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SELECTED ABSTRACTS FOR ORAL AND VIDEO PRESENTATION (45)

ES26-0017

Best Selected Abstracts 1

HALON (Hysterectomy by trans-abdominal laparoscopy or transvaginal NOTES): a randomized controlled trial

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Background

The HALON trial is a randomized controlled, single center, single-blinded, parallel-group, non-inferiority, efficacy study (ClinicalTrials.gov: NCT02631837). The objective is to compare transvaginal Natural Orifice Transluminal Endoscopic Surgery (vNOTES) Hysterectomy and Total Laparoscopic Hysterectomy (TLH) for the successful removal of the uterus for benign gynecological pathology. We studied women with a benign indication for hysterectomy aged 18-70. Women with a history of rectal surgery, rectovaginal endometriosis, malignancy, history of PID, active lower genital tract infection, virgo or pregnancy were not eligible.

Methods

After written informed consent, women were randomly allocated to vNOTES Hysterectomy or TLH by using a computer generated randomization list. All procedures were performed by a surgeon equally skilled in performing both techniques, who was not blinded to the treatment allocation. Participants, nursing staff and outcome assessors were blinded by mock incisions. Pre- and postoperative treatment was provided by staff blinded for the allocated intervention using a standardized protocol, identical for both techniques.

Primary outcome was successful removal of uterus with the intended approach without conversion to another approach. Secondary outcomes were proportion of women discharged on the same day, based on their own preference, postoperative pain scores between day 1-7 and total use of analgesics, postoperative infection, per- or postoperative complications according to Clavien-Dindo classification; hospital readmissions, surgery duration, dyspareunia, sexual wellbeing and direct costs up to 6 weeks.

Results

All 70 patients were successfully operated with the intended approach (35 vNOTES; 35 TLH) without conversion to another approach. The discharge rate on the day of the surgery was 28/35 (80%) in the vNOTES group versus 17/35 (48.5%) in the TLH group (RR:1.6, 95% CI:1.1-2.4). Data collection on secondary outcomes is ongoing, and will be available in October 2017.

Conclusions

In women scheduled for hysterectomy, vNOTES is a promising procedure that can reduce morbidity, duration in hospital stay and costs.

ES26-0019

Best Selected Abstracts 1

The sacrospinal ligament: a subject of reflection

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Background

The sacrospinal ligament fixation is a wide used technique for vaginal vault prolapse surgery. We aim to show the sacrospinal ligament and the surrounding structures from the laparoscopic point of view.

Methods

An extended dissection of the Latzko, Okabayashi and/or Retzius space(s) was performed towards the pelvic floor aiming the sacrospinal ligament in patients undergoing laparoscopic promontofixation for genital prolapse. The recorded videos from the surgeries were reviewed and selected to highlight in the images the sacrospinal ligament and it's surrounding structures and anatomic repairs.

Results

The laparoscopic view puts in evidence the highly variable structure of the sacrospinal ligament, not only the noble vessels and nerves close to it, but important differences in its constitution sometimes represented by a large and firm ligament and sometimes by only a few fragile ligamentary fibers.

Conclusions

This visual experience brings a few reflections to mind: 1- the different presentations of the sacrospinal ligament, sometimes large and firm, sometimes thin and fragile, raise doubts concerning the indications of the sacrospinal fixation technique: is it a reliable structure to carry the weight of the abdominal and pelvic organs for every patient?; 2- can the vaginal approach assure a safe procedure regarding the surrounding structures in every patient? Or the main reason for choosing this technique is related to convenience; 3- because the learning process for the recognition of pelvic ligaments are fundamentally based on palpation of structures that, as a rule, the students and residents are not accustomed to see, is there a more effective anatomic teaching and learning process of this compartment?

<http://player.vimeo.com/video/213847271?autoplay=1>

ES26-0126

Best Selected Abstracts 1

Laparoscopic and robotic techniques for bleeding control and vascular repair

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Background

To demonstrate laparoscopic vascular injury repair techniques to prevent conversion to open surgery. Methods: We have performed approximately 1100 laparoscopic or robotic retroperitoneal lymphadenectomies including para-aortic and pelvic dissection since 1998. Of these cases, 28 required vessel repair for inadvertent injury. 5 of these cases are presented.

Methods

Case 1- The right external iliac artery was injured by cutting current during robotic pelvic lymphadenectomy for cervical cancer. We used laparoscopic vascular clamps to temporarily control bleeding and robotically repaired the area with 4.0 interrupted proline suture. Case 2- The left external iliac artery was injured by cutting current during laparoscopic pelvic lymphadenectomy stage of a radical trachelectomy for cervical cancer. The hole was repaired the same as Case 1, but laparoscopically. Case 3- An avulsion injury to the left external iliac vein occurred during pelvic lymphadenectomy for endometrial cancer. Temporary bleeding control was achieved with atraumatic forceps. The repair was managed with one 5.0 proline Z-suture. Case 4- An avulsion injury to the left renal vein occurred during left-sided para-aortic dissection for endometrial cancer. We used a hemoclip for temporary bleeding control and one 4.0 proline Z-suture for repair. Case 5- The IVC was injured with a vessel sealer during right-sided para-aortic lymphadenectomy for endometrial cancer. Vascular tape wasn't effective so pressure on the bleeding point was required to control bleeding. After finding the bleeding point, suturing of the hole was performed with 4.0 proline continuous suture.

Results

All 28 cases required temporary bleeding control with vascular clamps, atraumatic forceps, vascular tape and/ or pressure application with sponge. All cases were administered with high molecular heparin and holes closed successfully without conversions to laparotomy. No blood transfusions were required.

Conclusions

Being prepared for possible vascular injuries and understanding how to control bleeding is vital for successful same session, conversion-free repair.

<http://player.vimeo.com/video/219373396?autoplay=1>

ES26-0142

Best Selected Abstracts 1

Retropubic fibroma: a rare tumor entity causing lower urinary tract obstruction

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Background

Retropubic isolated tumor causing lower urinary tract obstruction is very rare in young women. In this video, we will present a 31 y/o female, with the problems of voiding difficulty and several episodes of acute urine retention. She was referred to us by urologist. Imaging study revealed a well-margin large retropubic tumor, occupying the Lt 2/3 Retzius space and entire left paravagina space, in close contact with left obturator internus muscle, obturator bundle, pubic bone, left ureter, vagina, urethra, and bladder.

Methods

Laparoscopic surgery was performed. Port setup: umbilical port with 2 trocars, and additional two 5mm trocars over left and right lower quadrant. Energy source: Olympus PK, and Ethicon Harmonic Ace.

Results

Tumor was successfully excised laparoscopically, after careful dissection of the important retropubic and retroperitoneal sidewall structures. (obturator internus muscle, obturator nerve and vessels, urethra, left ureter, and bladder). Estimated blood loss was 25 cc. Final pathology: fibroma, without malignancy.

Conclusions

Large retropubic fibroma causing lower urinary tract obstruction is very rare. Laparoscopic excision is feasible and safe.

<http://player.vimeo.com/video/219416257?autoplay=1>

Impact of laparoscopic sacropexy on quality of life and sexuality in high-aged population. A prospective study

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Background

Pelvic organ prolapse (POP) has a very high prevalence, especially in the aging population, with an estimated lifetime risk of over 30%. Patients with POP suffer significant negative impact on quality of life, sexuality and social behavior.

Although numerous surgical procedures have been described for the management of POP, laparoscopic colposacropexy is currently regarded the gold-standard. Yet there is lack of knowledge regarding the influence of laparoscopic colposacropexy on disease-related quality of life (Qol) and on sexuality in high-aged population. Aim of this study was to assess the impact of laparoscopic sacropexy on Qol. and on sexuality in aging patients.

Methods

All patients who underwent laparoscopic colposacropexy for symptomatic POP between June 2012 and April 2014 at a tertiary university center were enrolled in this prospective observational cohort study. Sexual function and quality of life were assessed for the pre- and postoperative state (6 months follow-up) using two validated questionnaires, the Female Sexual Function Index (FSFI) and the European Quality of Life Five-Dimension Scale (EQ-5D).

Results

Out of 125 eligible patients, 75 (60%) enrolled in the study. Only 53 (42.5%) completed the study and follow-up. A significant improvement in quality of life and sexual function was observed when comparing pre- and postoperative FSFI (23.2[9.2-32.4] vs. 27.9[34.2-15.8], $p < 0.001$) as well as EQ-5D (0.9[0.3-1.0] vs. 1.0[0.6-1.0], $p < 0.001$). This highly significant improvement involved all domains of the FSFI-score (desire, arousal, lubrication, orgasm, satisfaction and pain, $p < 0.001$).

A very interesting result was that even patient with a physiological preoperative FSFI-score (FSFI > 26.55) experienced an improvement of sexual function after laparoscopic sacropexy (30[32.4-27.1] vs. 32.20[34.2-26.0], $p < 0.001$)

Conclusions

Sacrocolpopexy is a valuable therapeutic option for elderly patients suffering from POP. It seems to have a positive impact on functional outcome, Qol. and sexuality.

Titanium scaffolds is a promising group of implants for POP surgery (experimental study)

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Background

POP is widely distributed pathology among women different ages. Use of modern synthetic materials is often obligatory in reconstructive surgery. One of the most important criteria for such materials is biomechanical and biological compatibility. The most famous material is titanium as it's highly inert. Until recently there were no studies using titanium in pelvic reconstructive surgery. Aim of the study to compare biocompatibility of new titanium scaffolds and classic polypropylene meshes.

Methods

We include conventional rats both sexes 250g age 5 month. Animal was divides in 2 group. Main group was 15 animals with implantation titanium mesh and same amount in control group with PP mesh. We used implant "titanium silk" (24 g/m²) and polypropylene implant (65 g/m²) 1,5x1,5cm implanted subfascially in dorsal region and fix it with prolene 6-0 sutures. Five animals each group on 7, 30 and 90 day were analyzed. We use microscopic analysis of specimens and assess color histograms of distribution of collagen I and III types by counting red, green and blue pixels (green and blue – matured I type, red – III type).

Results

We found granulomas of foreign bodies around threads. At the moment of finishing the study inflammatory reaction was in connective tissue around granulomatous inflammation main component was fibroblasts, solitary macrophages and giant cells of foreign bodies close to the mesh. Using Immunohistochemical analysis of granuloma in region of interface we noted red collagen fibers, however density of collagen fibers increasing form 7 to 90 days. Differences in ratio in mature and immature collagen become statistically significant form 30 day: around titanium material it was 1,631+0,140 and 1,174+0,036 around polypropylene (p=0,008) and didn't notably change after. Significantly higher ratio of collagens I and III noted around titanium meaning that it provide active synthesis of mature collagen.

Conclusions

We can assume that form 7 to 90 days there are significant increase synthesis of collagen fibers, however titanium provide prevalence of collagen I type which makes "titanium silk" more preferable for delicate POP surgery in terms of biocompatibility.

ES26-0185

Best Selected Abstracts 2

Robotic-assisted single-site laparoscopy for treatment of advanced staged endometriosis

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Background

To compare perioperative outcomes of robotic-assisted single site laparoscopy with conventional single port laparoscopy for treatment of advanced stage endometriosis (EMS)

Methods

This retrospective cohort study includes 120 patients who underwent laparoscopic or robotic-assisted surgery for treatment of advanced staged EMS at Ewha Womans University Mokdong Hospital from January 2014 to January 2017. Fifty two patients underwent single-port conventional laparoscopy, and 68 patients underwent single-site robotic-assisted laparoscopy. We analyzed the perioperative outcomes of patients such as age, operative time, estimated blood loss, length of hospital stay, size of EMS, laterality of EMS, DIE, and recurrence rate.

Statistical analysis was performed using IBM SPSS Statistics Version 20 (Statistical Package for Social Science, Inc., Tokyo, Japan). A Student's t test, an χ^2 test and Kruskal-Wallis test were used and two tailed p-values of <0.05 were considered to be significant.

Results

The patients in both groups had similar age. In robotic-assisted surgery group, there were longer operative time (76.9, 107.8, P=0.0) and more estimated blood loss (57.1, 135.6, P=0.0). But, mean size of EMS was statistically larger in robotic-assisted surgery group (4.37, 5.23, P=0.030). There was not different in length of hospital stay (4.58, 4.59, P=0.862). There was more DIE rate (33cases in LS 63.5%, and 52cases in RS, 76.5%) and more bilateral EMS (13cases in LS, 25%, and 17cases in RS 25%) in robotic-assisted surgery group. Multi-cystic EMS was 17cases in LS (32.7%), and 26cases in RS (38.2%). Recurrence rate was 1case in RS (1.9%).

Conclusions

We may conclude that robotic-assisted single site laparoscopy is compatible in the treatment of advanced staged endometriosis, especially in more complicated cases.

Transperineal 3D/4D ultrasound evaluation of pelvic floor muscles in women after nerve-sparing surgery for deep infiltrating endometriosis

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Background

Deep infiltrating endometriosis (DIE) seems to be associated with pelvic floor muscle (PFM) hypertonic disorder, detectable with 3D/4D transperineal ultrasound. Complete, nerve-sparing excision of endometriotic lesions has been adopted for the treatment of DIE to preserve pelvic innervation and avoid post-operative functional complications. In a recent pilot study our group investigated PFM alterations in women with DIE, demonstrating a possible association between DIE and PFM hypertonic disorder, detectable with 3D/4D transperineal ultrasound. The aim of the study is to evaluate the morphometry of the PFM in women affected by DIE using 3D/4D transperineal ultrasound before and after nerve-sparing DIE surgery.

Methods

A prospective study was conducted on 38 women with clinical and ultrasonographic diagnosis of DIE, scheduled for laparoscopic surgery. Patients were evaluated pre-operatively and 12 months after nerve-sparing surgery. At both visits, a 3D/4D transperineal ultrasound for evaluation of PFM morphometry was performed at rest (static), during pelvic floor muscle contraction and during Valsalva manoeuvre (dynamic). All volumes were evaluated with dedicated software (4D View 14.4; GE Healthcare ®) for offline analysis; the investigator analyzing volumes was blinded to the clinical data. Moreover, patients were asked to rank endometriosis related pain symptoms (dysmenorrhea, dysuria, dyschezia, dyspareunia, chronic pelvic pain) using a numerical rating scale (NRS).

Results

No significant difference between pre- and post-operative PFM morphometry, both static and dynamic, was observed, while endometriosis related symptoms significantly improved after surgery. Levator Hiatus Areas (LHA) at rest were $11,3 \pm 2,4$ cm² before surgery and $11,5 \pm 2,4$ cm² after surgery, whereas LHA during PFM contraction were $9,1 \pm 2,1$ cm² before surgery and $8,5 \pm 1,2$ cm² after surgery and LHA during Valsalva manoeuvre were $12,7 \pm 3,6$ cm² before surgery and $13,0 \pm 4,1$ cm² after surgery. A significant reduction in pain NRS scores at one year post-operatively was detected for all symptoms evaluated in the present study.

Conclusions

Despite improvement in pain symptoms, nerve-sparing surgery for DIE seems not to influence pre-existent PFM hypertonic disorders detected by 3D/4D transperineal ultrasound. The advantages of transperineal 3D/4D ultrasound (dynamic, accurate, non-invasive, economic and pain free technique) make it an ideal method for the assessment of PFM in women with DIE both pre- and post-operatively.

ES26-0211

Best Selected Abstracts 2

Positive effects on ovarian reserve when using CO₂ Laser Vaporization versus Cystectomy for the treatment of ovarian endometrioma: a prospective randomized clinical trial

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Background

To determine whether and to what extent the two surgical procedures for endometrioma, cystectomy and laser vaporization, affect ovarian reserve. Recently, cystectomy has been questioned as an ideal surgical approach since it may involve excessive removal of ovarian tissue and the loss of follicles; laser vaporization has been proposed as a promising method that may help preserve ovarian function.

Methods

This is a prospective, randomized (1:1) clinical trial; 24 patients undergoing surgery at San Raffaele Scientific Institute (Milan) for symptomatic endometriomas larger than 3 cm were randomly assigned to undergo either cystectomy (Group 1) or laser vaporization (Group 2). Patients in Group 1 have undergone a standardized laparoscopic stripping technique, while patients in Group 2 have undergone drainage of the cyst content and vaporization of the internal wall using CO₂ fiber laser (AcuPulse Duo Laser, Lumenis). Pelvic ultrasound to determine the Antral Follicle Count (AFC) and blood sample to determine Antimüllerian Hormone (AMH) levels were performed preoperative for baseline, and at 1-month and 3-month time postoperative.

Results

Age and the mean size of endometriomas were similar between the two groups (Group 1=31.5±5.4 years, Group 2=32.4±5.5 years, P=0.805; Group 1=4.9±1.9 cm, Group 2=4.5±1.5 cm, P=0.209). AFC at 3-month follow-up was significantly higher compared to baseline in Group 2 (16.8 versus 8.5 respectively, P=0.002); AFC of the operated ovary was also found to be significantly higher following treatment in Group 2 (9.3 versus 4 respectively, P=0.003). In Group 1, AFC at 3-month follow-up time and the AFC of the operated ovary did not differ from baseline (14.1 versus 8.9, P=0.08; 5.4 versus 2.8 P=0.09). AMH at 3-month follow-up were not different from baseline in either group. No peri-operative complications and no recurrences were reported in either of the study group.

Conclusions

CO₂ laser vaporization for endometrioma using the flexible fiber yields a higher functional ovarian tissue, as determined by higher AFC and no change in AMH, in comparison with cystectomy. These are preliminary data of an on-going study, and further validation of the results on a larger sample is required.

Leich-Gregoir Laparoscopic Ureteroneocystostomy for intrinsic ureteric endometriosis – the value of the human robot

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Background

In this video, we demonstrate the technique for Leich-Gregoir laparoscopic ureteroneocystostomy in a patient with ureteric endometriosis causing significant hydroureteronephrosis, performed by an endometriosis surgeon with guidance from a urologist, experienced in open ureteric reimplantation.

Methods

Patient was referred to our tertiary referral centre with severe pelvic pain and moderate right hydroureteronephrosis. Uteroscopy suggested intrinsic disease invading the urothelium. As attempts to separate the nodule from the ureter failed, a ureteroneocystostomy was decided upon.

The surgical team included a gynaecologist with an interest in laparoscopic endometriosis surgery (SK) and an experienced urologist (SA), subspecialist in paediatric renal transplant but little laparoscopic experience. The gynaecologist performing this operation had not performed the procedure before but was experienced in advanced endometriosis surgery. The urologist was experienced in open ureteric re-implantation in paediatrics.

We demonstrate the technique, step by step, including the psoas hitch.

Results

The procedure was completed laparoscopically with no intraoperative or postoperative complications. Cystoscopy at six weeks confirmed excellent ureteric implantation site healing.

Conclusions

Urologists competent to perform laparoscopic ureteroneocystostomy are few and far between. This style of multidisciplinary surgical approach where the practical skill of one surgeon is complemented by the experience and verbal guidance of another can prove invaluable in rare cases like this.

This team has now completed three such cases since October 2016 in our centre, all with excellent results.

<http://player.vimeo.com/video/221192232?autoplay=1>

The effect on uterine and ovarian artery ligation to perioperative blood loss and postoperative ovarian rezerve at elective laparoscopic myomectomy

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Background

In this prospective study, we aimed to compare the intraoperative complication rates, operation time, preoperative-postoperative AMH and hemoglobin values, and the length of hospital stay for the patients undergoing elective laparoscopic myomectomy made or not made with uterine artery and ovarian artery ligation.

Methods

In this prospective clinical study, 32 patients undergoing elective laparoscopic myomectomy were divided in two groups as ligated and non-ligated. Primer outcome was determined according to different preoperative-postoperative haemoglobin to determine blood loss in patients. Seconder outcomes were determined as intraoperative complication rates, operation time, preoperative-postoperative AMH and the length of hospital stay.

Results

Similar demographic characteristics were found for both groups (ligated and non ligated). Additionally, myoma localization, age (39±5 vs 41,2±3,8), preop haemoglobin (12,7±0,9 vs 12,6 ±1,3), preop and postop AMH (1,9 ±2,2 and 2 ±2,1 vs 1,1 ±1,7 and 1,1 ±1,3) and operation time (69 ±17 vs 75.3 ± 19) were similar, while postoperative haemoglobin values (10,4±1,1 vs 11,4±1,3) were significantly higher for ligated group than non-ligated when compared.

Conclusions

It was observed that the loss of perioperative and postoperative hemoglobin value is decreased by ligation of uterine and ovarian arteries during and after the laparoscopic myomectomy without causing any important change of the operation time and AMH values.

Final results of a randomized controlled trial of the Cardea GEA system versus TCRE combined with roller-ball ablation for the treatment of AUB

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Background

To evaluate the safety and effectiveness of the Cardea™ GEA System (a bipolar RF with 5.5 mm probe diameter) as compared to the control (TCRE - Trans Cervical Resection of the Endometrium) combined with roller-ball ablation for the treatment of abnormal uterine bleeding.

Methods

A prospective, randomized clinical trial was undertaken in seven university teaching hospitals. The trial size is 161 pre-menopausal patients with abnormal uterine bleeding from benign causes who have completed child birth. 161 patients were 1:1 randomized into the test (82 patients) and control (79 patients) sub-groups, respectively. Ablation performed with Cardea™ bipolar RF or TCRE combined with roller-ball ablation.

Results

Patient success [PBLAC score≤75 at 1 year] was achieved in 89.19% of test (Cardea-treated) and 86.11% of control (TCRE-treated) sub-groups (at 6 months, 89.61% and 90.79%, respectively; with no statistically significance ($P>0.05$) compared to the one year data). One year after treatment, amenorrhea (PBLAC=0) was reported by 36.49% and 29.58%, respectively. Mean procedure time was 4.81 minutes for Cardea ablation treated patients, and 25.28 minutes for TCRE treated patients. Adverse events that were associated with both Cardea and TCRE instruments occurred in 2.60% and 2.63% of patients, respectively, with no statically significance ($P>0.05$). Patient satisfaction and increase in hematocrit were also collected.

Conclusions

The novel Cardea™ GEA system for the treatment of AUB is safe and effective. The fast delivery of bipolar RF energy by the system reduces much of the procedure time. The small profile of 5.5 mm in probe diameter requires less, or in most cases, no cervical dilation, potentially more suitable for office procedures.

New sonographic score of adenomyosis in the evaluation of type and degree of the myometrial involvement: interobserver reproducibility and correlation to symptoms

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Background

To evaluate type and degree of adenomyosis using a new transvaginal sonographic score system based on extension and invasion of myometrium and junctional zone (JZ) Diagnostic reproducibility by intraobserver analysis and correlation between adenomyosis severity and clinical symptoms were evaluated.

Methods

This study included women with typical sonographic features of adenomyosis according of the Morphological Uterus Sonographic Assessment (MUSA). The degree of the extension of adenomyosis was assessed using a new ultrasonographic scoring system. This system divided the disease in adenomyoma, focal and diffuse adenomyosis of the external myometrium and of junctional zone (JZ). A score number ranged from 1 to 4 were assigned to the extension and myometrial involvement of each type of adenomyotic lesions and for JZ alterations. Classifying the disease in three group: mild (ranged between 1 to 7), moderate (8-13) and severe (14-20). Inter-observer analysis was performed by 2 experienced observers who reviewed stored 2D and 3D sonographic examinations of 50 consecutive women. 20 patients without any sonographic signs of myometrial pathology were used as control group. Each observer, independently and blinded to each other, evaluated the presence or absence and the severity of adenomyosis using a new score system. Menstrual bleeding was assessed by a pictorial blood loss analysis chart (PBAC), painful symptoms were evaluated using a visual analog scale (VAS) and infertility factors were also considered.

Results

Regarding the interpretation of the presence or not of adenomyosis ultrasonographic findings, the agreement was perfect (Cohen kappa, $K=1$). Multiple rater agreements to classify the different features of adenomyosis (diffuse, focal adenomyoma and focal or diffuse alteration of JZ) ranged from good to almost perfect (Cohen k 0.678 – 0.953). According to numerical score the agreement for minimal, moderate and severe adenomyosis ranged from substantial to almost perfect (respectively Cohen $k=1$, $K=0.94$, $K=0.79$). According to the proposed scoring system 108 patients with adenomyosis (mean age 37.7 ± 7.7 yrs) were evaluated. 22 patients who had score of focal-mild adenomyosis compared to patients with severe disease a showed younger age (33.6 ± 7.7 yrs), 75.86% of severe dysmenorrhea ($VAS>5$) and of infertility (24.13%). The 20 patients who had severe-diffuse adenomyosis showed in 95.24% of heavy menstrual bleeding ($PBAC>100$) and 80.95% of severe dysmenorrhea. All the 21 patients with adenomyomas had $PBAC>100$.

Conclusions

The evaluation of the severity of adenomyosis seems important in correlation to painful symptoms and in the management of infertility, but also for an emerging request of surgical treatment. The high percentage of agreement obtained in the JZ evaluation could improve the sensitivity of adenomyosis diagnosis. The ultrasonographic quantification of severity and the extension of adenomyosis in the myometrium could be helpful in correlation to the severity of symptoms but also for an emerging request of surgical treatment.

ES26-0150

Best Selected Abstracts 3

Pushing the boundaries of laparoscopic myomectomy: a single centre prospective series of 323 cases

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Background

Symptomatic fibroids remain a common reason for referral to the gynaecologist and given the benefits of minimal access surgery, laparoscopic myomectomy (LM) should be considered the gold standard surgical treatment. In this study we present a large series of 323 cases assessing the safety and feasibility of LM and identify what factors, if any, preclude the laparoscopic approach.

Methods

A single surgeon observational study of 323 patients undergoing a LM over a 12-year period. Data was collected prospectively and analysed using SPSS.

Results

323 patients underwent a LM over the 12-year period. There was almost a 5-fold increase in the number of LM performed in 2016 compared to 2004. The mean age was 38 and mean BMI 26.5. A total of 1921 fibroids were removed with the size of the dominant fibroid ranging from 2 to 20cm (mean 7.6cm). The majority of fibroids removed were intramural (49%) and subserosal (33%) and less frequently submucosal (17%) and pedunculated (1%). The mean number of fibroids removed was 4, with the greatest being 22 removed from a single patient. Average blood loss was 279.14mls (50-1500mls) with mean duration of surgery and inpatient stay recorded as 112.92mins (20-240mins) and 1.88 days respectively (1-7 days). Over 80% of patients were successfully discharged within 48 hours. No major intraoperative complications were noted and 2 procedures were converted to a mini laparotomy giving a conversion rate 0.62%.

7 patients had documented post-operative complications giving an overall complication rate of 2.17%. Following mechanical morcellation no cases of occult uterine malignancy was diagnosed. Age and BMI did not appear to have any significant impact on operative outcomes. When comparing the number of fibroids and operative outcomes there was a significant difference in both blood loss (218.5mls vs. 308.45mls, $p=0.001$) and operating time (85.6mins vs. 125.43mins, $p<0.001$) between single and multiple myomectomies, however no difference was observed in duration of inpatient stay (1.81days vs. 1.9days, $p=0.437$). With regards to fibroid size (8cm vs. ≥ 9 cm) there was a significant difference in blood loss (121.34mls versus 192.03mls, $p<0.001$) and operating time (105.30mins vs. 130.12mins, $p<0.001$), however there was no difference in duration of inpatient stay (1.799 days vs. 1.989 days, $p=0.127$).

Conclusions

Laparoscopic myomectomy is a safe and efficacious procedure that should be considered the gold standard surgical treatment option for fibroids. With experience the procedure can be undertaken with minimal complications, a low risk of conversion to laparotomy and early discharge from hospital, even in cases of large and multiple fibroids that historically would have required the open approach. This allows even the most complex of cases to now benefit for the advantages of the minimal access approach.

Effects of preoperative ulipristal acetate on surgical outcomes of laparoscopic myomectomy: a pilot study

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Background

Ulipristal acetate (UPA) is increasingly prescribed prior to surgery in order to reduce myomas' volume. Myomas' modifications induced by UPA could theoretically affect surgical outcomes. Our study aims to assess the effects of a 3-month preoperative treatment with ulipristal acetate on perioperative outcomes of laparoscopic myomectomy.

Methods

In this case-control study consecutive patients scheduled for laparoscopic myomectomy were enrolled from January 2017 to May 2017 in our tertiary care medical center. Women were divided into two groups, based on preoperative medical therapy: 3-month cycle of UPA or no hormonal therapy (control group). Perioperative data were collected during surgery: enucleation time (ET), total operative time (TOT), hemoglobin loss, complication rate and hospital stay. Surgeons, blinded to the preoperative therapy, were then given a 3-item questionnaire, evaluating identification of a clear cleavage plane, difficulty of enucleation (1 to 5 score) and fibroid's softness.

Results

A total of 34 women undergoing laparoscopic myomectomy were included: 16 had received a 3-month cycle of UPA and 18 had not been submitted to any hormonal therapy. The two groups were comparable in terms of anthropometrical and clinical characteristics, mean number and dimension of myomas. A higher difficulty of enucleation (3.3 ± 1.2 vs 1.7 ± 0.8 score), increased myoma's softness (87.5% vs 27.8% of cases) and no clear cleavage plane (87.5% vs 5.6% of cases) were found in the UPA group, compared to the control group ($p < .05$). Similar mean ET (10.5 ± 11.8 vs 7.7 ± 6.8 minutes) and TOT (107.4 ± 47.8 vs 110.3 ± 26.1 minutes) were reported in UPA and control group respectively. No difference between the two groups was noted in terms of perioperative complication rate (12.5% vs 5.6%), hemoglobin drop (2.4 ± 1.5 vs 1.7 ± 0.7 g/dl) and hospital stay (4.7 ± 0.7 vs 4.7 ± 1 days).

Conclusions

Preoperative treatment with Ulipristal acetate can affect myomas characteristics, reducing their consistency and subjectively impairing the identification of a clear cleavage plane. However, surgical times and perioperative outcomes did not vary significantly between women submitted to UPA and untreated patients.

ES26-0426

Best Selected Abstracts 3

Increased accuracy of hysteroscopic metroplasty leads to high reproductive and obstetric outcomes in patients with partial and complete septate uterus

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Background

To evaluate the long term reproductive outcomes in patients with partial and complete septate uterus treated by hysteroscopic metroplasty with pre-and-intra-operative objective measurements of the uterine septum.

Methods

A prospective observational study conducted on 100 women with uterine septum diagnosed with 3D-transvaginal ultrasound (3D-TVS): 90 with a partial, class U2a according to ESHRE/ESGE classification of uterine anomalies, (**GROUP U2a**) and with at least one of the following criteria: history of primary infertility after exclusion of other infertility factors (**GROUP U2a-PI**), history of repeated early miscarriages (>3) (**GROUP u2a-ABSP**); 10 women with a complete uterine septum, class U2b, (**GROUP U2b**) divided in two groups according to the same criteria: primary infertility (**GROUP U2b-PI**), repeated early miscarriages (**GROUP U2b-ABSP**). Pre-operative analysis of uterine architecture was carried out on coronal section using the interstitial portions of the fallopian tubes as reference points. Intercornual distance was used as the reference line. The two variables considered included uterine fundus thickness and endocavitary development of the septum. Outpatient hysteroscopic metroplasty was performed under conscious sedation using a 5mm hysteroscope with vaginoscopic approach and miniaturized 5Fr instruments: bipolar electrode for the removal of 3/4 of the septum, scissors to refine the base of the septum and a novel graduated intrauterine palpator to measure the portion of the removed septum with a margin of resection of 10 mm. An antiadhesive gel was applied into the uterine cavity to avoid post-operative adhesions. 3D TVS and second-look hysteroscopy were used to identify and resect the residual part of the septum.

Results

After a mean follow up of 36 months, in which the patients, with a fully restored normal anatomy of the uterus, tried to conceive naturally or through assisted method, an overall clinical pregnancy rate of **67%** (67/100) was detected with a **77.6%** (52/67) of live birth rate. In table 1 the main reproductive outcomes are reported for each subgroup.

Table 1

	U2A-PI	U2A-ABSP	U2B-PI	U2B-ABSP
<i>Number of patients</i>	75	15	7	3
<i>Clinical pregnancy rate</i>	44/75 (58.7%)	12/15 (80%)	5/7 (71.4%)	1/3 (33%)
<i>Abortion rate</i>	7/44 (15.9%)	4/15 (26.7%)	1/5 (14.2%)	0/1 (0%)
<i>Mode of conception:</i>				
<i>Spontaneous</i>	28/44 (63.6%)	9/15 (60%)	4/5 (80%)	1/1 (100%)
<i>Post-ART</i>	9/44 (20.4%)	0/15 (0%)	0/5 (0%)	0/1 (0%)
<i>Live birth rate</i>	38/44 (86.3%)	9/15 (60%)	4/5 (80%)	1/1 (100%)
<i>Obstetric complications rate</i>	1/38 (2.6%) - 1 placenta previa	0/9 (0%)	0/5 (0%)	0/1 (0%)

Conclusions

Outpatient hysteroscopic metroplasty with miniaturized instruments and pre-and-intra-operative objective measurements of the uterine septum significantly increases reproductive outcomes in patients with partial and complete septate uterus. Surgical correction of Müllerian anomalies could induce a uterine remodeling involving not only macroscopic (i.e. morphology and vascularization), but also microscopic (i.e. endometrial receptivity) changes.

ES26-0429

Best Selected Abstracts 3

Evaluation of endometrial receptivity in infertile women with congenital uterine anomalies before and after hysteroscopic metroplasty surgery (BASE-R study: Before and After Surgery Endometrial Receptivity)

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Background

To evaluate if there is an endometrial receptivity change in women with uterine malformations (dysmorphic uterus and uterine septum) undergone hysteroscopic metroplasty. The investigated genes are the ones of the HOX family (HOX10, HOX 11) and LIF gene.

Methods

Twenty-two infertile patients between the age of 18-44 years with uterine malformations (dysmorphic uterus and uterine septum) were enrolled in our biomedical research. All patients underwent metroplasty at the Hysteroscopy ambulatory of the University Hospital 'Federico II' of Naples, during the late proliferative phase of the menstrual cycle. During the hysteroscopic procedure the first endometrial sampling was obtained. After two months from the metroplasty, during the diagnostic hysteroscopy of follow up, another sample of endometrium was obtained. The endometrial samples were immediately stored at -80° C and RT-PCR was used to evaluate the expression of the endometrial protein HOX10, HOX11, LIF.

Results

The variation of HOX 10, HOX 11 and LIF genes in correlation to the pregnancy outcome are shown in table 1. An overexpression of HOX 10 and HOX 11 mRNA has been found in women who became pregnant after metroplasty (group 1: 6/22 patients), a deep under expression of HOX 10 and HOX 11 mRNA has been found in women who had a miscarriage after metroplasty (group 2: 5/22 patients) while in women who didn't have a pregnancy an under expression of HOX 10 and HOX 11 mRNA has been found (group 3: 11/22 patients). The mRNA expression level of LIF gene results overexpressed in all three groups.

Table n.1

Gene	Fold Change		
	HOX 10	HOX 11	LIF
Group 1: Pregnancy (6/22)	+ 2,74	+ 2,06	+ 6,54
Group 2 : Abortion (5/22)	-5,57	-7,19	+ 7,26
Group 3 : No pregnancy (11/22)	-1,21	-1,57	+3,34

Conclusions

Our preliminary results have shown that the better reproductive outcome seen in women undergone to hysteroscopic metroplasty for congenital uterine anomalies is correlated also to a deep positive modulation of endometrial receptivity. Nevertheless, further larger studies are needed to better explain the correlation between uterine remodelling and gene-expression modulation.

ES26-0431

Best Selected Abstracts 3

Hysteroscopic treatment with miniaturized instruments of complete septate uterus with unilateral cervical aplasia (Class U2bC3V0/ESHRE/ESGE Classification) formally named Robert's uterus

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Background

To describe a successful hysteroscopic treatment with miniaturized instruments under ultrasound control of a Complete Septate Uterus With Unilateral Cervical Aplasia (Class U2bC3V0/ESHRE/ESGE Classification) formally named Robert's uterus.

Methods

A 15-year-old virgin patient was referred to the emergency unit of our Department because of severe pelvic pain, every menstrual cycle. At transabdominal and transrectal ultrasonography an hematometra in the right portion of uterine body was detected. Uterine fundus at 3D ultrasonography appeared single and normal, so the diagnosis of suspected Robert's uterus was done. Robert's uterus is a very rare mullerian duct anomaly, described as an asymmetric septate uterus with an half obstructed cavity and an half non obstructed cavity.

The patient was then scheduled for an in-patient hysteroscopy with miniaturized instruments in order to preserve the integrity of the hymene.

Results

Operative hysteroscopic Metroplasty was performed with miniaturized instruments under ultrasonographic control. We started with a 5 Fr bipolar electrode and 5 Fr blunt scissors to perform the opening of the cavity and the evacuation of the hematometra. The right tubal ostium was then identified. Resection of the fibrotic tissue with 16F mini resectoscope was performed. As soon as a normal uterine cavity was obtained the procedure was stopped. At one month follow up office Hysteroscopy we could detect a normal, single, uterine cavity with only a mild indentation in the uterine fundus which was treated with 5 Fr Blunt scissors. The patient referred that her first menstrual cycle after surgery was normal without any significant pain.

Conclusions

Operative hysteroscopy with miniaturized instruments under ultrasonographic control offers a unique opportunity for the treatment of a Complete Septate Uterus With Unilateral Cervical Aplasia (Class U2bC3V0/ESHRE/ESGE Classification) formally named "Robert's uterus".

<http://player.vimeo.com/video/222379604?autoplay=1>

Intraoperative nerve staining in nerve-sparing radical hysterectomy

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Background

In this video, we introduced a new technique of intraoperative nerve staining with modified leucomethylene blue (MLB) for nerve-sparing radical hysterectomy (NSRH). Leucomethylene blue (LB) was initially applied to vagotomy for the patients with stomach ulcer. It consists of 0.4% methylene blue, 7.02% ascorbic acid, and 1.68% sodium bicarbonate solution. It is a colorless or very faintly blue solution. If exposed to the air, it rapidly changes to deep blue, oxidized by the atmosphere.

However, it was indicated that the coloring of the distal esophagus with LB is of no clinical value in achieving completeness of vagotomy because nerve tissue was confirmed in only 33% of nerve tissue removed. Because ascorbic acid cannot completely oxidize methylene blue, methylene blue is also susceptible to oxidation in the dyeing process. This oxidized methylene blue can only remain extracellular, resulting in non-specific staining, affecting the staining results.

Methods

MLB consists of 800 milligram sodium thiosulfate, 10 milliliter 0.1% leucomethylene blue, and four drops of dilute hydrochloric acid (proportion 1.17, hydrochloric acid/water 1/3). The final solution was colorless and pH was 4.0. MLB is maintained in the reduced state in this procedure, which can enter nervous tissue. The strong oxidizing ability of nervous tissue oxidized the reduced MLB. Nerve showed blue, so the MLB had better specificity than LB in nerve staining. Other cells lack this oxidation, and therefore cannot be dyed blue. It suggested that nervous tissue either stores or has access to considerably more oxygen than other tissues did.

In the operation, the nerves spared were always visible by naked eye. And the minor nerves, producing a marked effect, were always neglected. Moreover, there were variant nerves sometimes, just like the vessels. Proper staining of the nerve solved the thorny problems. Our study suggested small nerve fibers oxidize the MLB more readily than muscle or connective tissue and it was proved selective. Large nerve fibers or trunks are not stainable. The reason for this may be that the thick sheath of the larger nerves impedes MLB to penetrate. However, in the process of NSRH, most nerves injured or excised were hard to be detected by naked eye, and therefore difficult to be isolated and divided.

Results

In the previous animal experiment, the tissues dyed blue obviously showed abundant nerve fibers by microscopic examination. The minor nerves were dyed blue clearly in NSRH. The time to post-void residual urine volume of less than 100 ml after removal of the urethral catheter was 7 days. The time to the first defecation was 36 hours.

Conclusions

Intraoperative nerve staining by MLB provided a new method for nerve location in NSRH. It was safe, effective and convenient.

<http://player.vimeo.com/video/215737095?autoplay=1>

ES26-0041

Best Selected Abstracts 4

A randomized controlled trial to evaluate the suturing methods for the uterine vascularity after laparoscopic myomectomy

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Background

Uterine rupture during pregnancy is a rare but serious complication associated with myomectomy. Laparoscopic myomectomy(LM) has been a prevalent surgery owing to the advances in laparoscopic techniques and devices, but there has been lack of evidence regarding appropriate operative procedure to minimize the risk of uterine rupture. Recently, we compared two different suturing methods in LM, showing that simple interrupted suturing might be superior to continuous suturing in terms of vascularity evaluated using contrast-enhanced MRI(CE-MRI) in a non-randomized study (Eur J Ob Gyn Reprod Biol. 211: 146-149, 2017). We here conducted a prospective randomized controlled trial(RCT) to confirm our results.

Methods

This prospective RCT was performed between June 2014 and September 2016. Eighteen women with symptomatic intramural uterine fibroids undergoing LM were divided into two groups with different suturing methods. In 8 patients, simple interrupted suturing of uterine wound in 2 or 3 layers was performed using braided absorbable thread (group A). In 10 patients, continuous suturing in 2 or 3 layers was performed (group B). Three-months after surgery, uterine wound vascularity was evaluated using CE-MRI. We defined avascularity index as the percentage of postoperative avascular area to cross sectional area of preoperative myoma. A t-test was applied to compare avascularity indexes between two groups.

Results

Avascularity indexes in group A and B were 5.9 ± 3.7 and 9.5 ± 5.4 , respectively (mean \pm SD). In group A, there was a tendency of decreased avascularity index compared to that in group B, indicating the uterine wound vascularity after interrupted suturing was better than that after continuous suturing, though not significantly different ($p=0.10$).

Conclusions

Though there was not enough number of cases to make a definite conclusion regarding postoperative vascularity between the two groups, simple interrupted suturing method might be superior to continuous one in terms of the uterine wound vascularity. Simple interrupted suturing of the uterine wound might be associated with better uterine healing, reduction of uterine rupture, and recommendation of vaginal delivery after LM.

Short-term outcomes of laparoscopic extraperitoneal para-aortic lymphadenectomy in gynecologic neoplasms: 199 cases at a single center

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Background

Since 1998 more than 700 cases of laparoscopic extraperitoneal para-aortic lymphadenectomy (e-PAL) have been performed at our institution to date. The advantage of e-PAL over the transperitoneal approach is the achievement of a good operative field not obscured by the intestines. We will present a video demonstration of our methods and indicate the technical feasibility of e-PAL.

Methods

From January 2011 to December 2015, 127 patients with endometrial cancer, 52 patients with ovarian cancer, and 25 patients with cervical cancer underwent e-PAL at our institute.

Results

The median age of patients was 57 years (range 24-82). 5 patients required conversion to transperitoneal PAL due to adhesion, marked obesity, or subcutaneous emphysema. The median operative time for e-PAL was 110min (range 40-180), and the median blood loss was 22.5ml (range 0-175). The number of harvested para-aortic lymph node was 34 (range 7-81). According to Clavian-Dindo classifications, no postoperative complications related to e-PAL measured more severe than grade IIIb. One cases suffered intraoperative ureteral injury but this was repaired in the same operative session laparoscopically. No major vessel injuries occurred during the study period.

Conclusions

Our data puts forward the safety and benefits of e-PAL. Laparoscopic e-PAL for patients with gynecologic neoplasms can be a safe and reliable method with experience and training.

<http://player.vimeo.com/video/219352867?autoplay=1>

Related problem of laparoscopic fertility preserving surgery for cervical cancer

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Background

In China, with the development and the awareness of the importance of cervical cancer screening, more and more young cervical cancer were diagnosed. Besides, due to the change of China's One-Child Policy, there is a gradual increase in the number of patients who require fertility preservation or even the need to retain women's physical function (menstrual). Radical trachelectomy with lymph node dissection is the standard of care for selected women who desire fertility preservation. With the popularization and proficient use of laparoscopic technology, LRT method performed by gynecologist is more than that of VRT in recent year.

Methods

The study enrolled 54 women who had undergone LRT by the same group of surgeons for cervical cancer between Jan 2010 and Dec 2016. Inclusion criteria were desire to preserve fertility, squamous and adenocarcinoma histology types, FIGO stage 1A2-1B1, tumor size 2 to 4cm, preoperative imaging examination displayed no infiltration at cervical internal, no evidence of lymphatic metastasis or distant metastasis. We performed the LRT and lymph node dissection in all of 54 patients.

Results

Of the 54 patients, 9 patients were given up due to positive lymph node or positive cervical margin. A total of 45 patients who survived fertility surgery were followed up. Only One patient had a vaginal cuff relapse 32 months later, who was treated with radical hysterectomy followed by concurrent chemoradiation, but died 12 months later. Seven patients were followed up for 2 to 12 months after the loss of patients; 38 cases of follow-up patients, 24 cases of fertility requirements, 9 patients were pregnant 16 times, only 6 live births.

Conclusions

LRT can effectively maintain the reproductive function and doesn't affect the outcome of the tumor.

Ovarian conservation is associated with better survival in young patients with T1N0M0 cervical adenocarcinoma: a population-based study

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Background

Ovarian conservation is controversial in patients with cervical adenocarcinoma due to the risk of ovarian metastasis. The aim of this study is to evaluate the association of ovarian conservation with survival outcomes in young patients with T1N0M0 cervical adenocarcinoma.

Methods

Women who were 45 years of age or younger with T1N0M0 cervical adenocarcinoma from 1988 to 2013 recorded in the Surveillance, Epidemiology, and End Results (SEER) Database and who underwent hysterectomy were included in this study. Propensity score weighting was used to balance the intragroup differences. Cause-specific survival (CSS) and overall survival (OS) were compared using Kaplan-Meier estimates. A multivariate cox model was used to adjust for covariates, including propensity score.

Results

A total of 1,368 patients with T1N0M0 cervical adenocarcinoma were identified, including 1,090 (79.7%) who underwent oophorectomy and 278 (20.3%) whose ovaries were preserved. The median follow-up was 89 months in the oophorectomy group versus 91 months in the ovarian conservation group. Patients who preserved their ovaries were younger, with a lower T classification and more inapplicable histological grade; these patients were also less likely to undergo pelvic lymphadenectomy (all $p < 0.05$). In the weighting cohort, the ovarian conservation group had better CSS (5-year 98.8% versus 97.1%, 10-year 98.0% versus 95.2%, $p = 0.0370$) and OS (5-year 98.8% versus 97.1%, 10-year 96.5% versus 93.5%, $p = 0.0025$). After adjustment, the CSS benefit of ovarian conservation was marginally significant ($p = 0.051$), and the OS benefit was still significant ($p = 0.006$). Stratified analysis showed that the CSS benefit was only found in T1b classification (HR, 0.23; 95%CI, 0.06-0.89, $p = 0.033$) and histological grade > 1 (HR, 0.12; 95%CI, 0.02-0.87; $p = 0.035$).

Conclusions

Among young women with T1N0M0 cervical adenocarcinoma, ovarian conservation is associated with better survival.

Comparison between transperitoneal and extraperitoneal laparoscopic para-aortic lymphadenectomy in gynecologic malignancies

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Background

The aim of this study was to compare the surgical outcomes of transperitoneal and extraperitoneal laparoscopic para-aortic lymphadenectomy in gynecologic malignancies.

Methods

A retrospective review of all patients with gynecologic malignancies who underwent laparoscopic para-aortic lymphadenectomy was performed from June 2014 to April 2017. Two groups were compared: transperitoneal laparoscopic para-aortic lymphadenectomy ("transperitoneal group"; N=33); extraperitoneal laparoscopic para-aortic lymphadenectomy ("extraperitoneal group"; N= 23). The surgical outcomes of the 2 groups were statistically analyzed.

Results

Extraperitoneal group achieved significantly better results than transperitoneal group in harvested para-aortic lymph nodes (19.96 ± 4.59 vs 15.45 ± 4.38 ; $P < 0.05$), positive para-aortic lymph nodes (6.12 ± 2.48 vs 3.42 ± 2.45 ; $P < 0.05$), operative time (113.56 ± 17.49 min vs 132.48 ± 15.78 min; $P < 0.05$), intraoperative complications (13.04% vs 39.3%; $P < 0.05$), postoperative hospital stay (6.34 ± 3.59 days vs 8.74 ± 4.38 days; $P < 0.05$) and bowel function recovery (13.42 ± 3.45 h vs 28.38 ± 4.25 h; $P < 0.05$). However, there was no significant difference in the estimated blood loss between the extraperitoneal group and the transperitoneal group (68.87 ± 11.83 ml vs 73.33 ± 13.19 ml; $P > 0.05$).

Conclusions

Extraperitoneal laparoscopic para-aortic lymphadenectomy can be considered for gynecologic malignancies.

Use of different types of bags for safe specimen retrieval in minimal-access surgeries

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Background

To compare the use of contained closed and open endo-bags during presumed benign minimal-access surgeries for safe specimen retrieval with laparoscopic power morcellation.

Use of bags for specimen retrieval in minimal-access surgeries has been practice since quite a long time and new advancements have been made in terms of shape, size, texture and optimal access for the need of safe extraction of specimen (better visibility and minimizing the risk of benign and malignant tissue spillage). The decision of type of the bag used for specimen retrieval depends upon the size and type of the specimen to be retrieved. **Methods**

A retrospective study was conducted on 767 patients during laparoscopic surgeries of presumably benign nature between the November 2014 and January 2017. Different types of bags were used randomly depending upon the size and type of the specimen retrieved through laparoscopic power morcellation and the risk of benign and malignant tissue dispersal and/or spillage of the contents of the specimen. Tailor-made bags (surgical gloves) were also used for contained power morcellation of some specimens.

Results

Out of 767 patients,

302 patients (39.3%) underwent laparoscopic myomectomy. In 291 patients (96.3%), contained closed bags and in 11 patients (3.6%) open endobags were used. 2 patients (0.68%) in which contained closed bags were used had histological evidence of malignancy (LMS- Leiomyosarcoma).

313 patients (40.8%) underwent laparoscopic supra-cervical hysterectomy out of which the contained closed bags in 275 patients (87.8%) and open endobags were used in 38 patients (12.1%). 2 patients (0.72%) with contained closed bags had histological evidence of malignancy.

72 patients (9.38%) underwent total laparoscopic hysterectomy for which the contained closed bags were used in 71 patients (98.6%) and open endobags in 1 patient (1.3%) which had histological evidence of leiomyosarcoma (LMS) on frozen section and the specimen was extracted vaginally.

In the rest of the 80 patients (10.4%) only open endobags were used to extract other specimen out of which only 1 patient (1.25%) had histological evidence of ovarian cancer.

Open bags were initially found to be easier in application; however, the maintenance of stability of open bags and tailor-made bags (surgical gloves) had disadvantages in terms of precision. Closed bags however required more training and the time for insertion and tissue extraction was found to decrease only after 20 cases.

Conclusions

Even in presumably benign minimal-access surgeries, closed bag specimen extraction was found to be the best method of choice irrespective of the time and cost difference involved when compared to the other bags and techniques. The incidence of malignancy in such presumed benign minimal-access surgeries was existing and make safe extraction techniques worth to be considered.

Atypical polypoid adenomyomas: Is there any association with hyperplasia and endometrial cancer?

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Background

Objective: To review the literature about the clinical behavior of atypical polypoid adenomyomas (APAs) and to describe the rates of (i) recurrences, (ii) their association with endometrial hyperplasia and (iii) with endometrial cancer.

Methods

Methods: A review of the English literature since 1970 was systematically performed. All studies that reported the outcome of the clinical management of patients with APAs were included. The patients' demographics details, the modality of initial diagnosis, the type of intervention, the duration of follow-up, and the number of deliveries after the APA excision were chased. The cases of recurrence, the cases with any association with endometrial hyperplasia, and the cases with any association with endometrial cancer, were depicted. Descriptive statistics were applied to the study population.

Results

Results: Totally, 310 cases of polypoid adenomyomas were identified in the literature. 250 cases of APAs and 60 cases of typical polypoid adenomyomas were found. The cases of APAs had a recurrence rate of 28.0% (70/250), a rate of association with endometrial hyperplasia of 5.6%(14/250), and a rate of association with endometrial cancer of 12.4% (31/250).

Conclusions

The recurrence rate, and the association of APAs with hyperplasia or cancer appear to be different with the already described in the literature rates. APAs comprise an intriguing clinical entity that needs individualized treatment, considering the increased association to serious gynecological diseases.

Endoscopic fallopian tube cannulation – Time to revive the art of tubal surgery?

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Background

Tubal factors are responsible for 20% of all couples with subfertility, with proximal (corneal) tubal occlusion in seen in up to 1:5 hysterosalpingograms. Although in-vitro fertilisation (IVF) has largely been successful in managing those patients, it has the disadvantages of risks of ovarian hyperstimulation and multiple pregnancies in addition to the emotional and financial burden of IVF particularly if a need arises for repeated cycles.

Fallopian tube cannulation for treatment of proximal tubal occlusion, though an established, safe and cost-effective technique it is currently under-utilised. . It is recommended by the National institute of clinical excellence (NICE) guidelines on management of tubal subfertility as it improves the chance of pregnancy. The procedure of fallopian tube cannulation is often performed by radiologists worldwide, however the laparoscopic-hysteroscopic (endoscopic) approach has the advantage of allowing direct visualisation of the uterine cavity and ostia, and diagnosis of co-existing pathologies such as endometriosis, ovarian and peritoneal pathology and/or uterine anomalies. Our previously published cohort in 2007 showed a success rate of 73% per fallopian tube and a pregnancy rate of 33% with a livebirth rate of 19%. We conducted a retrospective cohort study to determine our safety and efficacy outcomes.

Methods

A retrospective cohort study was carried out in a tertiary referral hospital for all cases of endoscopic fallopian tube cannulation between 2007 and 2015. The operating theatre database system was used to identify cases and case notes and maternity scan system were used to identify pregnancy outcomes only for the subgroup whom were followed up by our unit.

Results

In total 115 cases of endoscopic fallopian tube cannulation were identified. Median age and BMI at time of procedure was 32 years (26-44) and 25 (15-38) respectively. Mean operating time was 57 minutes (31-90). No cases of tubal perforation, sepsis, subsequent tubal pregnancies were identified. Fallopian tube cannulation was successful with rates 86% (99/115) per patient and data which were available on pregnancy outcome showed spontaneous conception rate of 33% livebirth rate of 20%.

Conclusions

Our data continue to support laparoscopic-hysteroscopic fallopian tube cannulation to be a safe and effective alternative to IVF in women with corneal occlusion. Although our follow-up data were limited in view of having good number of remote referrals, it shows a high rate of spontaneous conception and extremely low complication rates . We believe this is a much under-utilised technique which directly addresses the underlying pathology of tubal subfertility.

Transvaginal hydrolaparoscopy ovarian drilling improve ovulation rate in patients with polycystic ovary syndrome

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Background

Polycystic ovarian syndrome (PCOS) is one of the most common endocrine disorder in gynecology affecting women in the reproductive age with a prevalence rate of 17-20% and it is responsible for about 80% of cases of infertility due to anovulation. Clomiphene citrate (CC) remains the first-line treatment for PCOS-related anovulatory infertility, but 15-40% of these patients are CC-resistant. Laparoscopic ovarian drilling (LOD) is considered, by the ESHRE/ASRM PCOS consensus workshop, the second-line intervention in the CC-resistant PCOS patients. Recently, Transvaginal hydrolaparoscopy (THL) has been proposed as mini-invasive approach for ovarian drilling in PCOS patients. Aim of our study was to assess the ovulation rate, with mid-luteal progesterone level and ultrasound follicles monitoring, in PCOS CC-resistant patients undergone to THL ovarian drilling.

Methods

A prospective observational study was carried out on 123 PCOS, infertile, CC-resistant patients undergone THL ovarian drilling. Women were evaluated by hormonal measurement, and ultrasound evaluation during 6 months follow-up. Each participant after surgical treatment underwent blood sampling on days 20–24 of the cycle to measure serum Pg levels. Progesterone level >3 ng/mL was considered as ovulation. The endometrial thickness and follicle size were monitored on days 10, 12 and 14 of the cycle; the presence of ovulation was found only in those cycles in which the follicle reached at least 16 mm in diameter.

Results

One hundred-seventeen patients completed the study protocol, since six patients were lost to follow-up. Patient's mean age at enrollment was 29.5 years ± 3.9. Ovulation rate at the follow up was 64.1% one month after treatment, 79.5% after three months and 82.9% after 6 months. Eighty-two patients conceived during follow up period. Pregnancy rate was 70.1%. Mean major follicular diameter during ovulation monitoring was 16.37 mm while Pg levels (ng/mL) were 17,39 ± 10,65.

Conclusions

Our study have showed THL ovarian drilling is a feasible and efficacy option which allows an improvement of ovulation rate, evaluated by mid-luteal progesterone level and ultrasound monitoring, in CC-resistant PCOS patients. This is the first study that evaluates ovulation rate after THL ovarian drilling in those patients, by measurement of serum progesterone levels and US monitoring. Previously studies have showed several advantages of THL ovarian drilling compared to LOD. Thus, we believe that THL ovarian drilling is an option in the management of anovulatory CC-PCOS patients and could be offered as second-line therapy at all women who fail the medical methods of ovulation induction.

Effects of low intraperitoneal pressure and a warmed, humidified carbon dioxide gas on the laparoscopic environment and clinical outcomes: a randomized clinical trial

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Background

Laparoscopic surgery technology continues to advance. However, much less attention has been focused on how alteration of the laparoscopic surgical environment might improve clinical outcomes. The objectives of the present study were to evaluate whether low intraperitoneal pressure (IPP) (8 mmHg) and/or warmed, humidified CO₂ (WH) gas are better for minimizing the adverse impact of a CO₂ pneumoperitoneum on the peritoneal environment during laparoscopic surgery and for improving clinical outcomes compared to the standard IPP (12 mmHg) and/or cool and dry CO₂ (CD) gas.

Methods

The study was designed as a prospective, 2x2 factorial with IPP and types of CO₂ gas as factors, single-center, single-blinded (patients) randomized trial. This trial is registered with ClinicalTrials.gov, trial number NCT01887028. The power calculation of the present trial was based on our previous results for 12 genes (4 adhesion-formation-related, 4 inflammation-related, and 4 hyaluronan-related); 40 patients for each group enabled a power of 91-95% for each gene at 5% significance level. During study recruitment from September 2013 through June 2016, all patients who underwent laparoscopic sub-total hysterectomy with promontofixation for uterine prolapse were assessed for eligibility to participate. After obtaining informed written consent, participants were allocated in a 1:1:1:1 ratio by a remote computer-generated randomization system. Expression levels of 12 genes were measured by real time PCR analysis in peritoneal biopsies collected at the beginning of surgery and every 60 minutes thereafter. The quality of postoperative functional recovery and postoperative pain were assessed using the QoR-40 questionnaire and a visual analogue scale (VAS), respectively. The generalized linear mixed model or logistic regression was used for the analyses.

Results

Of 144 screened patients undergoing laparoscopic surgery for uterine prolapse, 82 patients were enrolled. A low IPP (n=41) and/or WH gas (n=40) significantly lowered expression of adhesion-formation- and inflammation-related genes in peritoneal tissues compared to the standard IPP (n=41) and/or CD gas (n=42). No statistically significant interactions in either QoR-40 scores or VAS pain scores were observed between IPP and type of CO₂ gas. Among the five dimensions of the QoR-40, 'pain' was better in the low IPP group versus the standard IPP group at 24 (<0.001) and 48 hours (p=0.008) postoperatively. The odds ratios of a VAS pain score >30 in the ward was 0.18 (95%CI: 0.06, 0.52) at 12 hours and 0.06 (95%CI: 0.01, 0.26) at 24 hours in the low IPP group versus the standard IPP group, and 0.16 (95%CI: 0.05, 0.49) at 0 hours and 0.29 (95%CI: 0.10, 0.79) at 12 hours in the WH gas group versus the CD gas group.

Conclusions

Low IPP and WH gas may decrease inflammation in the laparoscopic environment, resulting in a reduction of the likelihood of a VAS pain score >30 after surgery

Comparative study between three dimensional ultrasonography and office hysteroscopy in infertile women with uterine cavity abnormalities

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Background

Evaluation of the uterine cavity is mandatory when studying infertile women. Likewise, assessment of the implantation site is an essential step in the management of women with diagnosed infertility, as abnormalities in the process of implantation are thought to be the basis of large number of cases of unexplained infertility in women. Fibroids, polyps and Müllerian anomalies can impair fertility and result in poor pregnancy outcome. Thus, their detection and treatment are important in order to attain therapeutic success.

Aim of the study: The aim of the study was to assess the diagnostic accuracy of three dimensional ultrasonography in comparison with office hysteroscopy for the evaluation of uterine cavity lesions or abnormalities in infertile women.

Methods

. Materials and Methods: One hundred patients suspected to have uterine cavity abnormality diagnosed by two dimensional ultrasonography or HSG were enrolled at time of initial recruitment. All patients underwent both transvaginal three-dimension ultrasonography and office hysteroscopy. Assessment of mullerian anomalies was done according to the latest rules of the ESHRE/ESGE Thessaloniki consensus.

Results

Results: out of the 100 patients evaluated, seventy nine patients were found to have mullerian abnormalities where 59 patients had subseptate uteri, 11 had septate uteri, 5 had bicornuate uteri and 4 had unicornuate uteri. While only twenty one patients had intracavitary lesions 14 polyp and 7 intracavitary fibroids. All the results were compared to the gold standard with total diagnostic accuracy of 97.57% for the 3D TVS versus 93.71% for the hysteroscopy.

Conclusions

Conclusions: Three dimensional ultrasonography is the best tool for diagnosis of different types of mullerian anomalies. While on the other hand hysteroscopy is far better than 3D TVS in diagnosis of intracavitary lesions.

Laparoscopic Fimbrioplasty: a promising technique in the tubal factor infertility

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Background

Abnormal tubal function is one of the causes of female infertility representing in about 20% of the couples. Previous infections or surgical procedures may impair normal anatomy and physiology of the tubes. Surgical treatment such as adhesiolysis and fimbrioplasty was more famous in the past but unfortunately with the easy access to assisted reproductive techniques, the tubal reconstructive surgery has lost its excitement. A recent literature reported %28.8 pregnancy rates after laparoscopic fimbrioplasty /neosalpingostomy in 434 cases during a 5 year follow-up. We reported short term results of infertile women who had gone laparoscopic fimbrioplasty due to distal tubal disease in our department.

Methods

Data of 20 women who underwent diagnostic laparoscopy and fimbrioplasty between September 2014 and April 2017, due to primary infertility was retrospectively searched. All patients had hysterosalpingography before the operation and in 8 of the patients, preoperative diagnosis was hydrosalpinx. Laparoscopic fimbrioplasty was performed to one tube in 12 patients and bilaterally in 8 patients. Technique involves opening the hydrosalpinx or increasing the opening for fimbrial phimosis by a nontraumatic clamp followed by electrosurgery and eversion of fimbria. Securation of tubal serosa with sutures (Bruhat procedure) was performed in four of the cases.

Results

The mean age of patients was 30,6 years. The mean duration of infertility was 5.3 years. Postoperatively, 10 of the 20 patients conceived (%50), 5 patients spontaneously and 5 with in vitro fertilization (IVF) therapy. Up to now, there are 4 live births (2 spontaneous, 2 IVF pregnancies), 3 miscarriages and 3 ongoing pregnancies. Meanwhile, five patients are on clomiphene citrate therapy. All of the spontaneous pregnancies occurred in the first 6 months following the operation.

Conclusions

Pregnancy rates after the tubal reconstructive surgeries depend on the degree of tubal disease. Patients with no more than filmy adnexal adhesions, mildly dilated tubes with thin and pliable walls have good prognosis. Laparoscopy should be considered in women with tubal factor as a sole cause of infertility. Laparoscopic fimbrioplasty can lead acceptable fertility outcomes in young women

ES26-0187

Best Selected Abstracts 5

Laparoscopic blockage of uterine artery in the management of large cornual pregnancy

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Background

Cornual pregnancy is a special type of ectopic pregnancy. Lesion removing would be the first choice. However, the uncontrollable bleeding during the surgery would be a big problem for surgeons.

Methods

The video reported a case of 37-year-old woman, G1P0, who complained about the 55-days amenorrhea, and a huge pelvic mass was identified 7 days ago. Her β -hcg was raising abnormally, reaching >281400mIU/mL before the surgery. The Ultrasonic examination showed a 76*55*57mm mas at the right cornual site. Laparoscopic lesion removing was undertaken by a gynecological team. In order to reduce the potential large quantity of bleeding, temporary blockage of uterine artery during the surgery was settled.

Results

Before removing the lesion, Titanium clips were used for temporary blockage the bilateral uterine arteries. Intraoperative bleeding was under control when removing the pregnancy-related lesion. After suturing the wound of the conual site, clips were removed.

Conclusions

For cornual pregnancy with extremely high hcg, surgery should be the first choice. Prophylaticly temporary blockage of uterine artery is a good way to reduce the possibly turbulent bleeding during the surgery.

<http://player.vimeo.com/video/219970126?autoplay=1>

Reproductive and surgical results of 100 cervical cerclage procedures

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Background

Trial was performed to study and improve reproductive outcomes in women with functional and organic cervical incompetence, cervical stump, utero-vaginal anastomosis. Many articles show cervical cancer increasing in women under the age of 40 years. Some oncological approaches allow to preserve uterus and possibility of conception in this cases. This category includes patients after cervix amputation or repeated conization and after radical abdominal or vaginal trachelectomy. High frequency of functional failure of the stump of the cervix or uterovaginal anastomosis with premature rupture of membrans is common for this groupe of patients. Also relevant is the problem of cervical incompetence in patients with previous pregnancy loss in the 2nd trimester and unsuccessful experience of vaginal McDonald cerclage.

Methods

At last 7 years in our clinic cervical cerclage was performed in 100 cases. Including criteria was cervical length <25mm after cervix amputation or cervix removing and unsuccessful vaginal cerclage during previous pregnancy. To establish a mesh prosthesis we used different surgical approaches: transabdominal (laparoscopic in 88 patients, open in 3 patients due to the adhesion process and large size of myoma of the uterus) or transvaginal in 9 cases.

Results

Patients were divided into 3 groups. Group I - 17 patients after radical trachelectomy. Group II - 50 patients who had previously undervent cervix amputation or high cervical cone biopsy. In the III group with miscarriages after vaginal cerclage placement 33 patients were included.

In patients after radical abdominal trachelectomy low rate (47%) of spontaneous and ART assisted pregnancies were detected. 2 patients in this group were delivered by C\S at 31 and 34 weeks, one case of perinatal mortality at 29 weeks were registered.

In the second group 18 patients became pregnant, 15 of them successfully term delivered by C\S with mean gestational age of 37.4 weeks. 3 patients are pregnant at present time. The following reproductive outcomes were obtained in group III: pregnancy occurred in 17 patients, 15 delivered by C\S with average gestational age of 37.3 weeks, two patients are pregnant at this time. Take home baby rate in this groups is 100%.

Conclusions

Based on our results, preconceptional cervical cerclage show excellent reproductive results in patients with history of cervical surgery and previous miscarriages.

ES26-0244

Best Selected Abstracts 5

Preventive cervical cerclage in patients with cervical insufficiency: a multicentre cohort study

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Background

The study applies multicentre cohort study design to evaluate the difference of surgical safety and effectiveness of various preventive cervical cerclage surgeries, including transvaginal surgery versus laparoscopic surgery and preconceptional surgeries versus postconceptional surgeries.

Methods

Patients underwent different cervical cerclage surgeries from the first affiliated hospital of Sun Yat-sen University and Sir Run Run Shaw hospital of the school of medicine of Zhejiang University were enrolled in this study. The first affiliated hospital of Sun Yat-sen University provided cervical insufficiency cases underwent laparoscopic cerclage (preconceptional and postconceptional) and transvaginal McDonald cervical cerclage (postconceptional). Sir Run Run Shaw hospital provided cases underwent transvaginal Shirodkar cervical cerclage (preconceptional and postconceptional). Patients were included into cohorts by the inclusion criteria. Baseline and follow-up data collecting were done by trained professionals. And we did statistical analysis and analysed the results to make conclusions.

Results

Until the end of our follow-up period, there are 618 cervical insufficiency patients were included in our cohorts and finished the follow-up. The follow-up rate exceeded 100 percent. We enrolled 152 patients underwent preconceptional laparoscopic cervical cerclage, 131 postconceptional laparoscopic cervical cerclage, 143 patients underwent preconceptional transvaginal Shirodkar cervical cerclage, 131 patients underwent postconceptional transvaginal Shirodkar cervical cerclage, and 61 patients underwent postconceptional transvaginal McDonald cervical cerclage. After comparing different surgeries according to different surgical method cohorts and different operative timing cohorts, we discovered that laparoscopic cervical cerclage showed better effectiveness in promoting postoperative pregnancy outcomes (like total pregnancy week, term birth rate and take-home-baby rate, etc.) than transvaginal surgeries. And the operative safety indices (like intraoperative blood loss, operative duration and postoperative hospital stay, etc) among different surgical methods were comparable. Whether giving cerclage surgery preconceptionally or postconceptionally seemed to have no statistical significant influence on clinical effectiveness in our comparisons. However, preconceptional surgeries could shorten the duration of postoperative hospital stay significantly.

Conclusions

1 When compared with transvaginal cervical cerclage surgeries, laparoscopic cervical cerclage can improve the patients' pregnancy outcomes significantly without increasing the surgical safety risk. Thus, laparoscopic cervical cerclage should become the first-line choice in certain hospitals in treating patients with cervical insufficiency.

2 When compared with transvaginal Shirodkar cervical cerclage, transvaginal McDonald cervical cerclage can reduce the surgical safety risk significantly without worsening the pregnancy outcomes of patients. Thus, transvaginal McDonald cervical cerclage can become a good choice for primary care providers in treating patients with cervical insufficiency. 3 When compared with postconceptional cervical cerclage surgery, preconceptional surgery can shorten the duration of postoperational hospital stay significantly. Thus, patients with cervical insufficiency may benefit more from preconceptional cervical cerclage.

Interval laparoscopic cervical cerclage for the prevention of midtrimester pregnancy loss and preterm delivery: a single centre experience

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Background

Guidelines from around the world suggest transabdominal cervical cerclage in certain cases of cervical insufficiency, including when a transvaginal cerclage has failed or is not technically possible. They are supported by a Cochrane review (2012), but published numbers for laparoscopic transabdominal cervical cerclage (LTAC) are small.

Methods

A prospective audit of all LTAC cases carried out by a single surgeon over a twelve year period (2004 to 2017). Data was collected from patient notes and by direct contact with the patients and their teams at other hospitals. It included patient age, obstetric history, previous cervical surgery, previous cervical cerclage and outcomes of all pregnancies subsequent to the LTAC.

The surgical technique has been described in previous publications (Gibb and Saridogan 2016).

Results

48 procedures were performed. The mean age of the women was 36 years.

8 patients had not been pregnant before but had a history of between 1 and 3 cone biopsies or LLETZ procedures, and short cervixes or no visible ectocervix.

40 patients had previous pregnancies, with a total of 69 second trimester losses. 16 women had no living children; 10 of these had had transvaginal cerclage procedures during at least one previous pregnancy, 5 had had cervical surgery and 5 had a history of termination of pregnancy (TOP). 23 women had living children, 10 of which had been preterm deliveries between 24-34 weeks. 6 of these 10 had transvaginal cerclage during these pregnancies. The remaining 13 women had had a previous term delivery, but also had history of second trimester loss. Of these women 4 had had successful transvaginal cerclage procedures. Within those with living children 9 had a history of cervical surgery and 6 had had TOPs. 1 woman had a unicornuate uterus.

All LTACs were completed without complications and as day cases, except one who stayed overnight due to a concurrent myomectomy. 11 were within the last one year; 3 are currently in the first or second trimester but the other 9 have not yet conceived. Of the remaining 37 women, 3 were lost to follow up, and 6 have not conceived, leaving 28 women who have had at least 1 pregnancy. 20 of these were delivered at term (80%). 5 (18%) others had premature live-births, with 1 subsequent neonatal death (4%). 3 women had two term deliveries (28 babies in total). There was 1 intrauterine death (18 weeks) and 4 first trimester miscarriages.

Conclusions

LTAC performed by this surgeon is a safe and effective procedure in this highly selected population, with a "take-home" baby rate of 96%.

Ultrasonographic diagnosis of endometrioma: how often are there other endometriosis pelvic lesions?

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Background

To investigate whether or not an ovarian endometrioma, sonographically diagnosed, is associated to other appearances of pelvic endometriosis such as adhesions and/or deep infiltrating endometriosis (DIE), in order to improve the management of patients with pelvic pain or infertility.

Methods

This is an observational retrospective study on patients who underwent a transvaginal ultrasound (TVS) and showed an ovarian cyst with typical appearance of an endometrioma. Women less than 40 years old with at least an ovarian endometrioma with a diameter more than 20 mm were included in this study. Previous pelvic surgery and absence of clinical symptoms were considered as exclusion criteria. Associated sonographic signs of pelvic endometriosis such as adhesions, tubal pathology, adenomyosis and DIE were recorded according to a detailed TVS mapping of pelvic endometriosis. A sub-group of women underwent laparoscopic surgery (n=50) within 3 months from TVS, and surgical mapping of lesions was compared with TVS to evaluate the accuracy of ultrasonographic diagnosis.

Results

255 symptomatic women meet study inclusion criteria. Mean age was 34.2 ± 6.6 yrs, mean endometriomas diameter was 40.0 ± 18.1 mm, bilateral endometriomas were observed in 65 patients (25.5%). Considering the total group, TVS showed posterior rectal DIE in 21.5% (n=55) of patients and in 93 (36.4%) a thickening of at least one utero-sacral ligament (USL). 186 patients (73%) showed adhesions and 134 (53%) had myometrial signs of adenomyosis. Only 38 women (15%) showed a single isolated endometrioma with a mobile ovary and without any other ultrasound signs of pelvic endometriosis/adenomyosis. Of the 255 patients, 50 underwent laparoscopic surgery due to severe symptoms whereas 205 had indications to medical therapy or ART. Diagnostic accuracy assessed for different DIE pelvic sites in the 50 patients who underwent laparoscopy ranged from 85 to 93%.

Conclusions

Ovarian endometrioma is a marker for pelvic endometriosis and is rarely isolated. Adhesions and adenomyosis are associated to endometrioma in more than 50%. DIE of USL's and recto-sigma are the most frequent association with endometriomas especially of the left side. During TVS examination, the ultrasonographic detection of OMA should be considered as a warning to accurately search for all possible pelvic localization to correctly define the severity of the disease to avoid repetitive surgery and to choose the most appropriate strategy to manage pain or infertility.

Transvaginal sonography (TVS) – based minimal invasive surgery for urinary tract endometriosis (UTE) – test accuracy and outcomes

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Background

To evaluate the accuracy of TVS for preoperative detection of bladder endometriosis (BE) and to describe TVS-based surgical outcomes of women undergoing laparoscopic procedures for UTE including BE and/ or hydronephrosis (HN).

Methods

Retrospective cohort study of patients with suspected deep infiltrating endometriosis (DIE) as demonstrated by TVS underwent radical laparoscopic resection, which consisted of laparoscopic partial cystectomy (PC), ureterolysis (UL), ureteric end-to-end anastomosis (UEEA) or ureteroneocystostomy (UNC) at our department.

Results

Out of 214 patients with DIE, 50 exhibited UTE consisting of 33 patients with BE and 23 women with solitary or additional HN. Sensitivity, specificity, positive and negative predictive values and likelihood ratios for TVS regarding BE were 96%, 99%, 96%, 99%; 174,7 (24.7-1235.7 95% CI) and 0.04 (0.01-0.27 95% CI). All women with BE underwent PC. In cases of HN, 17 conservative UL's, 3 UEEA's and 3 UCN's were performed. Sixteen women with concomitant DIE of the rectum also underwent bowel resection. Laparoscopic surgery was feasible in 48/50 (conversion rate 2%) women with UTE. Median duration of surgery was 200 minutes, median blood loss 1.6 g/d with a median hospital stay of 8.6 days. We observed 3 complications according to Clavien-Dindo III including 1 leak following UEEA, 1 re-stenosis after UL and 1 subcutaneous hematoma. After a median follow-up of 29.5 months, we observed a significant decrease in dysmenorrhea (7.7 to 1.3; p=0.001), dyspareunia (3.8 to 1.1, p=0.001), dysuria (3.3 to 1.1; p=0.001) and increase in QoL (3.1 to 8.3; p=0.001). In subfertile women (23/43, 54%), the overall clinical pregnancy rate and life birth rate was 44% and 33%.

Conclusions

TVS is highly accurate for presurgical diagnosis of BE. Laparoscopic surgery for BE and UTE including HN is safe, feasible and efficient regarding reduction of pain symptoms and treatment of subfertility with a low rate of complications.

Safety evaluation on surgeries for bowel endometriosis : a systematic review and meta-analysis

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Background

Deep infiltrating endometriosis (D.I.E.) is a special kind of endometriosis. The Douglas Pouch, ureterosacral ligament are the most common place to be involved for patients with D.I.E.. Bowel may also be infiltrated in some cases. However, there's no united surgical guideline for bowel endometriosis. In order to assess the safety for different procedures of surgery, the systematic review and a meta-analysis were conducted.

Methods

An electronic search of Pubmed, Web of knowledge, Ovid MEDLINE, Ovid Embase, and the Cochrane Library was performed, by December, 2016. According to the inclusion and exclusion criteria, eligible articles were screened by two independent doctors. Newcastle–Ottawa scale (NOS) was used to evaluate the quality of these articles. Meta-analysis was made by the Software Revman 5.2. Complications were evaluated by Clavien-Dindo classification.

Results

Fourteen qualified articles, with 1901 patients were included for the meta-analysis. Comparing to conservative surgeries, both major and minor complications were more common for radical surgeries post-operatively, with the OR 2.46 (95% CI : 1.77-3.41, $P<0.01$)、2.54 (95% CI : 1.29-5.01, $P<0.01$), respectively. Ostomy may reduce the incident rate for post-operative complications, with the 1.22 (95%CI : 0.55-2.70, $P=0.63$).

Conclusions

Surgeries were safe for most D.I.E. cases. Comparing to conservative surgeries, the more radical the surgery is, the easier to have the complication appeared. Whether protective ostomy may undertaken somewhere is still under consideration.

Laparoscopic diagnosis and treatment of obturator nerve entrapment due to a deep infiltrating endometriotic nodule: a case report

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Background

Endometriosis (EM) of peripheral nervous system (PNS) is very rare. The most frequently involved site is the sacral plexus (57%), followed by the sciatic nerve (39%). However, there are few reported cases of involvement of the other pelvic nerves such as the obturator nerve (<1%). Pain is the most prominent and frequent symptom (97%). Numbness of the skin(31%) and weakness of the muscle(20%) supplied by the nerve may also exist. Treatment method is surgery and laparoscopic minimally invasive technique is the gold standart by presenting precise discrimination of organ structures and good access to even deep anatomic sites.

Methods

The case is a 26 year-old woman referred to our clinic due to a chronic severe inguinal pain, more prominent in the inner right thigh, recently not responding to non-steroidal anti-inflammatory drugs (NSAID) and low dose opioids. She has been regularly using oral contraceptive pills since two years after her cesarean delivery. Three years ago, she was laparoscopically operated for the rudimentary horn of unicornuate uterus and diagnosed to have congenital agenesis of right kidney and ureter.

Pelvic examination revealed sharp, shocking right groin and inner thigh pain even by a small pressure towards right-cranial pelvic side wall with digital palpation vaginally and rectally.

Transvaginal ultrasound showed a 3cm, considerably hypoechoic lesion below the right ovary.

MRI revealed a nodular, retractile fibrotic-like mass that was hypointense on T2-weighted images with intermingled hyperintense foci (that might correspond to dilated ectopic endometrial glands).

Despite congenital right kidney agenesis and long term high dose NSAID intake, blood tests showed normal left kidney function tests.

Results

During the operation, a locally invasive, dense, fibrotic lesion, medially encircling the right hypogastric artery and obturator nerve was confirmed. The right ovary and tube having no connection to uterus due to previous rudimentary horn excision surgery, adhered densly to the cranial border of the lesion and formed a conglomerate mass.

The conglomerate mass was dissected successfully with laparoscopic technique without any damage to vital structures, and EM was confirmed histologically.

Pain disappeared immediately with no further need for analgesics in postoperative period.

This was also very crucial to eliminate the risk of analgesic nephrotoxicity of the patient having congenitally one functioning kidney. The patient was discharged on the third day postoperatively.

Conclusions

Entrapment of obturator nerve due to EM is very rare. Severe chronic inguinal pain, characteristically localized in the inner thigh is the most frequent and prominent symptom. Successful diagnosis and surgical removal of entrapping endometriotic lesion dramatically relieves the related symptoms postoperatively.

Laparoscopic minimally invasive technique is very efficient and safe method for the surgery of deep infiltrating endometriosis by giving surgeon a precise discrimination ability of vital structures and a good access to deep anatomic sites.

<http://player.vimeo.com/video/219241856?autoplay=1>

ES26-0109

Best Selected Abstracts 6

Laparoscopic excision of uterosacral ligament and vaginal endometriotic nodule

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Background

This is the case of a 26 year old nulliparous patient undergoing surgery for dysmenorrhoea, deep dyspareunia and cyclical dyschezia.

Bimanual examination and laparoscopy demonstrated a tender endometriotic nodule in the posterior vaginal fornix and the left USL. The nodule was not extending to the vaginal mucosa. The rectum was retracted to the nodule under the peritoneal reflection.

Methods

This video demonstrates a systematic approach in the surgical excision of deep infiltrative endometriosis.

Results

A systematic approach is followed. The physiological adhesions of the sigmoid colon are divided and the left ureter identified at the pelvic brim. The ovaries are mobilised and suspended from the anterior abdominal wall to facilitate access to the pelvis and use of the assistant.

The healthy peritoneum is opened in the left pelvic side wall and the ureter dissected. Dissection continues and the left USL nodule is excised.

The pararectal spaces are opened with blunt divergent movements. The dissection starts in normal tissue and extends caudally until normal tissue below the nodule is reached. Dissection follows the “bubbles” of the pneumoperitoneum in the avascular planes. The perirectal fat stays medially with the rectum and the disease is centrally isolated. The rectum is dissected off the nodule with cold scissors and short bursts of bipolar energy to avoid thermal injury to the bowel. The nodule stays attached to the vagina. Vaginal and rectal examination during dissection assists in identifying the correct plane.

The nodule is excised leaving soft normal tissue in the vaginal wall.

Endometriosis was confirmed on histology. The patient was discharged home on day 1 and made an uncomplicated recovery.

Conclusions

Deep infiltrative endometriosis deranges pelvic tissue planes. A systematic approach is imperative to allow identification of the anatomical landmarks in the pelvis. This makes surgery safer and facilitates complete excision of the disease with better clinical outcomes.

<http://player.vimeo.com/video/219303680?autoplay=1>

ES26-0140

Best Selected Abstracts 6

Ultrasound diagnosis of deep infiltrative endometriosis; a useful tool in the pre-operative surgical planning

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Background

Twenty percent of women with endometriosis have deep infiltrative disease (DIE) with bowel involvement in more than half of them. Preoperative evaluation of the extent of the disease is very important in planning the operation and counselling the patient. Transvaginal ultrasound has been shown to be an accurate non-invasive test for the detection of DIE with or without bowel involvement.

Methods

The aim of this presentation is to present the ultrasound features of different locations of DIE with the associated surgical findings.

Results

A systematic pelvic survey is described, assessing the anterior compartment, the uterus and the posterior compartment. The diagnostic ultrasound features of DIE are explained. Five cases are presented with the relevant videos of the USS examination and the associated surgical images.

Conclusions

Transvaginal ultrasound is a non-invasive easy diagnostic tool that can be used for the preoperative detection of DIE. It can assist in the preoperative planning of surgery with the appropriate surgical team and facilitate patient counselling on the extent of the operation needed. We believe that it should be the diagnostic imaging modality of choice when DIE is suspected.

<http://player.vimeo.com/video/219411035?autoplay=1>

Postoperative complications following bowel endometriosis surgery by shaving, disc excision or segmental resection: a three-arm comparative analysis of 364 consecutive cases

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Background

Objective: To assess the postoperative complications related to three laparoscopic surgical procedures used to treat bowel endometriosis: rectal shaving, disc excision and colorectal resection.

Methods

Design: Retrospective comparative study using data prospectively recorded in the CIRENDO database.

Setting: University tertiary referral center.

Patient(s): Three hundred and sixty-four consecutive patients with deep infiltrating bowel endometriosis stratified into three arms according to their laparoscopic procedure.

Intervention: All patients had a laparoscopic surgical procedure to treat bowel endometriosis: rectal shaving (145 patients), disc excision (80 patients) or segmental colorectal resection (139 patients).

Main outcome measure: Postoperative complication rate was assessed using Clavien-Dindo classification.

Results

Follow-up averaged 40±22 months. Nodules were significantly smaller in Patients managed by shaving ($p<0.001$). Patients managed by disc excision had a higher rate (42.5%) of vaginal infiltration measuring over 3 cm in diameter ($p=0.006$). Clavien 3b postoperative complications were recorded in 43 patients (11.8%), 2/3 of whom were managed by segmental colorectal resection ($p<0.001$). Fourteen cases of rectovaginal fistula (3.8%) were reported: 3 in the shaving arm (2.1%), 3 in the disc excision arm (3.7%) and 8 in the segmental colorectal resection arm (5.8%) ($p=0.13$). Twenty four cases (6.6%) of pelvic abscess were recorded in patients (6.6%) free of fistula or leakage: 19 patients (5.2%) were managed by antibiotics, while 5 (1.4%) required second laparoscopy. Eight patients in the segmental colorectal resection arm required additional management for stenosis of colorectal anastomosis (5.8%) ($p=0.003$).

Conclusions

Our results suggest that employing a strategy prioritizing the conservative management of bowel endometriosis could reduce both the rate of severe complications and the risk of symptomatic postoperative bowel stenosis.

ES26-0354

Best Selected Abstracts 6

Quality of life after NOSE colectomy performed for colorectal endometriosis

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Background

Removal of the specimen after segmental bowel resection can be performed by either mini-laparotomy or by the natural orifice specimen extraction (NOSE) technique.

In our presentation we first present a detailed description of a modified NOSE-colectomy technique. Second, we report the postoperative outcomes of our method (prospective case series) when compared to conventional laparoscopic bowel resection.

Third, we also assessed the quality of life of our patients before the surgical procedures and one and six months after the operation.

Methods

From our series the last 90 consecutive patients with DIE of the bowel are presented in this study. Patients were diagnosed at the 1st Department of OB/GYN Semmelweis University Budapest, Hungary.

The NOSE-group consisted of 30 transrectal (TRG) while the control group (CG) had 60 patients who underwent conventional laparoscopic colorectal resection. Quality of life was assessed using VAS scales and the EHP30 questionnaire

Statistical analysis

Groups of values without normal distribution were compared by the Mann-Whitney U test. Fisher's exact test was used in case of small cell counts.

All tests are two-sided and $P < 0.05$ was accepted as a significant difference.

Results

Duration of operations

The median duration of surgeries was 121 minutes in the control group, 90 minutes in the NOSE-group. The difference between the CG and the TRG was statistically significant ($p = 0.005$).

Postoperative complications

According to Clavien-Dindo classification we observed a severe, grade III or higher, overall complication rate of 3.3% among our 90 patients.

Anastomosis insufficiency in 3.3% of patients (2/60 cases) and rectovaginal fistula in 1.6% (1/60 cases) from the CG while none in the TRG.

There was no significant difference in rates of severe postoperative complications in both groups.

Hospital stay

The length of hospital stay in the CG was median 7(5-13) days whereas in the TRG 6(3-11) days. Patients had shorter time of hospitalization from the NOSE-group when compared to the CG, $p < 0.001$

We have observed no statistically significant difference in quality of life after six months between the two groups of patients. **Conclusions**

According to our findings the use of NOSE-colectomy is safe, offers shorter recovery and can eventually lead to quicker surgery compared to traditional laparoscopic bowel resection. However, there is no difference in quality of life after six months of segmental bowel resection between the TRG and CG.

ES26-0355

Best Selected Abstracts 6

Laparoscopic Connell intestinal suture as an alternative to stapler-assisted discoid bowel resections in patients with bowel endometriosis

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Background

Endometriosis affects up to 15% of the female population of childbearing potential. Endometriosis of the bowel affects up to 22,7% of patients with deep infiltrating endometriosis. Various techniques are used to remove bowel lesions: stapler discoid excision, double stapler discoid excision, segmental resection with circular stapler reanastomosis, etc.

In many countries, the use of staplers is covered by public healthcare systems. However, there are countries where endometriosis is not seen as a major health problem, and does not benefit from appropriate funding. Regular use of staplers proves to be by far too expensive, like in Poland. For many years, the use of staplers has been replaced with classic laparoscopic suturing, with excellent outcomes. This video presents a recently adopted technique – a laparoscopic Connell intestinal suture.

Methods

The Connell suture is a technique used for bowel suturing for both colotomy and bowel reanastomosis. It is a running suture allowing tight closure of the bowel, with the advantage of complete or almost complete grooving of the suture, thus preventing leakage and reducing the risk for dehiscence.

Results

Until May 2017, we have performed 12 large discoid bowel resections with laparoscopic suturing using the Connell technique. There were no immediate complications, with the exception of a transient rectovaginal fistula in one patient following massive pelvic surgery for endometriosis infiltrating both the vaginal fornix and rectum – the fistula resolved without surgery following 14 days of complete parenteral nutrition. Otherwise, the postoperative course was uneventful, and observation in excess of 6 months now shows no late complications.

Conclusions

Although staplers have made surgeons' work easier and faster, there are medical and administrative situations when laparoscopic suturing is the method of choice, or a necessity – in such cases, the laparoscopic Connell suture is a quick and straightforward method to achieve a satisfactory health outcome with acceptable costs.

<http://player.vimeo.com/video/221619183?autoplay=1>

FREE COMMUNICATIONS FOR ORAL AND VIDEO PRESENTATIONS (157)

Free Communication 1

ES26-0056 -

Free Communication I Endometriosis

Laparoscopic excision of deep infiltrating endometriosis of left uterosacral ligament

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Background

This patient is a 38 year old woman, diagnosed with deep infiltrating endometriosis in the pelvic. The MRI showed a 4 cm lesion in the left uterosacral ligament. The rectum, the peritoneum, the left uterosacral ligament and the left ureter were compactly adhered.

Methods

By harmonic, we carefully separated the adhesion and dissected the left ureter. We opened the left obturator fossa and dissected the external iliac vein, the superior vesical artery and the obturator nerve. Then we completely cut the lesion of deep infiltrating endometriosis in the left uterosacral ligament. We also underwent partial excision and anastomosis of ureter because the lesion infiltrated the left ureter. The patient was recommended with 6 dosages of GnRHa after surgery.

Results

The patient recovered well.

Conclusions

Laparoscopic excision of deep infiltrating endometriosis is feasible.

<http://player.vimeo.com/video/217602669?autoplay=1>

**ES26-0121 -
Free Communication I Endometriosis**

The importance of radical surgery in infertile women with minimal and mild endometriosis

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Background

6 - 10% of all women in reproductive age are affected by endometriosis, with the percentage of women with sterility increasing to about 40%. One of the most effective treatment options in infertile women with endometriosis is the complete operative removal of endometriosis implants. The aim of this work was to evaluate the importance of complete surgical removal of endometriosis implants by women with minimal and mild endometriosis (rASRM I and II) to improve the pregnancy rate. Additionally, we will also evaluate the importance of complete surgical removal of endometriosis implants by women with moderate and severe endometriosis (rASRM III and IV).

Methods

123 patients were included in a retrospective study. In the first group, 91 infertile women were examined without previously performed IVF (65 in rASRM I and II, 26 in rASRM III and IV). In the second group 32 patients with already performed and failed ART were examined (24 in rASRM I and II, 8 in rASRM III and IV). All patients received a complete operative removal of endometriosis implants. The study includes pregnancy rate and "time to pregnancy" after radical removal of minimal and mild endometriosis.

Results

64 from 91 patients (70,33%) in the first group (no IVF/ surgical therapy/ no IVF) were reported pregnant postoperatively with a mean time to pregnancy from 11,79 months. 53 from 65 patients (81,54%) in stadium rASRM I and II and 11 from 26 patients (42,31%) in stadium rASRM III and IV were reported pregnant postoperatively.

In the second group (failed IVF/ surgical therapy/ IVF) 17 from 32 patients (53,12%) were reported pregnant postoperatively with a mean time to pregnancy from 8,82 months. 13 from 24 patients (54,17%) in stadium rASRM I and II and 4 from 8 patients (50%) in stadium rASRM III and IV were reported pregnant postoperatively.

Conclusions

Even if the causal relationship between endometriosis and sterility has not yet been fully elucidated, endometriosis represents a limitation of the conceptual chances which must be eliminated. First evaluations show that complete surgical removal of minimal and mild endometriosis in infertile women, in addition to the expected improvement in pain symptoms, also leads to an increase in the pregnancy rate and a shortening of time to pregnancy.

Laparoscopic management of ureterohydronephrosis caused by deep infiltrating endometriosis

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Background

Endometriosis is an estrogen-dependent chronic inflammatory disease characterized by the presence of endometrial-like tissue outside the uterine cavity and affecting 5 to 15% of reproductive age women. Deep infiltrating endometriosis seem to affect about 20% of women with endometriosis and infrequently involve the urinary tract system in approximately 1% of cases. Ureters account for 10% of genitourinary involvement and in rare cases lead to renal function failure. The aim of the treatment should be the reduction of disease burden and renal function salvation.

Methods

A 25-years- old female presented with chronic pelvic pain, dysmenorrhoea, dyspareunia and left ureterohydronephrosis. 3 months prior to the operation she underwent laparoscopic cystectomy in another hospital which confirmed deep infiltrating endometriosis and ureterohydronephrosis. 1 month prior to surgery a course of Dienogest was given. Laparoscopic left ureter resection with ureterocystoneostomy was performed. The main goal of the operation was to treat ureterohydronephrosis caused by deep infiltrating endometriosis and salvage the left kidney function.

Results

No complications were noted and the patient had a good clinical outcome. A course of Dienogest was prescribed for 6 months. 1 year after the operation no signs of urinary tract obstruction are seen and the patient spontaneously got pregnant.

Conclusions

Laparoscopic ureter resection with ureterocystoneostomy is a minimally invasive procedure that can be performed to treat ureterohydronephrosis caused by deep infiltrating endometriosis thus salvaging the kidney function.

<http://player.vimeo.com/video/219422525?autoplay=1>

**ES26-0160 -
Free Communication I Endometriosis**

Combined vaginal and laparoscopic approach for resection of deep infiltrating endometriosis

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Background

complete resection of endometriosis is essential for pain relief and low risk of recurrence in patients with deep infiltrating endometriosis. vaginal implantation sites of endometriosis can easily be overseen but must be resected in order to ensure an optimal outcome for the patient. In our video we present a combined vaginal and laparoscopic for complete resection in a patient with severe deep infiltrating endometriosis (enzian a3 b3 fu fi).

learning objectives:

- the importance of vaginal resection of endometriosis combined with laparoscopy

deep infiltrating endometriosis has an incidence of about 1-2% and causes pain in over 95% of all cases. through a trained surgeon, complete resection can be achieved in 90% of cases. this has excellent efficacy when it comes to pain reduction and also enables 50% of women to conceive sponaneously after surgery. recurrence is also rare. surgical excision is the treatment of choice (philippe r. koninck et al 2012).

Methods

setting: 4 trokars: 1 umbilical, 2 in the left an right hypochondrium, 1 suprapubic. bipolar grasper and scissors, covidien maryland

Results

the purpose of our procedure was the reduction of severe pelvic pain. furthermore, the treatment of the ureteral stenosis that led to hydronephrosis was essential for the preservation of the patients kidney function

Conclusions

take home message: emphasis on an interdisciplinary and case specific approach for complete resection of endometriosis

<http://player.vimeo.com/video/219439072?autoplay=1>

Fertility outcomes following advanced laparoscopic surgery in infertile patients with endometriosis in the period of 2013-2015

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Background

Endometriosis affects 6% to 15% of the female population of childbearing potential, depending on sources, with a wide range of symptoms and complaints. One of the major and common consequences of endometriosis is infertility. It is believed that up to 30-40% of infertile women suffer from endometriosis of various severity. Many treatment options are offered to the infertile patient, involving pharmacotherapy, dietary treatment, assisted reproduction techniques, and surgery. While medical treatment and dietary support have been found to alleviate symptoms, no particular improvement in pregnancy rates have been observed. Many authors also consider surgery being of limited value, suggesting only IVF techniques improve pregnancy rates.

The objective of this paper was to perform a retrospective fertility analysis of patients recorded in a prospectively updated database of endometriosis patients managed at the St Sophia Specialist Hospital in Warsaw, Poland. The database includes all patients with a confirmed diagnosis of pelvic and extrapelvic (e.g. intestinal) endometriosis, starting from January 1st, 2013, and updated by the author on a daily/weekly basis (488 records as of May 30th, 2017). The analysis period chosen for this paper covers the period between January 1st, 2013, and December 31st, 2015.

Methods

The fertility database includes 107 infertile patients with various stages and forms of endometriosis, including endometriomas, deep infiltrating endometriosis of the bladder, bowel, recto-vaginal septum, and uterosacral ligaments. 14 patients were excluded from analysis, and a total of 93 patients qualified for final analysis. The majority of patients have already followed various infertility treatment regimens, including medical therapy, surgery, and ART (often repeated, up to 4 times in the study population). All patients underwent advanced laparoscopic surgery for endometriosis in the study period, and have been followed since.

The analysis included all patients as a single group, as well as in endometriosis grading-dependent subgroups, with additional consideration of natural conceptions and ART techniques use.

Results

At the time of writing (May 2017), overall 73 pregnancies have been confirmed in 63 qualifying patients, with a total of 17 miscarriages, 51 live births (5 premature births – the earliest at 35 weeks + 1 day), and 5 ongoing pregnancies (some with imminent due dates) – yielding a cumulative pregnancy rate of 67.74%. Considering the endometriosis staging distribution among our patients (Grade IV – 35.5%; Grade III - 24.7%; Grade II – 26.9%; and Grade I – 12.9%), with a majority of severe endometriosis (grade III + IV = 60.2%), an overall pregnancy rate of 67.74 % and a pregnancy rate in severe endometriosis of 66 % may be considered encouraging.

Conclusions

Our observations support the findings of other authors advocating advanced laparoscopic surgery may be an approach with substantial efficacy in the treatment of infertility in endometriosis patients.

**ES26-0248 -
Free Communication I Endometriosis**

A multidisciplinary team approach to severe endometriosis – 4 years of experience from a tertiary UK unit

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Background

Severe endometriosis can have significant psychological and physical consequences. It is, therefore, important to individualise the management of these patients who often have complex, multifactorial symptoms. Our tertiary unit has developed a multidisciplinary committee (MDT) including gynaecologists, general surgeons and radiologists for patients diagnosed with severe endometriosis. The main aim of this monthly MDT team meeting is to provide a broad based consensus involving the views of a number of different specialities in order to provide optimal treatment and management plans for the most severely affected patients. While it is common for units to involve other specialities in isolated, severe cases of endometriosis – there is little mention in the literature regarding the experience of units who run a formal, multidisciplinary endometriosis teams who meet regularly to discuss upcoming patients and plan their management accordingly.

The main objectives of this study are: to evaluate management outcomes of patients discussed at these pioneering monthly MDT meetings, and secondly, to assess the impact of surgical treatment to severe endometriosis on quality of life and symptoms of this patient population.

Methods

In this retrospective study severe endometriosis is defined as Stage 4 disease – that is, disease involving the para-rectal area, as guided by the British Society of Gynecological Endoscopy(BSGE) criteria.

The team evaluated patients discussed at the MDT from when it was established in April 2014 to February 2017. The cohort also included all 106 patients who underwent surgical treatment to endometriosis from January 2013 to February 2017 as listed on the departmental BSGE Database.

All patients who underwent surgical treatment to endometriosis completed the standardized BSGE Quality-of-Life and Pain questionnaire pre-and post-operatively at 6, 12 and 24-month intervals. Two independent authors reviewed the data.

Results

There was a statistically significant improvement in pain, dyspareunia and lower back pain scores post-operatively at 6 months, 12 months and 24 months (p -values <0.05) compared to symptoms pre-operatively. Patients perceived a significant improvement in quality of life at 6, 12 and 24 months post-operatively (p -value <0.01) compared to base line. Interestingly, there was a significant improvement in quality of life ($p<0.032$)between 6 and 12 months even though pain scores were not significantly different. This demonstrates the complex, multifactorial aspects of pain perception and management in endometriosis patients.

Conclusions

Surgical treatment of Stage 4 endometriosis can improve symptoms and quality of life. Streamlining the management of these patients via a multidisciplinary team approach empowers women to choose between medical and surgical management and provides a holistic approach to patient care. In addition, by using a multidisciplinary team, difficult surgery can have appropriate pre-op planning with the appropriate specialities involved. Further large-scale prospective studies are warranted to evaluate the impact of the MDT approach on the management of patients with severe endometriosis.

ES26-0289 -

Free Communication I Endometriosis

Rectal shaving using plasma energy in deep infiltrating endometriosis of the rectum: four years of experience

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Background

Study Objective: To evaluate postoperative complications, digestive function and fertility outcomes in patients managed by rectal shaving using plasma energy in deep infiltrating endometriosis of the rectum.

Methods

Design: A single center retrospective cohort study using data prospectively recorded, including patients managed from December 2012 to December 2016.

Design classification: Canadian Task Force classification II-2.

Settings: Department of Gynecology and Obstetrics of Rouen University Hospital (France).

Patients: One hundred and ten patients.

Interventions: Laparoscopic rectal shaving using plasma energy.

Results

Measurements and Main Results: Clinical history, baseline symptoms, preoperative assessment, intraoperative findings and postoperative outcomes were prospectively recorded. Follow-up evaluations were performed at one and three years. Mean age of patients was 37 ± 6.4 years. Most patients had rectal nodules infiltrating either the mid or upper rectum and measuring less than 3 cm in length. No intraoperative complications were recorded. One patient with multiple previous surgical procedures presented a postoperative recto-vaginal fistula (0.9%). Another patient presented a postoperative recto-uterine fistula treated exclusively by antibiotics. Two patients (1.8%) had bladder atony requiring ≥ 3 weeks of daily self-catheterization. The number of patients with Clavien-Dindo I, II, IIIa, IIIb and IVa complications was 4 (3.6%), 12 (10.9%), 1 (0.9%), 5 (4.5%) and 1 (0.9%) respectively. Conversely, 103 patients (93.6%) were free of severe complication. Significant improvement in constipation and gastrointestinal quality of life was recorded 1 and 3 years postoperatively. Thirty-two patients attempted pregnancy after surgery (29.1%), 17 of whom became pregnant (53.1%).

Conclusions

Rectal shaving using plasma energy allows for a low rate of post-operative complications with good digestive function and fertility outcomes and seems suitable in selected women with symptomatic rectal endometriosis.

**ES26-0387 -
Free Communication I Endometriosis**

Shave, disc resection and segmental bowel resection: 3 different approaches to treat endometriosis compromising the bowel

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Background

Endometriosis is a common, potentially debilitating condition that is estimated to affect up to 10% of women at reproductive age, 12% of those will have endometriosis affecting the bowel. The rectum and sigmoid colon affection can be associated with symptoms of dyschezia, bowel colic and diarrhoea. Some gynaecologists are not familiar with the different surgical techniques to treat bowel endometriosis, and the aim of this video is to show the 3 main techniques to treat it.

Methods

- Equipment, instruments and trocar configuration:
- 10mm 0 degree scope, through 12mm umbilical port
- 4 secondary ports: 5 mm RIF port, 5 mm suprapubic port, and two 5 mm LIF ports (one port is replaced with a 12mm port on LIF, if surgical stapler (endoGIA ®) is needed)
- Ultrasonic scapel (Harmonic Ace+7 ®)
- Valtchev uterine mobilizer

Techniques:

- **Bowel Shave:** the endometriosis is cleaved from the bowel surface. This technique is undertaken when it is possible to completely excise the endometriosis without breaching the mucosa. Seromuscular interrupted re-enforcement stitches are placed in this instance.
- **Disc resection:** is a fullthickness excision of bowel with overlying deep endometriosis and primary closure and is performed when the endometriotic lesion is less than half of the maximum circumference of the bowel. Primary closure of a disc excision is performed transversely across the proximal and distal lumens of the bowel in order to not cause stenosis of the rectum. The integrity and caliber is thoroughly checked with rigid sigmoidoscopy in all cases.
- **Limited anterior resection:** is performed if there are more than 2 such lesions in the rectum or if the endometriotic lesion is greater than half the maximum circumference of the bowel. Primary anastomosis was completed at the time of surgery.

Results

As published on JMIG (vol 23, No 4, May/June 2016), in our unit this disease is approached as a 2-stage procedure with interval down-regulation using gonadotropin releasing hormone (GnRH) analogues. Initially, if at laparoscopy bowel involvement by deep endometriosis is diagnosed, endometriomas are mobilized, drained, and stripped. At the second procedure the bowel is mobilized clear of the nodule, at which point the decision for shave, disc, or segmental resection is taken. Any residual pelvic endometriosis is then completely excised. All second procedures were performed by the same gynecologic surgeon (AK) and colorectal surgeon (TR), with wide experience in the management of deep infiltrating endometriosis.

The serious perioperative and postoperative complication rate was 7.3%. The results show significant improvement in almost all variables measured. There was no significant difference between any postoperative variables tested regardless of the type of bowel surgery.

Conclusions

Gynaecologists need to know the basics of these 3 different surgical techniques to treat endometriosis comprising the bowel, in order to be able to counsel accurately the patient with severe endometriosis.

<http://player.vimeo.com/video/222159867?autoplay=1>

The expression of proliferating cell nuclear antigen (PCNA) in eutopic and ectopic endometrial tissue of women with endometrioma

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Background

Endometriosis is defined as the presence of functional endometrial tissue in other sites than uterin cavity. Ovarian endometrioma is one of the most common type of endometriosis. Endometrioma was described an ovarian cyst containing functional endometrial tissue. However, pathophysiology of endometriomas is still under debate and there are controversial theories proposed for its pathogenesis. Proliferating cell nuclear antigen (PCNA) is a marker of cell proliferation and is expressed in the nuclei of cells during the DNA synthesis phase of the cell cycle.

The aim of this study was to investigate the expressions of PCNA in eutopic endometrial tissue from women with endometrioma and compared them with control subjects.

Methods

Histological specimens of ovarian endometrioma and, controls subjects and the corresponding endometrium samples were obtained from 89 women who had undergone laparoscopic surgery because of clinically suspected endometrioma and adnexal masses. The specimens were evaluated by the same pathologist to confirm the correct pathological diagnosis. All benign ovarian neoplasms were removed at laparoscopy, preserving normal ovarian tissue. During evaluation, an experienced histopathologist, blinded to the clinical variables. The expression of PCNA in the groups was compared according to IHC staining intensity of PCNA in cyst wall tissue samples and eutopic endometrium. MedCalc Statistical Software Programme Version 17.2 (Ostend, Belgium) was used for statistical analysis and p values of <0.05 were considered to be statistically significant.

Results

The pathological specimens of endometrial tissues from women with endometrioma and control subject were analyzed. The median age of women was similar between the groups. The immunohistochemical expression of PCNA revealed proliferation of many columnar epithelium and stromal cells in endometrial tissue samples of women with endometrioma. In contrast, PCNA expression was localised only a few columnar epithelium and stromal cells in patients in the control group and PCNA expression in endometrial tissues from women with endometrioma was significantly higher than those in control group. (P < 0.05).

Conclusions

Our current results indicate that compared the control endometrial tissues, there was a strong biological activity in endometrium from women with endometrioma. Further studies are needed to confirm our data.

Free Communication 2

ES26-0018 -

Free Communication I Fibroids including morcellation OR tissue extraction

Preliminary outcomes of the open clinical trial: evaluation of uterine patency following sonography-guided transcervical radiofrequency ablation of fibroids with the Sonata® System

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Background

The Sonata® System is a transcervical device to ablate uterine fibroids with radiofrequency (RF) energy, guided by intrauterine sonography provided by an ultrasound probe integrated within the system. This study will document the presence or absence of intrauterine adhesions after treatment with the Sonata System when used in women with submucous and/or transmural fibroids.

Methods

This is a post-market prospective, multicenter, single-arm cohort study of up to 60 women at 12 hospitals undergoing transcervical RF ablation for symptomatic uterine fibroids. All patients must have at least one FIGO type 1, type 2 or type 2-5 (transmural) fibroid, and a baseline European Society for Hysteroscopy (ESH) adhesion score of 0 as determined by baseline diagnostic hysteroscopy. Transcervical, intrauterine ultrasound-guided radiofrequency (RF) ablation of symptomatic uterine fibroids with the Sonata® System followed by second-look hysteroscopy at 6 weeks post-treatment. No adjunctive measures to prevent adhesiogenesis are permitted, nor are concomitant procedures that may promote adhesions (eg, D&C).

Results

Preliminary outcomes of the OPEN trial (NCT02844920) will be presented. The incidence of new intrauterine synechiae at 6 weeks will be assessed via second-look hysteroscopy. Video from each hysteroscopy performed at the baseline and 6-week visits will be assessed and scored by two external reviewers (a third reviewer will resolve any disputes). Adverse events, subject satisfaction and other qualitative patient reported outcomes with validated instruments will also be assessed.

Conclusions

The literature indicates a varying level of adhesiogenesis associated with hysteroscopic myomectomy and other intrauterine procedures. This may relate to the presence of disruption of the basalis layer of the endometrium. The Sonata System is designed to minimize or avoid disruption of this layer. The ongoing OPEN clinical trial will assess the adhesiogenic potential of transcervical RF ablation of uterine fibroids with the Sonata System.

ES26-0055 -

Free Communication I Fibroids including morcellation OR tissue extraction

Laparoscopic uterine artery occlusion versus uterine artery embolization in the treatment of uterine fibroids, long term outcomes and recurrence

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Background

Uterine leiomyomata are the most common uterine pathologies. Up till now, no medication is approved for long-term administration for this disease. Therefore, surgery (hysterectomy or myomectomy) remains the treatment standard for myomata.

Recently, other therapeutic options are available to avoid major surgery, and even to maintain the uterus for psychological reasons. Uterine artery occlusion (UAO) is a recent minimally invasive alternative to surgery. Uterine artery embolization (UAE) and laparoscopic uterine artery occlusion (LUAO) are the most known forms of UAO. The present work was carried out to compare between the effects of these two treatment modalities on symptomatic leiomyomata..

Methods

60 women having symptomatic uterine leiomyomata were recruited, of whom, 40 had been randomly subjected to LUAO and 20 underwent UAE. The mean uterine & leading myoma volumes were estimated by ultrasound. Basal serum estradiol (E2) & follicle stimulating hormone (FSH) were measured as well as cancer antigen 125 (CA125). Follow up was done at 3 & 6 months after treatment.

Results

Post treatment pain was significantly more severe and prolonged in the UAE group. Similarly, symptoms of post-embolization syndrome were significantly more prominent among the same group. Reduction of the mean uterine volume at 6 months follow up reached 59.3% and 57.8%, and of the mean leading myoma volume was 59.1% and 58.7% for LUAO and UAE respectively. At 6 months follow up; menopausal levels of FSH and E2 were reached in; 1 case among LUAO group and 3 cases among the UAE group. The difference between the two groups was significant.

Conclusions

The study revealed that both methods were effective in treating uterine leiomyomata, with complete relief of symptoms and mild complications.

ES26-0266 -

Free Communication I Fibroids including morcellation OR tissue extraction

Contained morcellation for laparoscopic myomectomy within the MorSafe Tissue Isolation Bag: using the left ancillary port

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Background

MorSafe (Veol Technologies, Mumbai, India) contained power morcellation bag system is previously described to be used from a 15-mm suprapubic incision for laparoscopic myomectomy. We describe our technique of contained power morcellation through a 10-mm left ancillary port using MorSafe bag system for laparoscopic myomectomy.

Methods

A step-by-step explanation of our technique using video. MorSafe is a specially designed two-port bag system for contained power morcellation. After laparoscopic myomectomy and suturing procedures are finished the MorSafe bag system is introduced through a 10-mm left ancillary port incision. Then the myoma is placed inside the bag through the wider part of the bag and this wider part is pulled out through the 10-mm left ancillary port. The camera is placed on the right ancillary port and the tail of the bag is taken through the umbilical port. A trocar is introduced through the tail end of the bag for insufflation. And then the camera is introduced from the same trocar for visualization the bag. The morcellator is introduced through the left ancillary incision where the wider part of the bag is pulled out and morcellation is carried out. After the procedure the bag is deflated, the tail part is knotted and taken out through the left port.

Results

A total of 10 cases were performed. The mean time for bag insertion, specimen placement, bag insufflation and power morcellation was 38 minutes (range 25-60 minutes).

Conclusions

Using the 10-mm left ancillary port for introducing the MorSafe bag system allows us to avoid from using a 15- mm suprapubic additional incision and gives us the opportunity to use the power morcellator in its traditional place as many gynecologists are familiar with.

<http://player.vimeo.com/video/221138188?autoplay=1>

ES26-0279 -

Free Communication I Fibroids including morcellation OR tissue extraction

Transvaginal natural orifice transluminal endoscopic surgery: a new approach to myomectomy

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Background

Traditionally myomas type 0-2 are resected hysteroscopically and myomas type 3-7 are resected via laparoscopy, laparotomy or transabdominal robotic surgery. This first IDEAL stage 1 study aims to demonstrate a new approach for performing a myomectomy via transvaginal Natural Orifice Transluminal Endoscopic Surgery (vNOTES) as an alternative for a laparoscopic myomectomy.

Methods

8 patients were treated transvaginally for intramural, subserosal and pedunculated myomas. In case of a posterior myoma a 2,5 cm posterior colpotomy was made under general anaesthesia. The pouch of Douglas was opened and a vNOTES port was inserted transvaginally. In case of an anterior myoma an anterior colpotomy was made and the peritoneum was opened between the uterus and the bladder. A vNOTES port was inserted transvaginally. A pneumoperitoneum was created and the myoma was identified. Using conventional endoscopic instruments and a standard endoscope, all inserted through the vNOTES port, the uterine serosa was incised over the myoma and the myoma was resected. After achieving haemostasis the uterine scar was sutured in two layers using a standard resorbable suture or an autolocking suture. An adhesion preventing barrier was applied over the uterine scar. The myoma was removed through the colpotomy in an endobag. The vNOTES port was removed and the colpotomy was sutured using a resorbable suture. The following data were prospectively collected: age, BMI, number of previous abdominal procedures, myoma size, myoma weight, operating time, length of hospital stay, VAS score, serum hemoglobin drop. The main outcome measure was completing a successful minimally invasive myomectomy via vNOTES without abdominal scars.

Results

All patients were successfully operated without complications or conversions to standard laparoscopy. No peri- or postoperative complications occurred. All patients were discharged within 24 hours, 2 patients were discharged within 12 hours. Anterior myomas can be resected through an anterior colpotomy and posterior myomas can be resected through a posterior colpotomy via the pouch of Douglas. In a low resource setting a self-constructed gloveport can be used and the uterine scar can be sutured via vNOTES using a standard resorbable suture. In a first world setting the surgical time can be reduced using an autolocking suture and a commercially available vNOTES port.

Conclusions

Myomas type 0-2 can be resected hysteroscopically. Myomas type 3-7 are traditionally resected via laparotomy, laparoscopy or transabdominal robotic surgery. vNOTES provides a new less invasive approach for the resection of myomas type 3-7. This first IDEAL stage 1 study confirms the feasibility of vNOTES myomectomy; it remains however a novel approach that requires further investigation. It can provide better cosmetic results and improved patient comfort.

<http://player.vimeo.com/video/221331290?autoplay=1>

ES26-0294 -

Free Communication I Fibroids including morcellation OR tissue extraction

When preoperative ultrasound is imprecise: impact of undetected myomas on surgical outcomes of laparoscopic myomectomy.

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Background

Transvaginal ultrasound (TU) is the first tool in the evaluation of uterine pathology. However, underestimation of myomas' number has been reported in Literature and confirmed by our experience. The aim of our study is to determine how myomas undetected at TU affect surgical outcomes during laparoscopic myomectomy.

Methods

In this cohort study, women scheduled for laparoscopic myomectomy at our Academic tertiary care center between October 2016 and May 2017 were included. Myomas' number, mean diameter and location were recorded during the preoperative routine TU two weeks before surgery. During laparoscopic myomectomy, correspondence between ultrasonographic and surgical data was assessed. Perioperative data were compared between patients in which TU was able to determine the correct number of myomas (group A) and patients in which transvaginal ultrasonography underestimated it (group B).

Results

Ninety-three patients submitted to laparoscopic myomectomy were included: in 66 women (70.9%) the number of myomas had been correctly diagnosed at TU (group A), while in 27 (29.1%) it was underestimated (group B), missing a total of 57 myomas. Mean number of myomas was smaller in group A, compared to group B (1.6 ± 0.1 vs 2.6 ± 0.3 ; $p < .05$), while no significant difference in mean diameter was observed between the two groups (45.0 ± 7.1 vs 37.9 ± 10.6 mm). In group B, the 57 missed myomas had a mean diameter of 13.51 ± 7.84 mm and were mostly subserosal (57.9%). Mean total operative time was 106.0 ± 5.2 minutes in group A and 122.8 ± 8.1 minutes in group B ($p = ns$). No intraoperative complications occurred in either group. No difference between group A and group B was noted regarding haemoglobin drop (1.6 ± 0.1 vs 1.8 ± 0.2 g/dl), hospital stay (3.5 ± 0.1 vs 3.7 ± 0.2 days) and post-operative complications (1.5% vs 3.7%).

Conclusions

Transvaginal ultrasonography is the first tool in the preoperative assessment of uterine pathology, but underestimation of myomas' number may be a concern. Our data demonstrate that undetected myomas have no significant impact on surgical outcomes during laparoscopic myomectomy. The small dimensions and the subserosal location of missed myomas could explain these reassuring results.

ES26-0304 -

Free Communication I Fibroids including morcellation OR tissue extraction

The surgical effects of ulipristal acetate on laparoscopic myomectomy

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Background

Fibroids remain a common surgical challenge for the minimal access surgeon and more and more the boundaries of what can be achieved laparoscopically are being pushed. The use of GnRH analogues pre-operatively to induce fibroids shrinkage remains controversial and many surgeons choose to avoid using it due to its unwanted effects on the fibroid capsule. Bloodless enucleation can be hampered with the destruction of the clear surgical planes normally encountered in a myomectomy resulting in increased blood loss, operating time and potential complications. An alternative to this, and increasingly being used in the medical management of fibroids is ulipristal acetate (Esmya™). Ulipristal acetate is an orally-active selective progesterone receptor modulator which acts directly on the fibroids resulting in an inhibition of cell proliferation and induction of apoptosis. Most of the pre-operative data on ulipristal acetate looks at symptomatic improvement, but there is a paucity of data on its surgical effects. Does ulipristal acetate have similar effects to GnRH analogues and should caution be applied when given before a laparoscopic myomectomy?

Methods

We present a video demonstrating the effects of ulipristal acetate on laparoscopic myomectomy and the technical modifications that need to be made.

Results

In our practice we have found that ulipristal acetate can negatively effects the surgical planes, distort the fibroid capsule and cause a surrounding necrotic effect into the myometrium resulting in a technically more challenging case.

Conclusions

Although considered by many as the new wonder drug in the medical management of uterine fibroids, there remains a paucity of data surrounding its pre-surgical effects on patients who subsequently undergo a laparoscopic myomectomy. Although our data is limited, in our practice ulipristal acetate appears to have a negative effect particularly on surgical planes making the procedure technically more challenging. The necrotic changes hinder complete resection and may also potentially increase the risk of recurrence. Further studies are certainly needed to substantiate our observations, however until that time surgeons should be aware of the potential limitations and observe caution.

<http://player.vimeo.com/video/221555917?autoplay=1>

ES26-0381 -

Free Communication I Fibroids including morcellation OR tissue extraction

Laparoscopic myomectomy using various suture materials and removal of a fibroid with the colpotomy technique

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Background

The aim of the study is to demonstrate use of various types of suture materials (Stratafix™ and vicryl) to repair the myometrium after myomectomy and removal of the fibroid with the colpotomy technique

Methods

A standard laparoscopy procedure was performed to the patient. After the umbilical port entry, lateral ancillarys and a suprapubic port were inserted. To repair the myometrium; a symmetric PDS Plus Knotless tissue control device (Stratafix™) and Vicryl suture were used.

Results

In laparoscopic myomectomy, homeostasis could be ensured with different type of sutures. With the new Symmetric PDS Plus suture (Stratafix™); the myometrium was repaired with minimum blood loss. The fibroids were removed safely with the colpotomy technique

Conclusions

Laparoscopic myomectomy has recently become as one of the most popular gynecologic operations. For a successful laparoscopic myomectomy, the localisation and size of fibroids are important factors. Different suture types were used to repair the myometrial cavity and the wound was closely approximated with adequate hemostasis. The removal of fibroids with colpotomy is an effective and safe technique. Fibroids were bladed with a Chardonnens knife and then removed by colpotomy in this video article.

<http://player.vimeo.com/video/221646027?autoplay=1>

Free Communication 3

ES26-0430 -

Free Communication I Hysteroscopic Surgery

Diagnosis and management of Asherman's Syndrome developed after abortion

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Background

To describe a successful case of a severe Asherman's syndrome developed after abortion treated with repeated hysteroscopies with miniaturized instruments and several anti-adhesion strategies.

Methods

A 36-year-old primipara woman was referred to our center in August 2015 complaining of amenorrhoea accompanied by abdominal bloating and lower abdominal pain after spontaneous abortion in February 2015. Transvaginal ultrasonography revealed hypoechoic bands traversing through the uterine cavity. The patient was scheduled for office hysteroscopy.

Results

Several hysteroscopies were performed with miniaturized instruments to restore a normal uterine cavity.

A combination of different anti-adhesion strategies to prevent postsurgical adhesions was used in our case:

1. Auto-cross-linked hyaluronic acid gel;
2. Repeated second look office hysteroscopies;
3. Intrauterine contraception device
4. Hormonal treatment (4mg/day of oestrogen).

Conclusions

Intrauterine adhesions have a high impact on female reproduction. Nearly 90% of cases of IUA are related to post-partum or post-abortion overzealous dilatation and curettage

The advent of hysteroscopy has significantly improved the treatment success rate and the fertility outcomes. Anti-adhesions agents should be used to prevent adhesions recurrence after hysteroscopic surgery

<http://player.vimeo.com/video/222378071?autoplay=1>

**ES26-0025 -
Free Communication I Hysteroscopic Surgery**

Endometrial polyps in women with postmenopausal bleeding should be resected or morcellated at first presentation

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Background

The malignant potential of endometrial polyps in women with PMB has not been adequately addressed in the literature. Currently, there is no consensus amongst gynaecologists regarding the best management approach; with some relying on blind twisting with polyp forceps and others recommending hysteroscopic-guided removal only for women with recurrent PMB. The aim of this study was to find out the prevalence and to quantify the risk of hyperplasia and cancer in endometrial polyps in women presenting with PMB and normal background endometrium.

Methods

Prospective data of the PMB clinic, including 2625 consecutive women, were collected between 1st January 2011 and 31st December 2015. Women diagnosed with endometrial polyps on hysteroscopic examination were identified and included in the analysis. All of them had normal background endometrium on hysteroscopic and/or histopathological examination. Endometrial polyps were categorized according to the histopathological assessment into: (1) benign polyps or (2) polyps with hyperplasia or cancer. The project was considered as "service evaluation" by the Clinical Effectiveness Department; therefore, ethics approval was not deemed necessary.

Results

The total number of women, presenting with PMB, diagnosed with endometrial polyps and normal background endometrium was 448 (17%). The number of benign polyps and those with hyperplasia or cancer was 413 (92.2%) and 35 (7.8%), respectively.

Conclusions

The high prevalence of premalignant and malignant changes in endometrial polyps in women presenting with PMB justifies removal at first presentation with bleeding. We recommend hysteroscopic-guided resection or morcellation, rather than the traditional blind twisting, to ensure polyps are removed to their entirety.

**ES26-0133 -
Free Communication I Hysteroscopic Surgery**

The use of diode laser in hysteroscopic metroplasty for the septate uterus: our experience

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Background

The aim of this study was to evaluate the feasibility, safety and efficacy of office hysteroscopic metroplasty using a 980 nm diode laser.

Methods

20 patients were treated for septate uterus between 2013 and 2017. The indications for hysteroscopic metroplasty were recurrent abortion in 13 of the women and primary infertility in the other 7. We used a 5 mm-office hysteroscope with a diode laser fibre. After exploration of the cavity, the septum was divided with use of the laser fibre.

Results

Operating time was $14,16 \pm 1,05$ min. Blood loss during the procedure was minimal. There were no intraoperative complications. Intraoperative pain was $3,06 \pm 0,52$. No postoperative complications were observed in any patients. Follow-up performed 2 months after the hysteroscopic metroplasty confirmed the complete removal of the septum and no evidence of intrauterine synechiae.

Conclusions

Hysteroscopic metroplasty with a diode laser is a feasible and safe alternative to the scissor, bipolar twizzle and bipolar or monopolar resectoscope techniques. We believe that vaporization of the septum with a diode laser could reduce the formation of adhesions and consequently reduce the occurrence of septum persistence.

Models to predict unsuccessful endometrial ablation: a retrospective study

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Background

The use of endometrium ablation (EA) as treatment for heavy menstrual bleeding (HMB) is rapidly increasing. This surgical outpatient procedure offers a minimal invasive alternative for hysterectomy in case non-surgical treatments weren't effective.

The success of EA is mainly based on short recovery time, low risks and low costs associated with the procedure. In contrast to the short-term success, long-term follow up shows decreasing patient satisfaction and treatment efficacy.

Abdominal pain and abnormal blood loss still lead to a hysterectomy-rate of 10-20%.

Different factors, such as age and parity, seem to affect this. Due to dissimilarities in and variety of these factors in the literature, it has not been possible so far to use preoperative factors to predict the success-rate of EA. Patient counselling of EA is therefore difficult. The aim of this study therefore is to establish two prediction models to help counsel patients for the outcomes 'failure of EA' and 're-intervention within 2 years after EA'.

Methods

This study describes the multivariate analysis of retrospective patient data from the Catharina Hospital, Eindhoven and Elkerliek Hospital, Helmond, both non-university teaching hospitals in the Netherlands. Pre-menopausal women (18+) with complaints of abnormal blood loss, for which they received EA between January 2004 and April 2013 were selected. If meeting the in- and exclusion criteria and willing to fill in the questionnaire, they were available for analysis (n=446). The minimal follow-up time was 2 years.

Used ablation methods were Cavatherm ® (Veldana Medical SA, Morges, Switzerland), Thermablate EAS ® (Idoman, Ireland) and Gynecare Thermachoice ® (Ethicon, Sommerville, US.). Earlier research showed that all the interventions had the same outcomes. All data were put into IBM SPSS statistics software version 21.0 (IBM Corp., Armonk, NY, USA). Using logistic regression analysis, multifactorial prediction models were formed.

Results

The mean age of the patients was 43.8 years (range 20-55), 97.3% had complaints of menorrhagia, 57.4% of dysmenorrhoea and 61% had complaints of dysfunctional blood loss. A hysterectomy was performed in 18.8% of the patients. Low age, parity ≥ 5 and dysmenorrhoea were significant multivariate predictors of failure in both models. Chance of re-intervention was significantly greater in women with menstrual duration > 7 days or a previous caesarean section, while preoperative menorrhagia significantly influenced the chance of failure of EA. The models had a c-index of 0.71 and 0.68 respectively.

Conclusions

With the use of our prediction models a better counselling can be done regarding EA in patients with abnormal blood loss. Counselling can be done for the outcomes 'failure of EA' or 'surgical re-intervention within two years after EA'. This can help patients to make an balanced decision about treatment and contributes to the shared-decision making.

**ES26-0066 -
Free Communication I Hysteroscopic Surgery**

Asherman's Syndrome: literature review and medicolegal considerations

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Background

Asherman's Syndrome (AS) and intrauterine adhesions (IUAs) are conditions with high impact on female reproduction. Despite the progress made over the last century, the treatment of AS remains challenging and the prognosis variable. AS and IUA can cause menstrual disorders, infertility, recurrent pregnancy loss and other pregnancy complications. Hereby we provide a literature review of the recent evidence on prevention, diagnosis, treatment and recurrence prevention of AS and IUAs. The medicolegal incidents reported in the UK the last 12 years are presented.

Methods

The medical databases have been searched for the terms Asherman, intrauterine adhesions and amenorrhea post surgical evacuation of uterus. Data and conclusions were extracted by 63 studies and reviews. The incident level patient safety data-base, held on the National Reporting and Learning System by NHS Improvement, has been searched for the period between 2005 and 2017

Results

The highest incidence is reported after curettage of miscarriage. Hence, it should be performed conscientiously and, in favourable cases, medical management should be considered. Introduction of hysteroscopy has revolutionised the treatment of AS, significantly improving the fertility outcome. Cold knife techniques or use of minimal energy should be considered. In cases of severe adhesions concurrent laparoscopy or ultrasound guidance have been shown to reduce the risk of uterine perforation. Hormonal treatments can be used to encourage fast growth of the residual endometrium. The use of mechanical barriers or anti-adhesive agents is widely accepted, in an attempt to decrease the recurrence rate. Treatment with stem cells, in cases that traditional methods have failed, is promising. Post treatment assessment should be planned. In cases of successful treatment and conception, increased antenatal surveillance is recommended.

12 incidents were reported between 2005 and 2017. 3 incidents referred to diagnosis of AS after surgical evacuation of uterus. 2 were related to perforation of uterus during hysteroscopic treatment. Interestingly, 5 out of the 12 incidents were related to severe post partum haemorrhage, due to abnormal placentation, when Asherman's was considered to be the underlying cause.

Conclusions

Appropriate counselling can reduce the medicolegal incidents related to AS. Risk of AS should be included in the consent documentation of patients undergoing surgical management of miscarriage, postpartum intrauterine procedures and operative hysteroscopic surgery. Patients diagnosed with AS should be warned regarding the limitations of the treatment, the high risk of uterine perforation and the risk of recurrence. The risk of complications in subsequent pregnancies should be discussed.

As treatment of AS remains challenging, more research should focus on the cellular and molecular aspects of endometrial tissue regeneration and the prevention of postsurgical adhesion formation.

**ES26-0101 -
Free Communication I Hysteroscopic Surgery**

Hysteroscopic evaluation is justified in recurrent miscarriage cases

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Background

Fifteen percent of all pregnancies result in clinically recognized pregnancy loss. Recurrent miscarriage (RM) defined as ≥ 2 consecutive pregnancy losses occur in 1%. Although the majority of first trimester losses result from embryonic factor mainly due to the chromosomal aberrations, structural uterine/endometrial abnormalities may also play a role separately or in conjunction with the other etiologies. Thus, hysteroscopy may be a valuable tool in the management of RM. We aimed to share our clinical data of hysteroscopic evaluation in RM cases.

Methods

This retrospective descriptive study was conducted at a tertiary health care center. All patients either diagnosed with RM or referred to our center with the diagnosis of RM were offered diagnostic hysteroscopy as a part of standard investigation work-up. Medical records of all patients who consent to undergo hysteroscopy pertaining to July 2007 and April 2017 were reviewed. All hysteroscopic procedures were performed by B.I.O.H.® Office hysteroscopy unit (Karl Storz, Germany). Baseline characteristics, and hysteroscopic findings were documented.

Results

RM was the only indication in 66 hysteroscopy procedures. Baseline characteristics of the studied population (66#) are as follows (mean \pm SD): patients' age 36,29 \pm 5,91, body mass index 26,45 \pm 5,58. Number of miscarriages were 2,71 \pm 1,12 [two in 36 (54,5%) patients, three in 20 (30,3%) patients and >3 in 10 (15,2%) patients].

Twenty-nine women (44%) had normal hysteroscopy findings. The remaining 37 women (56%) presented uterine/endometrial abnormalities: eight patients (12%) had intrauterine adhesions, four (6%) had polyps and 25 (38%) had congenital structural uterine anomalies (three cases of partial septum, 21 of arcuate uterus and one case of unicornuate uterus).

Conclusions

The scarce number of existing studies are not sufficient enough to come to a definite conclusion regarding necessity of performing hysteroscopic investigation in RM cases. The results of our study will certainly provide a contribution to the current knowledge in the literature. The limitations of our study are the retrospective design and small sample size. Patients with ≥ 2 miscarriages have a high prevalence of uterine cavity abnormalities diagnosed by hysteroscopy. Hence, it will be prudent to offer diagnostic hysteroscopy during the investigation of RM etiology.

ES26-0434 -

Free Communication I Hysteroscopic Surgery

Management of cesarean scar ectopic pregnancy entirely based on hysteroscopy procedures

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Background

Cesarean scar pregnancy (CSP) is a life-threatening condition with high risk of haemorrhage, uterine rupture and for the development of abnormal placenta implantation. The mainstay of management to spare fertility and reduce maternal mortality is early diagnosis and pregnancy termination. Several conservative treatments have been experienced, but no guidelines have been given until now on the best therapeutic approach. The cornerstone of medical therapy is traditionally based on systemic or local Methotrexate (MTX) administration. Hysteroscopy allows the precise visualization of placental implantation and it can be used to drive MTX injection selectively within the intervillous placental spaces. This procedure increases drug concentration delivered to the target tissue, potentially improving its therapeutic index.

Methods

herein we report 2 cases of women (36 and 38 years old) with a history of a previous cesarean section, admitted to our department for viable CSP at 7th and 9th weeks respectively managed by hysteroscopically-guided sub-chorionic MTX administration, delivered at the placental implantation site. In an office setting, 80 mg of MTX were injected through a needle adaptable to the 5-Fr operative channel of hysteroscope, under the chorionic membrane of placental implantation site. The duration of the procedures took three minutes and four minutes respectively and no complications occurred.

Results

An early embryo demise was obtained in both cases; the human chorionic gonadotropin-beta subunit (beta-hCG) serum trend dropped rapidly and no patient complaints were recorded. Patients were discharged after 2 hours of uneventful observation. Clinical, sonographic and beta-hCG monitoring were recommended after 4, 7, 14 and 21 days from MTX administration. After 28 and 30 days respectively, a resectoscopic removal of the gestational sac and placenta were safely accomplished by using cold loop to separate villous trophoblast from the cervico-isthmic niche, following a loose cleavage plane between tissues. Coagulating current for bleeding control was not necessary in both cases. The interventions lasted less than 10 minutes.

Conclusions

A new management of viable CSPs by selective administration of MTX under hysteroscopy guidance within the placental intervillous space has been described. MTX administration within the target tissue may optimize its cytotoxicity. Hysteroscopy can be considered for CSP termination.

**ES26-0428 -
Free Communication I Hysteroscopic Surgery**

Efficacy and safety of essure in infertile women with hydrosalpinx before assisted reproduction technique: an Italian 9-year follow up

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Background

To evaluate efficacy and safety of Essure device in patients with hydrosalpinx before assisted reproduction technique (ART).

Methods

Since 2008, 51 infertile patients with diagnosis of hydrosalpinx undergoing hysteroscopic tubal occlusion with Essure device prior to ART were enrolled by three Italian centers (Florence, Naples, Milan). All patients enrolled had contraindication to or declined laparoscopic approach. Clinical pregnancy rate, live birth rates, level of satisfaction (very satisfied, fairly satisfied or not satisfied) and adverse events were recorded through periodic visits and telephone interviews.

Results

51 patients were enrolled from 2008 to 2016, of these only 46 patients attempted an ART cycle after hysteroscopic placement of Essure microinserts. The clinical pregnancy rate was 64.4% (27/46) with live birth rate of 92.6%(25/27) and miscarriage rate of 7.4% (2/27).

The level of satisfaction was rated as “*very satisfied*” by most women (97.6%) and no long-term significant adverse events were reported.

Conclusions

The hysteroscopic placement of Essure devices in hydrosalpinx prior ART produced, reasonable pregnancy rates, comparable to those associated with laparoscopic salpingectomy in international literature. These rates were also associated with high patient satisfaction and absence of long-term side effects.

ES26-0437 -

Free Communication I Hysteroscopic Surgery

Safety of hysteroscopic sterilisation compared to laparoscopic sterilisation: a French nationwide cohort study

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Background

Safety of hysteroscopic sterilisation (HS) with Essure device has been recently called into question and caused societal debates on women's health in several countries following reports of adverse events that included various general, non-specific symptoms in addition to gynaecologic events. To investigate a possible role of HS, a nationwide cohort study comparing women with HS versus laparoscopic sterilisation (LS) was conducted in France.

Methods

Women aged 30 to 54 who received a first sterilisation by Essure or laparoscopy between 2010 and 2014 were included and followed until December 2015 using information from national hospital discharge linked to health insurance databases. Risks of intraoperative/postprocedural surgical and medical complications and of gynaecologic (sterilisation failure, reoperation) and general health outcomes (including allergy; autoimmune diseases; thyroid disorder; medication consumption including analgesics, antimigraines, antidepressants, benzodiazepines; outpatient visits; sickness absence from work; suicide attempts and death) within one and three years following sterilisation were compared using inverse probability of treatment weighted adjusted models, overall and according to baseline characteristics.

Results

In total 105,357 women, 67.7% (71,303) with HS and 32.3% (34,054) with LS were included. Mean follow-up time was 3.3 years. Intraoperative/postprocedural surgical and medical complications were significantly less frequent with HS than with LS (0.13% vs. 0.78%, adjusted odds ratios [95% confidence interval (95%CI)]: 0.18 [0.14-0.23]; and 0.06% vs. 0.11%, 0.51 [0.30-0.89]; respectively). Compared to LS, HS was associated with higher risks of sterilisation failure (4.8% vs. 0.7%, adjusted hazard ratio (aHR) [95%CI]: 7.11 [5.92-8.54]) and gynaecologic reoperation (5.7% vs. 1.8%, 3.26 [2.90-3.67]) during the first year; these differences persisted after three years, although attenuated. Pregnancy risk was not increased with HS (0.24% vs. 0.41%, 0.70 [0.53-0.92] at one-year; and 0.48% vs. 0.57%, 1.04 [0.83-1.30] at three-year follow-up). Risks of various general health outcomes were not increased with HS compared to LS, except the risk of allergy which was slightly higher with HS versus LS in women with allergy history (aHR [95%CI]: 1.10 [1.03-1.17] at one year and 1.10 [1.03-1.18] at three years).

Conclusions

Our results confirm existing findings on intraoperative/postprocedural surgical and medical complications and gynaecologic outcomes but do not provide evidence of increased risks of general adverse events with HS compared to LS.

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ES26-0062 -

Free Communication I Hysteroscopic Surgery

Endometrial micropolyps in hysteroscopy: is it possible finding of chronic endometritis

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Background

Office hysteroscopy is commonly used in daily gynecology practice due to various indications. One of the main reasons for performing office hysteroscopy is the abnormal uterine bleeding. Visualization of the endometrial cavity by hysteroscopy depends on the experience of the operator. Normal appearing cavity sometimes may be reported as endometrial micropolyps which can sometimes be a marker of endometritis (1).

Methods

We retrospectively searched medical records of patients who underwent office hysteroscopy at the gynecology clinic of an university hospital between January 2015 and February 2016. The cases with abnormal uterine bleeding were retrospectively analyzed for hysteroscopy and histopathological results. Additionally, regions of endometrial micropolyps were applied CD138 (monoclonal Mouse, clone MI15, Dako) with Dako Autostainer. The slides were evaluated with a light microscope (Olympus BX51). Brown stained plasma cells were counted in different areas with big magnification.

Results

During the study period 53 patients underwent office hysteroscopy where the mean age of the patients was 40.1 ± 8.4 years. Preoperative indication for hysteroscopy were abnormal uterine bleeding in 52 cases and postmenopausal bleeding in one patient. At hysteroscopy, we noted a visible endometrial polyp larger than 0.5 cm in 31 (58.4%) patients. Ten patients were reported to have irregular endometrium (18.8%), one patient had hyperechogenic areas (18.8%) and one patient had intrauterine synechia (1.8%). The remaining 10 (18.8%) patients had visually normal endometrial cavities with naturally looking tubal ostia. None of the cases had endometrial adenocarcinoma nor hyperplasia. The histopathological diagnosis of cases with normal endometrial cavity (n=10) at hysteroscopy revealed endometrial micropolyps at histopathological evaluation (Figure 1). The CD138 staining of these cases were strongly positive in one patient indicating endometritis (Figure 2), whereas it was weakly positive only in four cases.

Conclusions

Presence of micropolyps (polyps less than 1 mm in size) during hysteroscopy is an additional finding one must carefully search. The presence of micropolyps were previously suggested as a possible finding of chronic endometritis (1). But unlike previous data, the pathological reports of ours did not report any sign of inflammation. The diagnosis of chronic endometritis may be difficult because of the focal lesions or normally existing inflammatory cells in the endometrial mucosa (2). Also, it is possible to miss the diagnosis of micropolyps

which are associated with stromal edema, endometrial thickening, focal and diffuse hyperemia (3). Therefore, CD138 staining contributes to diagnosis of endometrial pathologies in women with abnormal uterine bleeding despite normal endometrial cavity at hysteroscopy. However, the possible relationship between endometrial micropolyps and endometritis needs to be clarified by larger population based studies.

ES26-0260 -

Free Communication I Hysteroscopic Surgery

Reproductive outcomes of office hysteroscopic metroplasty in women with unexplained infertility with dysmorphic uterus

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Background

A dysmorphic uterus is a second-class (Class U1) uterine anomaly in the The European Society of Human Reproduction and Embryology (ESHRE) and the European Society for Gynaecological Endoscopy (ESGE) (ESHRE/ESGE) consensus on the classification of congenital genital tract anomalies, which was formerly known as “T-shaped uterus” in the American Fertility Society (AFS) Classification of Anomalies of the Müllerian Duct that leads to poor reproductive and obstetric outcomes.

There are still no robust data in the literature linking the relationship between a dysmorphic uterus and infertility owing to the absence of evidence on this topic. The objective of our study was to evaluate the reproductive outcome and effectiveness of hysteroscopic metroplasty in unexplained infertile women with dysmorphic uterus.

Methods

This retrospective study was based on the records of women who underwent hysteroscopic metroplasty for dysmorphic uterus with unexplained infertility from January 2013 to January 2016 at the Department of Obstetrics and Gynecology, Division of Reproductive Medicine and IVF Unit, Faculty of Medicine – Başkent University. After exclusion of mild and/or severe male infertility factor, diminished ovarian reserve, history of endometriosis and/or endometrioma, and tubal pathologies, including bilateral tubal obstruction or hydrosalpinx, the eligible women with unexplained infertility were analyzed. All of the included women were divided into two groups: the primary and secondary infertility groups. An institutional review board approval was obtained for this retrospective cohort study.

Results

One hundred sixty-two patients had primary infertility, while 110 had secondary infertility. The clinical pregnancy rate after metroplasty was 45.68% (74/162) in the primary infertility group and 55.45% (61/110) in the secondary infertility group. The live birth rate (LBR) after metroplasty was 38.9% (63/162) and 49% (54/110) in both groups, respectively. The normal term delivery rates in both groups were 82.4% (61/74) and 88.5% (54/61), respectively. The miscarriage rate and ectopic pregnancy rate in the secondary infertility group dramatically dropped [from 84.5% (93/110) to 9.8% (6/61) and from 15.5% (17/110) to 1.6% (1/61), respectively] ($p=0.01$).

Conclusions

Our study demonstrated that office hysteroscopic metroplasty of a dysmorphic uterus might resolve infertility problems, particularly in patients with unexplained infertility with dysmorphic uterus whose uterine factor was ignored. Müllerian anomalies can have a detrimental effect on obstetric outcomes, which might lead to recurrent pregnancy loss (5-10%) as well as late miscarriages and preterm deliveries (25%). These adverse obstetric outcomes of Müllerian

anomalies can be related to restricted expansion of an abnormally small endometrial cavity (11) and increased contractility and decreased vascular perfusion of the fibrous uterine septum. Further, the decrease in ectopic pregnancy and miscarriage rates is also an optimizing evidence for enlargement of dysmorphic cavities. The effectiveness of the operation will be supported by future randomized controlled trials.

<http://player.vimeo.com/video/220952535?autoplay=1>

**ES26-0268 -
Free Communication I Hysteroscopic Surgery**

Using crosslinked hyaluronan gel to prevent intrauterine adhesion after hysteroscopic septum resection: a prospective, randomized, controlled study

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Background

A prospective, randomized, controlled study was performed to assess the effect of new auto-crosslinked hyaluronic acid (ACP) gel on reducing the reoperation rates in women who underwent hysteroscopic septum resection.

Methods

A prospective, randomized, controlled study was performed. A total of 45 infertile women who underwent hysteroscopic septum resection were randomly assigned to two groups; Treatment group received intra-uterine application of crosslinked hyaluronan gel following septum resection (n=23); meanwhile the control group (n=22) received the standard Foley catheter balloon insertion (n=22). Patients in both groups were re-examined under hysteroscopy after 3 months to evaluate the intrauterine adhesion and therefore re-operation rate in order to dissect adhesions. During hysteroscopy, the postoperative uterine cavity was assessed whether it is appropriate for embryo implantation and normal pregnancy. Uterine adequacy was determined according to the presence of adhesion formations. The primary endpoint was the percentage of patients in each group without adhesion at 3-month hysteroscopic examination. The secondary endpoint was AFS score.

Results

Mean age of the study population was 25.5 (21-30 years). Mean ages were similar between groups (26 vs. 25.1, $P > 0.05$), again mean duration of infertility of the whole population was 2.9 (1-6 years), mean durations of infertility were also similar between groups (2.6 vs. 3.1, $P > 0.05$). There was a significant difference between groups with in terms of rate of reoperation indicated for adhesiolysis at the previously resected septum sites (1/23 versus 7/22, $P < 0.05$). A single case with mild adhesion was observed in study group, however among 7 cases in control group 4 cases had mild and 3 cases had moderate adhesions determined according to the AFS system ($P < 0.05$).

Conclusions

Our data showed that application of hyaluronic acid gel following hysteroscopic septum resection is associated with significantly higher rate of surgical success in women with uterine septum.

**ES26-0404 -
Free Communication I Hysteroscopic Surgery**

Retrospective telephone and notes survey of outcomes following endometrial ablation with Minitouch and Novasure.

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Background

Objective: To evaluate patient experience with the new endometrial ablation device Minitouch as compared to the established device Novasure in a University Hospital Gynaecology Outpatient Department.

Methods

Minitouch, a novel device, delivers microwave energy via an induction loop placed in the uterine cavity. The device diameter (3.5mm) negates cervical dilatation. In addition the procedure is of rapid duration (72 seconds). Patients do not require cervical dilatation or local anaesthetic and pre-emptive analgesia and inhaled entonox are all the pain control required. In our initial experience hysteroscopy was used to assess uterine cavity length but latterly this has been done by trans vaginal ultrasound.

Women with subjective evidence of menorrhagia who were not requiring further fertility who were suitable for outpatient endometrial ablation during the period 2014 – 2016 were included. One operator (RP) did only Minitouch and two consultant colleagues only did Novasure over that time period.

Consecutive endometrial ablations were identified, and a thorough search of the case records undertaken to identify complications and further surgical procedures for menorrhagia. Pain scores during the procedure, and immediately afterwards, were recorded by the attending 'vocal local' nurse. In addition three attempts were made to contact the women by telephone and text, and a structured follow up questionnaire conducted via telephone including recall of pain during the procedure and post procedure, and evaluation of symptom resolution with reference to reported change in menstrual blood loss and pain.

Results

Fifty two women underwent Novasure and 44 Minitouch over the time period. Case note review indicates that both procedures have similar subsequent intervention rates. To date women requiring hysterectomy are 7.7% (Novasure) and 6.8% (Minitouch). Evidence of attendance for other reasons were recorded with 2 patients with unresolved pelvic pain who were subsequently discharged without further intervention. Attendance for medical management may well increase with the second phase of study but have not resulted in GP referral. The telephone questionnaire is on-going but initial results indicate that both procedures are highly acceptable.

Conclusions

This new device represents the dawn of a third generation in endometrial ablation technology not only in terms of miniaturisation but also ease of use and patient acceptability. This represents a step change in comparison with currently available technology but clearly final validation of this device will require longer term follow up. Currently there have been 2000 Minitouch cases undertaken with approximately 700 patient outcomes published. These and the current report indicate outcomes comparable if not better than other devices.

**ES26-0435 -
Free Communication I Hysteroscopic Surgery**

Minimally invasive management of cervical ectopic pregnancy with hysteroscopy

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Background

Case series presentation of cervical ectopic pregnancy (CEP), treated with hysteroscopy and review of the literature.

Methods

Retrospective case series of early first trimester CEP managed with diagnostic and operative hysteroscopy. Clinical features upon admission, serum beta-hCG level, the techniques of hysteroscopy and hospitalization are presented.

Results

Four cases of early CEP successfully managed with operative hysteroscopy. Patients were 30, 35, 29 and 37 years old and CEP was diagnosed at 7, 6, 6 and 5 weeks of gestation respectively. Beta-hCGs levels were 13790, 3500, 930 and 1650 IU/mL respectively. Two patients conceived spontaneously and the other two after IVF-ET. One of the patients had a history of multiple curettage for termination of pregnancy and the other one a history of tubal ectopic pregnancy. Three cases were treated by mechanical hysteroscopy by 5Fr bipolar probe and scissors and discharged home the same day. The other case, mechanical hysteroscopy and a resectoscope were used to successfully remove the cervical ectopic pregnancy. Mild to moderate bleeding was noted by removal of the conceptus which was controlled by local application of Surgicel® absorbable hemostatic. The patient was discharged home after 24 hours.

Conclusions

Medical treatment failure of CEP is high, carrying a high risk of hemorrhage and the majority of the patients eventually undergo an operative intervention like cervical lumen curettage, uterine artery embolization, tamponade etc. Hysteroscopy provides direct visualization of the conceptus and cauterization of the vessels, minimizing the risk of bleeding, shortens hospitalization stay and preserves fertility. Hysteroscopic treatment of CEP below 8 weeks of gestation, is an efficient and safe operative modality.

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ES26-0003 - Free Communication I Laparoscopic Surgery

Retrospective comparison of abdominal, vaginal, and laparoscopic hysterectomies in a tertiary care hospital in Turkey

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Background

The aim of this retrospective study was to assess and compare the clinical results of three hysterectomy techniques: abdominal hysterectomy (AH), vaginal hysterectomy (VH), and laparoscopic hysterectomy (LH).

Methods

A total of 2,317 patients having undergone AH (n=1,380), VH (n=426), and LH (n=511) procedures between January of 2010 and December of 2016 were analyzed. The mean age, body mass index (BMI), parity, uterus weight, operation time, blood loss, duration of hospitalization, analgesic needs, intra and post-operative complications, and indications for hysterectomy were analyzed and compared.

Results

The highest AH rate was 76.53% in 2012, VH rate was 44.41% in 2010, and LH rate was 47.73% in 2016, while the lowest AH rate was 38.49% in 2010, VH rate was 7.32% in 2016, and LH rate was 10.14% in 2012. The operation time was significantly shorter in the VH group than in the other two groups ($p < 0.001$), and the blood loss was significantly lower in the LH group than in the others ($p < 0.001$). The duration of hospitalization and analgesic needs were the shortest in the LH group ($p < 0.001$), while the uterus weight and previous intra-abdominal surgery rate were the lowest in the VH group ($p < 0.001$). There were no differences between the groups with respect to the BMI, parity, and intra or post-operative major and minor complications.

Table 1. Patients' preoperative characteristics and outcome measures

	Abdominal Hysterectomy (n = 1,380)	Vaginal Hysterectomy (n = 426)	Laparoscopic Hysterectomy (n = 511)	p value (groups)		
1 vs 2	1 vs 3	2 vs 3				
Age (years)	51.83+7.93	53.10+6.35	51.04+6.79	0.002*	0.093	<0.001*
BMI (kg/m ²)	26.84+3.53	27.23+4.01	26.67+4.29	0.067		
Parity	2.64+1.03	2.77+1.17	2.70+1.09	0.116		
Operation time (minutes)	87.19+25.88	72.35+11.53	84.98+19.18	<0.001*	0.128	<0.001*
Preoperative Hb (gr/L)	11.96+1.69	11.81+1.95	11.85+1.89	0.195		
Postoperative Hb (gr/L)	9.78+2.09	10.31+1.95	10.67+1.68	<0.001*	<0.001*	0.011*
Blood loss (ml)	256.20+71.45	179.86+54.12	154.87+63.03	<0.001*	<0.001*	<0.001*

Hospital stay (days)	3.90+0.95	2.54+0.68	2.39+0.56	<0.001 *	<0.001 *	<0.001 *
Analgesic needs (days)	4.04+1.31	3.83+1.11	3.41+1.31	<0.003 *	<0.001 *	<0.001 *
Uterus weight (g)	239.40+92.65	173.04+77.17	230.55+69.44	<0.001 *	<0.111	<0.001 *
Previous intraabdominal surgery (%)	241 (17.5%)	14 (3.3%)	89 (17.4%)	<0.001 *	<0.520	<0.001 *
Conversion rate from laparoscopy to laparotomy	-	-	6 (1.17%)	-	-	-

Table 2. Intra-operative and post-operative complications

	Abdominal Hysterectomy (n =1,380)	Vaginal Hysterectomy (n = 426)	Laparoscopic Hysterectomy (n =511)	p value
Major complications	45 (3.23%)	10 (2.35%)	11 (2.16%)	0.369
Minor complications	36 (2.64%)	9 (2.10%)	5 (0.99%)	0.201

Conclusions

Despite the fact that the LH exhibited a longer operation time than the VH, the LH was considered to be a safe and effective surgical procedure due to the lesser blood loss, hospital stay, and analgesic needs.

**ES26-0026 -
Free Communication I Laparoscopic Surgery**

Laparoscopic evacuation of retained products of conception following iatrogenic uterine perforation - an interesting case report

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Background

24 year-old P2+2 (2 previous c-sections) underwent surgical termination of pregnancy at 13+4 weeks' gestation. The procedure was abandoned due to creation of a false uterine passage. Subsequent medical termination of pregnancy was commenced. An unidentified iatrogenic uterine perforation had been sustained and prostaglandin administration led to expulsion of the pregnancy into the broad ligament, identified on CT scan and managed laparoscopically.

Methods

Case History: Preoperative Misoprostol was given for cervical priming, however cervical dilatation with Hegar dilator 12 created a false passage. Medical termination proceeded with repeat prostaglandin administration, leading to significant patient distress and pyrexia. Diagnostic laparoscopy and examination under anaesthesia confirmed evidence of a false passage and stable broad ligament haematoma, with no evidence of uterine scar dehiscence or perforation. Hysteroscopy attempt was unsuccessful. Transvaginal ultrasound showed non-viable intrauterine pregnancy.

Due to concerns regarding clinical deterioration, exploratory surgical intervention was planned with preoperative imaging. CT demonstrated the fetus lying outwith the uterus with haematoma and evidence of active haemorrhage. The patient underwent 'Cystoscopy, ureteral catheterisation, laparoscopic drainage of haematoma, retrieval of fetus and placenta and peritoneal lavage'. An anterior approach to the haematoma was used by opening anterior peritoneum and broad ligament laparoscopically. Fetal parts were within the expanding haematoma on the pelvic side wall, expelled via a left posterolateral uterine perforation. Fetal parts and trophoblastic tissue were removed via the site of perforation but given ongoing sepsis, friability of tissue, adjacent anatomical structures such as ureter and uterine vessels the decision was made not to repair the site of perforation. Postoperative Methotrexate was administered and the patient made an uncomplicated physical recovery.

Results

Discussion - The risk of uterine perforation during surgical evacuation of the uterus is well documented and most common at the time of cervical dilatation with Hegar dilators. Standard practice is to have a low threshold for suspecting such complications and initiating further diagnostic tests (USS or laparoscopy) for confirmation. Given the multiple episodes of ultrasound imaging in this case confirming presence of fetal parts in the uterine cavity, and inconclusive diagnostic laparoscopy, exact timing of expulsion of fetal parts into the broad ligament is unclear. In correlation with the patient's symptoms and gradual decline in haemoglobin levels it is likely to have occurred following prostaglandin administration with an undiagnosed uterine perforation.

Conclusions

The importance of recognition and management of suspected uterine perforations is paramount. Diagnostic laparoscopy at the time of initial procedure may have identified the trauma to the broad ligament prior to haematoma formation. Complexity of the case was considered at each stage and additional measures such as imaging and ureteric catheterisation were instigated to prevent further complication. There is no documented guidance for how to proceed with termination of pregnancy following perforation.

**ES26-0050 -
Free Communication I Laparoscopic Surgery**

Long-term outcomes of modified laparoscopic sacrocolpopexy for advanced pelvic organ prolapse: a 3-year prospective study

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Background

The aim of the study was to evaluate the anatomical and functional outcomes of modified laparoscopic sacrocolpopexy (MLSC) for the treatment of advanced pelvic organ prolapse (POP).

Methods

From May 2009 to September 2012, a consecutive prospective observational study of 30 participants was conducted to evaluate MLSC as a treatment for symptomatic advanced POP at Peking Union Medical College Hospital. The Pelvic Organ Prolapse Quantification (POP-Q) classification was used to determine the POP stage. Validated tools were used to evaluate symptoms (Pelvic Floor Distress Inventory, PFDI-20) and sexual function (Pelvic Organ Prolapse/Urinary Incontinence Sexual Questionnaire, PISQ-12). Measurements were recorded preoperatively and then at 3 months and yearly after surgery. We compared the follow-up results with the preoperative data.

Results

All participants completed a 3-year clinical follow-up routine. The anatomical results at 3 months showed significant improvements ($P < 0.05$) compared with the preoperative results based on the POP-Q measurements. This improvement remained significant after 3 years ($P < 0.05$). The anatomical cure rate was 100% and 96.7% at 3 months and 3 years after surgery, respectively. Pelvic floor function remained significantly improved after surgery compared with preceding surgery ($P < 0.05$) according to the following measures: PFDI-20 (106.2 vs 36.0), Pelvic Organ Prolapse Distress Inventory-6 (POPDI-6, 47.9 vs 13.7), Colorectal-Anal Distress Inventory-8 (CRADI-8, 29.2 vs 9.2), and Urinary Distress Inventory-6 (UDI-6, 29.2 vs 13.2). The participants maintained a high level of sexual function (PISQ-12: 29.0 vs 35.1, $P < 0.05$). One case of mesh exposure (3.3%) and two cases of de novo dyspareunia (8.7%) were observed.

Conclusions

MLSC seems to be a safe and effective procedure that achieves good long-term anatomical and functional results.

**ES26-0072 -
Free Communication I Laparoscopic Surgery**

The outcome of laparoscopic adenomyomectomy in our hospital

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Background

Adenomyomectomy is a specialized procedure indicated for patients with infertility or pain and hypermenorrhea that cannot be controlled with medication. However, it can cause problems, such as an increased risk of uterine rupture during post-operative pregnancy or delivery. We evaluated the effectiveness of adenomyomectomy in a limited number of cases.

Methods

We employ convex lens resection, in which the lesion is resected laparoscopically in a convex lens shape while preserving the serosa. Secure reconstruction of the uterine wall is facilitated as the serosa is preserved. We performed convex lens resection for 58 patients with focal adenomyosis. The most common indication for adenomyomectomy in those with focal adenomyosis was infertility (43%).

Results

In patients for whom infertility was the surgical indication, the non-ART pregnancy rate was 62.5% and miscarriage occurred in 10%. The cumulative pregnancy rate was about 57% at 40 months post-operatively, and it was effective for infertility to some extent. A total of 24% of those who had focal adenomyosis and underwent surgery required hysterectomy at a later date. The most common cause was the aggravation of hypermenorrhea (43%), followed by dysmenorrhea (28.6%). There was a case of uterine rupture at 30 weeks of pregnancy. While 56% of the patients had achieved pregnancy without ART at 40 post-operative months, 24% of hysterectomies were performed within 60 months after the operation.

Conclusions

If adenomyomectomy is performed with the indication of infertility, the limit of infertility treatment is considered to be around 5 years. Uterine rupture occurred in one case, and so patients should be informed about the associated risk prior to the procedure.

<http://player.vimeo.com/video/219697059?autoplay=1>

**ES26-0075 -
Free Communication I Laparoscopic Surgery**

Does carbon dioxide pneumoperitoneum cause oxidative ovarian injury during laparoscopic surgery?

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Background

Carbon dioxide (CO₂) pneumoperitoneum has been used to create an operative field during laparoscopic surgery. However, based on the previous results from experimental animal studies, there is an emerging concern that pneumoperitoneum can cause oxidative damage in the ovaries. Therefore, we aimed to investigate whether CO₂ pneumoperitoneum can cause ischemia-reperfusion injury to human ovaries during laparoscopic surgery.

Methods

Pre-menopausal women undergoing hysterectomy with bilateral salpingo-oophorectomy (HSO) via open abdominal surgery and laparoscopy were enrolled in this prospective controlled clinical study. In both surgical approaches, we performed unilateral oophorectomy immediate after abdominal entry and compared to the remaining contralateral ovary excised at the end of the hysterectomy. Plasma samples were collected at following time points; 1) before abdominal entry, 2) at the end of hysterectomy, 3) before contralateral oophorectomy. Plasma and ovarian tissue samples were assessed for biochemical oxidative stress markers malondialdehyde (MDA) and 8-hydroxy-2'-deoxyguanosine (8-OHdG) as primary outcomes. Ovarian tissue samples were additionally evaluated for ischemia-reperfusion injury by using a histologic scoring method. Demographic and operative data were also collected and analyzed for all cases.

Results

A total of 20 patients (n=10, abdominal HSO and n=10, laparoscopic HSO) were included in this study. Baseline characteristics (age, BMI, gravida, parity) and operative data (operative time, estimated blood loss, intraoperative complication) were similar between groups. Perioperative plasma samples did not show significant difference in MDA and 8-OHdG levels in each group and between groups. Histological scores and tissue oxidative stress markers were also comparable between primarily and secondly excised ovaries in each group and between groups.

Conclusions

Our results show that CO₂ pneumoperitoneum does not cause ischemia-reperfusion injury in the human ovaries at clinically safe levels of intra-abdominal pressure. However, further studies with larger number of patients are needed to confirm our findings.

ES26-0094 -

Free Communication I Laparoscopic Surgery

Successful twin pregnancy in a patient with hemi-uterus corrected by laparoscopic Strassman's metroplasty

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Background

To describe a successful twin pregnancy in a patient with hemi-uterus (with a rudimentary cavity) underwent laparoscopic metroplastic surgery via modified Strassman's procedure.

Methods

A 27-year-old nulliparous woman with a hemi-uterus, presenting with dysmenorrhea for 13 years, a previous abdominal left ovarian chocolate cystectomy and right tubal ligation were done in community hospital and failed to relieve severe pain, which was also ineffective to analgesic agents or gestrinone. Asymmetric obstructed noncommunicating unicornuate uterus (Class U4a, according to 2013 ESHRE/ESGE classification) and ipsilateral renal agenesis was identified by MRI. A laparoscopic metroplasty was performed via modified Strassman's method (*a 5-minute video was presented here with key steps described*).

Results

During laparoscopic surgery, left rudimentary uterus was found filled with blood clots and a 1-cm polyp, right uterine horn was smaller than normal, the right fallopian tube was found ligated by previous mistake, a 3-cm vaginal cyst located in the left-upper vagina. Assisted by hysteroscopy and ultrasound, a new uterus was reconstructed and endometrial polyp was removed laparoscopically, while vaginal cystectomy was performed. Menstruation was restored without pain. Two years later, in vitro fertilization and embryo transfer was done, resulting in twin pregnancy. Cesarean section was performed at 35⁺³ weeks' gestation. Two healthy neonates were born. Uneventful menstruation was restored 4 months after giving birth.

Conclusions

Laparoscopy combined with hysteroscopy is golden standard to confirm müllerian anomalies. Resection of rudimentary uterus with functional endometrium should not be regarded as the only method to relieve cyclic pain. Detailed ultrasound during surgery is necessary for a comprehensive evaluation and precise reconstruction. Successful twin development might occur following metroplasty, as described in our case report.

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ES26-0333 - Free Communication I Laparoscopic Surgery

Laparoscopic management of vascular entrapment of the sacral plexus causing pelvic pain

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Background

Herein we describe laparoscopic removing of vascular varicose vein which is compressing on the sacral nerve roots in this video.

Methods

30 years old woman who had previously 4 laparoscopic and 1 laparotomic surgeries including presacral neurectomy because of pelvic pain applied to our department. She was complaining about radiating pain to her left foot which increases while seated. The pain was severe at her hind leg, calf and heel (score 9-10 on a pain scale of 0-10). Her dyspareunia was scored 10 at the 0-10 pain scale. On physical examination her patellar and achilles tendon reflexes, walking on toes and heels tests were normal. A painful area on her left pelvic sidewall was detected by bimanual vaginal examination. The patient underwent pelvic MR scans on 3 Tesla (T) with the prediagnosis of involvement of sacral 2-4 (S2-S4) nerve roots. MRI scans determined 2 cystic masses sized 9 mm on her left S1-S2 level. On operation, blunt dissection was performed to access to deep pelvis by the left internal iliac artery. Sacral nerve roots and the varicose vein which is compressing to the roots was seen after hypogastric fascia entered. Hemostasis was performed by using 5-mm bipolar forceps. The varicose vein was clamped from both sides and the part between clamps was removed. To evaluate the function of the nerves electrostimulation was performed intraoperatively.

Results

The surgical operative time was 50 minutes. Bleeding was less than 50 ml. The patient was discharged on the day after the procedure. Dyspareunia was totally disappeared (score 0, 0-10 pain scale) and the radiating pain to left foot was partially diminished (score 7, 0-10 pain scale) at 3rd months. There were no symptoms or dysfunctions attributable to manipulation of the nerves.

Conclusions

Laparoscopic magnification allows the surgeon a microscopical vision of these very small nerves even in the depth of the pelvis, or in the other areas which are difficult to access. A half of the etiology of the chronic pelvic pain was unrevealed. Therefore, comprehensive physical examination and multidisciplinary approach is a must to discover the underlying pathologies. Also the surgeon who is going to perform laparoscopy to these patients should be expert about pelvic anatomy.

<http://player.vimeo.com/video/221577661?autoplay=1>

**ES26-0104 -
Free Communication I Laparoscopic Surgery**

A new approach: hysterectomy by transvaginal natural orifice endoscopic surgery (V-NOTES)

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Background

The aim of this study is to show a new minimal invasive technique of v-NOTES for benign gynecological diseases. In this new technique we performed hysterectomy by v-NOTES.

Methods

A step-by-step explanation of the technique using videos (educative video).

Results

One of the more attractive advances in the field of gynaecology is the use of transvaginal natural orifice transluminal endoscopic surgery (v-NOTES) that is accepted as alternative procedure of other minimally invasive surgeries. This is a new technique, is performed through the vaginal route with hand-made glove port conventional rigid port equipments and Harmonic scalpel devices (Ethicon®, Cincinnati) ; Hysterectomy is done stepwise. V-NOTES hysterectomy offers new, safe, scarless and feasible innovative technical way for gynecological surgery. Patients who have pelvic prolapse, suspicion of malignancy and pelvic adhesions must be avoided with use of this technique.

Conclusions

The use of v-NOTES surgery provides safe entry, easy access, and direct vision for the peritoneal cavity. This approach has superior cosmesis, a short operative time, reduce postoperative pain, short postoperative hospital stay and less complication rates. V-NOTES hysterectomy might have been first choice in gynecological practice in near future.

<http://player.vimeo.com/video/219269947?autoplay=1>

**ES26-0129 -
Free Communication I Laparoscopic Surgery**

Three kinds of ultra-minimally invasive myomectomies

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Background

To demonstrate three ultra-minimally invasive techniques for myomectomy using a variety of port configurations and instrument sizes.

Methods

The first surgery is a small-sized, single-site myomectomy- a 5mm camera trocar and two 3mm manipulation trocars are placed in one 1.5cm incision at the umbilicus. The second surgery is a 4-puncture technique using 3mm trocars and instruments. The ports are placed in a standard diamond configuration. The third technique is a transvaginal laparoscopic myomectomy using 2 fine abdominal ports- a 5mm port in the umbilicus and a 3mm port at the left lower quadrant along with a 12mm, 15cm trocar in the vaginal fornix. The vaginal trocar is set under the vision of a camera from the 5mm umbilical port. A flexible camera, flexed 180 degrees, is operated from this vaginal port. This set up requires an image converter.

Results

All patients recorded lower postoperative pain and minimal scarring was achieved with skin incisions becoming almost invisible one month postoperative. No complications occurred and no patients required conversion or reoperation due to incomplete resection.

Conclusions

These techniques demonstrate that there is more than one way to approach the concept of making surgery less invasive. The advantage of making myomectomy as minimally invasive as possible is minimal scarring and less postoperative pain.

<http://player.vimeo.com/video/219374183?autoplay=1>

**ES26-0138 -
Free Communication I Laparoscopic Surgery**

Excision of torus uterinus and uterosacral ligament endometriosis

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Background

This is the case of a 27 year old nulliparous patient presenting with severe dysmenorrhoea, deep dyspareunia and menstrual dyschezia. On clinical examination there was a palpable tender nodule on the left uterosacral ligament (USL). Transvaginal ultrasound demonstrated a 15x8mm endometriotic nodule on the left USL with the rectum adherent to the lesion with positive sleeve sign.

On laparoscopy, a central endometriotic nodule at the torus uterinus was noted with retraction of the rectum and USLs in the nodule.

Methods

This video demonstrates the excision of the endometriotic nodule in a standardised and reproducible way. In this case the lesion was away of the ureters and therefore ureterolysis was not necessary.

Results

Initially the pararectal spaces on each side are opened at an area of normal peritoneum. The rectum is dissected medially and caudally until normal tissue is identified below the lesion.

Divergent movements, cold scissors and short bursts of bipolar energy are used to minimise thermal spread to the bowel.

Following the gas of the pneumoperitoneum helps to identify normal tissue planes.

Once the sides of the rectum have been released the dissection continues centrally. The lesion is dissected off the rectum with cold scissors. The rectovaginal space is opened, the rectum freed from the nodule and the normal anatomy of the pouch of Douglas is restored.

The nodule and USLs are excised en block. After careful haemostasis is achieved the bowel integrity is checked with an under water leak test which was negative.

The patient made very good recovery and was discharged on day 1 post operatively. Endometriosis was confirmed on histology.

Conclusions

A standardised approach to surgical excision of deep endometriosis is followed in this video. This is a reproducible technique and allows safe excision of deep infiltrative endometriosis.

<http://player.vimeo.com/video/219404833?autoplay=1>

**ES26-0192 -
Free Communication I Laparoscopic Surgery**

Two-port laparoscopic sacrocervicopexy

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Background

To demonstrate the technique of two-port laparoscopic supracervical hysterectomy and sacrocervicopexy for apical support.

Methods

The 60 y/o patient, P3(VD), presented as uterine prolapse (Pelvic Organ Prolapse Quantitative [POP-Q], stage III). We set the two-port laparoscopic system to perform supracervical hysterectomy and sacrocervicopexy with using the polypropylene mesh.

Results

The total operative time was 105 minutes. Blood loss was 50 ml. No complication happened. The patient was very satisfied with this operation.

Conclusions

The benefit of laparoscopic sacrocervicopexy with supracervical hysterectomy is good outcome of apical suspension and low risk of mesh erosion. Two-port laparoscopic surgery could provide better cosmetic effect than conventional laparoscopic surgery.

<http://player.vimeo.com/video/219541150?autoplay=1>

**ES26-0438 -
Free Communication I Laparoscopic Surgery**

Laparoscopic uterine artery ligation: four approaches and techniques

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Background

laparoscopic uterine artery ligation at hysterectomy is the mainstay in minimizing the intraoperative and postoperative morbidity. Uterine artery has a predictable course and can be intercepted at various points in its course to achieve the results of the surgery.

Methods

video demonstrates the various approaches to ligating the uterine artery to suit all pelvic pathologies :

1. posterior approach: uterine artery approached through the posterior leaf of the broad ligament by opening it parallel and lateral to the ureter. The uterine artery is ligated at its origin from the anterior division of the internal iliac artery.
2. lateral approach : uterine artery accessed through the lateral triangle which is bound by the round ligament , infundibulopelvic ligament and external iliac artery. this is the uterine artery leaving the lateral pelvic wall and coursing medially . the obliterated umbilical artery is the pathfinder leading to the uterine artery.
3. anterior approach: uterovesical fold is opened and the paravesical space is opened laterally to expose the tortuous uterine artery coursing to the lateral wall of the uterus the artery can be approached and ligated this way when the posterior compartment is obliterated or inaccessible.
4. medial approach: the uterine artery is accompanied by a set of veins as it courses up along the lateral wall of the uterus well encased in a fascial envelope .

Results

uterine artery ligation is a useful step in performing laparoscopic hysterectomy and minimizes intraoperative and post operative complication arising from use of thermal energy. other advantages are that the pedicle is available for inspection at the end of surgery at the time of confirming hemostasis

Conclusions

uterine artery ligation along its course from the anterior division of the internal iliac artery is a useful technique in minimizing the blood at laparoscopic hysterectomy. detail knowledge of the retroperitoneal anatomy and endosuturing skills are a must for this technique of devascularisation of the uterus at laparoscopic hysterectomy

<http://player.vimeo.com/video/225726036?autoplay=1>

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ES26-0118 -
Free Communication I Oncology

Laparoscopic pelvic lymphadenectomy using lateral umbilical ligament suspension technique

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Background

Pelvic lymphadenectomy is a crucial step in the surgical staging and treatment of several gynecologic malignancies and has an important role in gynecologic surgery. However, in laparoscopic surgery, in which there are a limited number of operator's hands, and a limited to the kind of operative forceps available, it is more difficult to secure the surgical field than in laparotomy. In this presentation, I will show our technique for laparoscopic systematic pelvic lymphadenectomy, and the surgical outcomes and complications of 387 cases (270 conventional laparoscopic cases, 117 robotic cases) in the 5 years from 2011 to 2015.

Methods

To create the operative field, we develop the paravesical space and Latzko's pararectal space first, and use a suspension technique. We puncture the abdominal cavity through a suprapubic incision 1 cm above the symphysis pubis with a straight needle and 3-0 monofilament thread and pull the bilateral lateral umbilical ligaments up to the abdominal wall, medially. The connective tissue around the lateral umbilical ligaments, called vesicohypogastric fascia, is spread like a sheet hung on a rope. To create more surgical space we pull the infundibulopelvic ligament with forceps from the additional port to the opposite side. We can not only secure a better surgical field for pelvic lymphadenectomy than laparotomy but also achieve better visualization using our technique. We have performed more than 1,000 endoscopic pelvic lymphadenectomies from 1998 using these techniques.

Results

Main indications of 387 cases were uterine cervical cancer (n=155), uterine corpus cancer (n=188) and ovarian cancer (n=44). The laparoscopic group had a significantly shorter operative time (46±14min vs 52±16min, p<0.01) and lower estimated blood loss than the robotic group (96±65ml vs 116±82ml, p=0.03); though this difference was significant, we don't believe it has clinical significance. The robotic group had a significantly larger number of lymph nodes yielded than the laparoscopic group (39±15 vs 46±17, p=0.01). There were 4 cases of vascular injuries (1.0%). 3 were in the laparoscopic group, and one was in the robotic group. There was one obturator nerve injury in the laparoscopic group (0.2%). All of these injuries were repaired by suturing endoscopically. There were no cases of blood transfusion or conversion to laparotomy. The number of cases of lower extremity lymphedema was lower than in most previous reports (6.9%).

Conclusions

Lateral umbilical ligament suspension technique is a simple, easy to apply and cost-effective solution for securing the surgical field for laparoscopic pelvic lymphadenectomy. Our techniques seem to allow systematic en bloc lymphadenectomy with fewer complications in gynecologic cancer surgery.

<http://player.vimeo.com/video/219355825?autoplay=1>

**ES26-0161 -
Free Communication I Oncology**

Goserelin/gonadotropin releasing hormone receptor promotes apoptosis of epithelial ovarian cancer through forkhead box O1

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Background

To investigate the apoptosis effect of goserelin on epithelial ovarian cancer (EOC) cells and the involved mechanism *in vitro* and *in vivo*. Furthermore, we explored the expression pattern and clinical significance of gonadotropin releasing hormone receptor(GnRHR).

Methods

A series of *in vitro* and *in vivo* experiments were performed to elucidate the function and mechanism of goserelin on the apoptosis of EOC. The expression of GnRHR in EOC tissues and its correlation with clinicopathological factors and prognosis was examined.

Results

Goserelin promoted EOC cell apoptosis both *in vitro* and *in vivo*. Through human apoptosis gene PCR array, we verified that the promotion of apoptosis by goserelin was linked to upregulation of members of the tumor necrosis factor (TNF) and TNF receptor super families, which have been identified as downstream targets of forkhead box O1 (FOXO1). Goserelin enhanced FOXO1 expression, and siRNA-mediated knockdown of FOXO1 abrogated the induction of apoptosis by goserelin. Goserelin decreased AKT activity, and FOXO1 upregulation by goserelin was dependent on the PI3K/AKT pathway. *In vivo*, the expression trend of key factors in this pathway was consistent with that observed *in vitro*. The GnRHR expression was various among EOC tissues. The low-expression of GnRHR was highly correlated with FIGO stage, distant metastasis and reduced overall survival(OS). A multivariate analysis showed that the GnRHR expression was an independent prognostic factor for OS.

Conclusions

Our data suggest that goserelin may promote EOC cell apoptosis by upregulating FOXO1 through the PI3K/AKT signaling pathway. GnRHR may be novel therapeutic targets for the treatment of EOC. GnRH agonists may also be potential antitumor agents.

Sentinel lymph node for endometrial and cervical cancer staging: detection rate and sensitivity analysis. A single-institution experience

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Background

The accuracy of Sentinel Lymph Node (SLN) technique for apparent early stage Cervical (CC) and Endometrial (EC) cancer staging is still under investigation.

Methods

Consecutive patients who underwent SLN technique for apparent early stage CC and EC via laparoscopic (LPS) or minilaparoscopic (mLPS) approach at Gynecological Department of Varese, Italy have been analyzed. SLNs were searched after intraoperative cervical injection with Indocyanine green (ICG). Pelvic (+/- para-aortic) backup lymphadenectomy was performed in high-risk patients based on tumor risk factors. Bilateral SLN mapping was considered as "successful procedure" (SP); unilateral mapping and no mapping were both considered as "unsuccessful procedure" (UP). Ultrastaging was performed in all SLNs removed. After stratification by type of cancer, a comparative analysis was performed (CC vs EC). Intraoperative and perioperative surgical outcomes were registered. Baseline demographic details and tumor characteristics were recorded to identify any potential association with SP. A trend analysis to compare the SP rate of SLN procedure over calendar quarters was performed using Cochran-Armitage test. Sensitivity and negative predictive value (NPV) of the SLN technique were estimated among the sub-group of patients who underwent backup lymphadenectomy.

Results

Overall, 35 women underwent minimally invasive (LPS or mLPS) SLN procedure during the study period, 24 (68.6%) and 11 (31.4%) for EC and CC, respectively. All cases (35/35, 100%) were accomplished without need for conversion to open surgery. Bilateral and overall detection rates were 51.4% (18/35) and 88.6% (31/35). After stratification by type of cancer (EC vs. CC) no significant differences were registered for bilateral detection (54.2% vs. 45.4%, $p=0.72$) and overall detection (87.5% vs. 90.9%, $p=1.00$). Bilateral detection rate was not influenced by any of the following variables (SP vs. UP) BMI (26.8 +5.9 vs. 24.7+4.3; $p=0.41$), prior abdominal surgery (70.6% vs. 46.7%; $p=0.17$), prior cesarean section (11% vs. 0%; $p=0.47$), and m-LPS approach (60% vs. 40%; $p=0.89$). SP rate of the SLN technique did not change over time ($p=0.59$ for trend). Final pathology report of the SLNs removed revealed 2 (5.7%) positive lymph nodes (EC 1/24, 4.2%; CC 1/11, 9.1%). Para-aortic lymphadenectomy was performed in 4 (11.4%) patients (EC:2/24, 8.3%; CC:2/11, 18.2%). The sub-analysis performed among patients who had backup lymphadenectomy (24/35, 68.6%; EC:14/24, 58.3%; CC:10/11, 90.9%) showed 100% cumulative sensitivity (EC: 1/1, 100%; CC 1/1, 100%), and 100% NPV for both types of cancer.

Conclusions

SLN procedure for CC and EC treatment can be performed both via LPS and m-LPS with comparable outcomes. Our findings did not show any association between patients' characteristics or type of malignancy and SP. However, the moderate bilateral detection rate of the present series could potentially underestimate some correlations. The high sensitivity and NPV support this technique as a valid alternative to systematic lymphadenectomy for endometrial and cervical cancer staging.

Evaluation of the effectiveness of malignancy risk index I, II, III, IV and the addition of the parity and body mass index as predictive factors

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Background

The aims of this study were to compare the sensitivity, specificity, positive predictive value and negative predictive value of risk of malignancy index (RMI) 1-2-3 and 4 with each other; and to find out the cut-off value that gives the best sensitivity and specificity by using the ROC curve if the malignancy risk index needs to be modified to our country; and to add the obesity and low parity separately and together as predictive factors to the RMI models whether they changed the sensitivity and specificity of malignant-benign discrimination of adnexal masses.

Methods

We included 590 patients who underwent operation between January 2012 and January 2017 with the preliminary diagnosis of adnexal mass. Ultrasonography and CA-125 measurements were performed in our hospital. Demographic information, body mass index and parity values, ultrasonography and CA-125 measurements of the patients were retrospectively obtained. For each patient, we calculated RMI 1-2-3-4; RMIP 1-2-3-4 with parity score added, RMIB 1-2-3-4 with body mass index score added and RMIBP 1-2-3-4 with parity and body mass index together. Jacob's model was used for the assessment of RMI 1 and variants ; Tingulstad's model for RMI 2-3 and variants and Yamamoto's model for RMI 4 and variants. The malignancy risk index scores were compared with results of postoperative pathology.

Results

RMI-2 and RMI-3 were reached the best predictive values, although all of our RMI scores were highly predictive in our study. The cut-off value, which gives the best sensitivity and specificity was found 160.5 for RMI 3 and 201.5 for RMI-4.

In addition, RMIB-1 (sensitivity 80.3%, specificity 96%), RMIB-2 (83.2%-93.2%), RMIB-3 (83.9%-92.9%) and RMIB-4 (81.9%-91.4%) were compared with RMI-1(75.9%-96.9%) RMI-2 (80.3%-94.9%) RMI-3 (80.3%-94.9%) RMI-4 (70.8%-97.1%) and it was observed that the sensitivity increased but the specificity didn't increased.

RMIP-1 (73.7%- 97.1%) RMIP-2 (75.9-96%), RMIP-3 (77.4%-94.7%), RMIP-4 (75.9%-94.5%) were compared to RMI 1-2-3-4 and the sensitivity for RMIP 1,2,3 decreased but the specificity increased slightly.

RMIBP 1 (76.6-95.4%), RMIBP-2 (81.0-92.3%), RMIBP-3 (83.2-92.7%) and RMIBP-4 (83.2%-91.6%) were compared to RMI 1-2-3-4 and sensitivity increased while specificity didn't increased.

Conclusions

After describing the malignancy risk index, many modified methods and new scoring systems were described. The malignancy risk index is differentiated from other scoring systems because of the relative simplicity of the ultrasonography parameters, the standardization of the formula, and the inclusion of the CA-125, which is easily obtained everywhere, without expensive testing. We have found that adding a high body mass index and reduced parity to the malignancy risk index, which has been proven to be a risk factor for over-cancer, has increased the sensitivity of the index but has not positively affected its specificity.

Additionally, it may be more accurate to determine the specific cut-off values for each population.

**ES26-0321 -
Free Communication I Oncology**

Laparoscopic para-aortic lymphadenectomy

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Background

To demonstrate step-by-step para-aortic lymphadenectomy

Methods

A 31-year-old presented with right ovarian cyst. Patient had one year back laparoscopic right ovarian cystectomy. The histopathology was Sertoli Leydig ovarian tumor Patient planned for laparoscopic cystectomy and for frozen section in the same session. Patient had right salpingoophorectomy. The specimens sent for frozen section and the result was sex cord stromal ovarian tumor cannot exclude malignancy. Therefore, procedure continued for surgical staging laparoscopically. In this video we demonstrate the para-aortic lymphadenectomy

Results

The procedure went uneventful. The patient was discharged on 2nd postoperative day. The histopathology result showed Sex Cord Stromal tumor with calcification. Total number of lymph nodes was 41. The duration of laparoscopic paraaortic lymphadenectomy was 120 minutes. Total blood loss was 80 ml.

Conclusions

Laparoscopic surgical staging for early ovarian cancer is feasible. The number of lymph nodes is similar compared to open surgery

<http://player.vimeo.com/video/221537755?autoplay=1>

**ES26-0338 -
Free Communication I Oncology**

Prognostic analysis of uterine cervical cancer of positive or negative vaginal resection margin: importance of intraoperative frozen pathology

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Background

There has been general consensus that cervical cancer patients with positive lymph nodes, parametrial involvement and/or tumor-involved resection margins should undergo adjuvant chemoradiation. Among those three high risk factors, vaginal resection margin may be the only factor that could be changed by operation. This study aimed to analyze prognostic factors for locoregional recurrence (LRR), distant metastasis (DM), and overall survival (OS) in cervical cancer patients who underwent radical hysterectomy with positive or negative vaginal resection margin, evaluate quality of life followed by postoperative radiotherapy (PORT), and preliminary investigate the importance of intraoperative frozen pathology in getting negative vaginal resection margin.

Methods

Clinicopathologic data of 104 patients with clinical stage IB1 to IIA2 cervical cancer treated with PORT for positive vaginal resection margin from 2008 to 2016 were reviewed, retrospectively. Cases matched for lymph node metastasis, direct extension of parametrium, histology, lymphovascular invasion, tumor size, depth of stromal invasion was selected in negative vaginal resection margin group. The median treatment dosage of external beam radiotherapy (EBRT) to the whole pelvis was 50.4 Gy in 1.8 Gy/fraction. High-dose-rate vaginal brachytherapy after EBRT was given to patients with positive or close VRMs. Analyze the impact of PORT for quality of life of patients and radiotherapy toxicity of the reaction occurrence. Kaplan-Meier method and log-rank test were used for analyzing LRR, DM, and OS; Cox regression was applied to analyze prognostic factors.

Results

The 3-year disease-free survival was 74.2% and 80.6% in positive and negative VRMs respectively. In multivariate analysis, PRM and LN metastasis remained independent prognostic factors for OS. VRMs was not independent prognostic factors for OS. However, patients with negative VRMs who could avoid vaginal brachytherapy and experience less organ toxicity of the bladder and rectum.

Conclusions

Preoperative 'mapping' colposcopy combining with intraoperative frozen pathology should be considered to ensure optimal vaginal resection to avoid PORT as much as possible.

**ES26-0407 -
Free Communication I Oncology**

Oncologic and reproductive outcomes for women undergoing a laparoscopic primary procedure in cases of borderline ovarian tumour – experience from a UK cancer centre.

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Background

Borderline Ovarian tumours occur in a relatively young female population.

The objectives of this study were; to review reproductive and oncologic outcome of laparoscopic surgery as primary procedure for borderline ovarian tumours in a UK regional cancer centre.

To compare results with laparotomy for both fertility preserving and definitive, recommended surgery.

Methods

Retrospective notes review of 297 cases of histologically proven borderline ovarian tumour over 6 years.

Manual data collection on surgery type, complications, spill at operation, recurrence, 5 year survival, desire for fertility and reproductive outcomes for these cases.

Results

31 women underwent a laparoscopic primary procedure, either as a planned procedure or after emergency presentation.

Mean age 44 (range 19 to 77)

12 women underwent primary planned total laparoscopic hysterectomy and BSO with omentectomy.

There were no intraoperative complications.

Recurrence occurred in none of these women on follow up so far.

9 women had planned fertility sparing surgery and underwent unilateral salpingo-oophorectomy or cystectomy.

All women with fertility sparing surgery were followed up closely.

One had recurrence within 5 years, which was picked up from routine screening.

5 women achieved pregnancy and 4 had at least one livebirth.

The remaining women underwent either unplanned surgery or adnexal surgery for reasons other than fertility preservation.

Conclusions

Laparoscopic management of borderline ovarian tumours is a safe option for those undergoing planned hysterectomy, BSO and omentectomy.

Fertility sparing surgery may increase recurrence rate but there is a high likelihood for achieving pregnancy and live birth. Definitive surgery may be performed after the woman has completed her family.

Women should be counselled carefully by a multidisciplinary team in light of this information.

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ES26-0016 -

Free Communication I Reproductive Medicine I Training + Testing

Extirpation of rudimentary uterine horn and salpingectomy of patient with primary infertility

Aleksei Golubenko¹

¹*Extirpation of rudimentary uterine horn and salpingectomy of patient with primary infertility, Scientific and clinical multidisciplinary center of medical help to mothers and children named after Z. Kruglova- the department of gynecology and reproductive technologies- Orel- Russia, Oryol, Russia*

Background

Single-horned uterus with rudimentary uterine horn - a reproductive and significant developmental disorder of the uterus

Methods

The patient is 33 years old with primary infertility requested to the clinic during 5 years of assisted reproduction for the program IVF. Left saktosalpinks was detected during examination according to echography. She was directed to an operative treatment. Features of the echographic picture: atypical location of saktosalpinks near to the pelvic wall, hypoplasia of the uterus. Combined pathology of the pelvic organs was detected during laparoscopy: anomaly of development of the uterus – unicorn uterus is on the right, rudimentary uterine horn is on the left and saktosalpinks is on the left side. Rudimentary horn was located high near to the pelvic wall in the region of localization of the iliac vessels, right unicorn uterus is shifted to the right. Right oviduct is freely passable with chromohydrotubes, right appendages are not changed. Extirpation of uterine horn and salpingectomy on the left were held.

Results

Features of the echographic picture: atypical location of saktosalpinks near to the pelvic wall, hypoplasia of the uterus. Combined pathology of the pelvic organs was detected during laparoscopy: anomaly of development of the uterus – unicorn uterus is on the right, rudimentary uterine horn is on the left and saktosalpinks is on the left side. Rudimentary horn was located high near to the pelvic wall in the region of localization of the iliac vessels, right unicorn uterus is shifted to the right. Right oviduct is freely passable with chromohydrotubes, right appendages are not changed. Extirpation of uterine horn and salpingectomy on the left were held.

Conclusions

Endometriosis and chronic salpingitis were detected during histological examination. The patient was transmitted to the clinic of assisted reproduction. Pregnancy was achieved 8 months later of the operation on the second try of IVF by cryopreserved embryo.

<http://player.vimeo.com/video/212011026?autoplay=1>

Laparoscopic transabdominal cerclage: case series

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Background

Transabdominal cerclage (TAC) procedure was first described 50 years ago as an alternative approach for treatment of cervical insufficiency in which vaginal approach is not possible or unsuccessful. Primary aim is closing the upper cervix at the level of the internal os, maintaining strength at this point. The procedure might be applied to women who are in preconceptional period or in the first trimester of their pregnancy. Preconceptual TAC is more successful in preventing recurrent spontaneous mid-trimester losses and preterm labour, and is associated with less surgical and pregnancy-related morbidity compared to first trimester TAC insertion. Herein we present 6 preconceptional laparoscopic TAC procedures managed without a complication .

Methods

Six infertile women who had at least one at most three second trimester losses (18-23 weeks) due to cervical insufficiency were treated with laparoscopic cervical cerclage. Indications were previous cervical operations in 4 and pregnancy loss with transvaginal cervical cerclage in 2 of the patients. The procedures were applied by the same surgeon in preconceptional period. The technique is as follows; after uterine manipulator was administered, the isthmic portion of the uterus is liberalized. Then, the bladder flap was dissected and mobilized downwards to secure the isthmicoservical portion. Uterine arteries were skeletonized bilaterally. A 5-mm non-absorbable Mersilene polyester tape with straightened needles, was inserted medial to the uterine arteries through the uterine muscle on both sides. The suture was placed anterior of the isthmocervical junction. The peritoneum overlying the tape is reapproximated with running vicryl sutures.

Results

Mean age of the patients was 33 years. Mean duration of surgery was one hour. All of the procedures were complication free intraoperatively. Currently, three of 6 patients are pregnant. Two of the patients conceived spontaneously while 1 had in vitro fertilization (IVF) due to accompanying genetic problems. Others (3 patients) are on medication for ovulation induction (clomiphene citrate). None of the patients had postoperative pain nor infection.

Conclusions

TAC is mainly reserved for patients who have failed previous transvaginal cerclages or a cervix which is not appropriate for transvaginal approach due to being short or having scarring/laceration. Potential advantages of TAC are more proximal placement of the stitch, decreased risk of suture migration, absence of a foreign body in the vagina that may promote infection, and the ability to leave the suture in place for future pregnancies. Laparoscopic approach offers additional advantages of less morbidity such as less bleeding and short recovery period. Preconceptional administration has the technical advantage of manipulation in a less vascularized uterus as reported in here. It is for sure that, laparoscopic approach has postoperative advantages over laparotomic approach and it is technically feasible and safe for a surgeon trained in laparoscopic suturing methods.

ES26-0228 -

Free Communication I Reproductive Medicine I Training + Testing

The chicken leg hysterectomy course

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Background

Development of safe surgical technique is one of the primary goals in core gynaecology training. All trainees learn to perform hysterectomy and until now, this training occurs in situ, in operating theatres with real patients. Often the most junior trainees find this daunting especially if they have minimal surgical experience. We have developed an innovative course to train junior or inexperienced trainees the key steps in performing hysterectomy using a chicken leg to simulate the uterine tissues.

Methods

We identified the key stages: 1) separation of the tissues to expose the anatomy using push and spread technique and blunt and sharp dissection. 2) safe opening of the broad ligament in the avascular plain. 3) safe ligation of the infundibulo-pelvic ligament, avoiding the ureter 4) safe ligation of the uterine pedicle. 5) dissection of the bladder to allow excision of the cervix from the vagina. Each stage can be reproduced using a single chicken drumstick. This allows pairs of candidates to practice safe surgical technique and effective assistance.

Results

All 14 trainees participating in the course valued the opportunities this form of surgical training offered and were significantly more confident about participating in real-life operating after the course.

Conclusions

We recognised the need for trainees to be able to practice techniques of hysterectomy to attain a level of knowledge and competence prior to real life operating. Many surgical courses are very expensive, necessitating use of cadaveric tissue or animal specimens which are poor representations of human reproductive organs. Using a chicken drum stick we were able to create a simulated human uterus with the key structures necessary for demonstrating and practicing each stage in the operation. The tissue was inexpensive. The chicken leg course offers an inexpensive, innovative solution to training junior gynaecology trainees in safe surgical technique for hysterectomy.

ES26-0261 -

Free Communication I Reproductive Medicine I Training + Testing

Learning curve for gynecological operative laparoscopy for a trainee under training by one mentor

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Background

Background: In surgery especially in laparoscopy where a constant stream of new skills must be acquired safely and efficiently, the learning curve and training is particularly important.

Methods

Method: It is a consecutive case series done in a university hospital. All the patients underwent operative laparoscopy by only one trainee under training by one mentor. All data were collected prospectively in a database and reviewed retrospectively. The learning curve of a trainee in gynecological operative laparoscopy (cystectomy, myomectomy, adhesiolysis, resection of endometriosis, adnexectomy, salpingectomy, ectopic pregnancy and hysterectomy) was defined using cumulative sum analysis (CUSUM) which transforms raw data into running total data deviations from their group mean. In the training phase high clinical outcomes, including complication-less operation and minimal bleeding have been set as primary aims in all the patients. Due to this fact, we have only investigated operating time as the main evaluating factor in the learning curve and investigated the changes in goal outcomes. The main CUSUM learning curve was demonstrated for hysterectomy.

Results

Results: CUSUM learning curve was observed to have two phases: phase 1 (initial 27 cases) and phase 2 (the last 31 cases). A comparison of various parameters between 2 phases identified by CUSUM has shown significant better post-operative outcomes including duration to have pain after surgery ($p=0.02$), post-operative pain strength ($p=0.005$) as well as time to discharge ($p=0.04$). CUSUM learning curves of other gynecological operative operations were reached significantly with fewer cases comparing to hysterectomy.

Conclusions

Conclusion: Measuring the surgical learning curve has potential benefits for patient's safety and surgical education. There is concern that endpoints currently used in learning curve literature do not measure competency. Therefore different confounding variables such as prior experience, case mix, difficulty of procedures and level of supervision should be investigated and controlled.

Patient's knowledge, attitude, and seeking information behavior on gynecologic laparoscopy: a survey on fertility clinic patient

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Background

Laparoscopy was recommended procedure for patient with infertility. The procedure was beneficial especially in patient with pathologic findings such as endometriosis, uterine fibroids, polyps, or other benign pathologies. But unfortunately from our experiences, not every patient realized the indication and the superiority for laparoscopic procedure. We found usually it needed hard effort to educate and informed the patient prior to laparoscopic surgery. We assumed our patients were not had enough knowledge therefore had low attitude about gynecologic laparoscopy. We also considered how our patient seeking information, so we can manage how we spread the information better.

Methods

We performed survey to 62 consecutive patients who referred to our hospital fertility clinic in May 2017. We used validated questionnaire to collect the patient's information about their knowledge and attitude about gynecologic laparoscopy, and seeking information behavior of our patient. The questionnaire was consisted of ten questions of knowledge and ten questions of attitude about general information (such as indication, benefit, and complication) related to gynecologic laparoscopy procedure.

Results

The survey found most of our respondents had average knowledge (67.7 %), average attitude (74.2 %), and average behavior (45.2 %) on seeking information about gynecologic laparoscopy. Most of the respondents (80.4 %) at least had used internet to seek information on internet about gynecologic laparoscopy. Other trend of media was printed media, radio, and television. On knowledge about gynecologic laparoscopy, the respondents were divided into good (11.3 %), average (67.7 %) and poor (20.0 %). On attitude, the respondents' grouping was quite similar to knowledge, that was good (8.1 %), average (74.2%) and poor (17.7 %). On behavior on seeking information about gynecologic laparoscopy, 27.4 % respondents were good, 45.2 % were average and 27.4 % were poor.

Conclusions

Our respondents had average knowledge and attitude about gynecologic laparoscopy. Only small group had good knowledge and attitude. It is needed to provide more information dissemination about gynecologic laparoscopy for our patient. We found internet might be potential media since most of our patients seek information on the internet. We expect this survey should encourage the effort to increase the level of our patients' knowledge and attitude on gynecologic laparoscopy.

Outcome of external genital reconstruction after FGM: a pilot of selected patients in The Netherlands

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Background

the demand for clitoral reconstruction after FGM is increasing as a result of the empowerment of migrated and naturalized women from Africa and the Middle East. We present our selection and outcome of surgery in the Netherlands.

Methods

from 2010 tot 2015, 41 woman presented with FGM. All underwent specified patient selection before operation by clarifying the request for help, if necessary with help from a sexologist. Clitoroplasty according to Foldes was performed in selected patients. These patients were followed-up, average 13.4 months. A questionnaire was used for outcome evaluation of the surgery.

Results

After counseling seventeen of the 41 woman (41%, n=17) were excluded. Some had unrealistic expectation about the outcome of surgery (n=11) and 5 woman had co-morbidities that had to be dealt with (first). One choose to have only her Bartholin cyst corrected after pre-operative consultation. The main reason to do the surgery was to undo what done to them. Clitoroplasty was performed in the remaining 24 woman. Post-operatively, we observed no major and 3 minor complications. Nineteen of these 24 woman were satisfied with the surgery and it appeared that the main reason for them was a better-esteem after surgery. Three of the remaining five woman were lost for follow-up. Two woman were disappointed about the esthetic surgical outcome

Conclusions

genital reconstruction after specified preoperative selection leads to satisfying results with minor surgical complications and a booster for their self-esteem. This minor surgery in case of wish for reconstruction can be acknowledged after careful counseling.

ES26-0362 -

Free Communication I Reproductive Medicine I Training + Testing

Uterine brace: a rare mullerian anomaly that may shed light into the pathophysiology of uterine septa development

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Background

The uterus is formed by the organogenesis, fusion and septal absorption of two paramesonephric ducts during 8-16 weeks of fetal life. Uterine septa are known to be associated with adverse obstetric outcomes which can be overcome with surgery. Although septum surgery has been classically referred to as septum resection, no tissue is actually resected, but an incision is made over the septum instead.

Here we aimed to present a case of a fusion-absorption anomaly of the uterus not reported before, which may indicate that fusion-absorption processes occur simultaneously instead of sequentially in a more complex mechanism than previously thought. We also believe the histologic examination of the excised tissue will aid in the better understanding of the pathophysiologic mechanisms responsible for the occurrence of uterine septa.

Methods

A 32 year old, G0 patient presented to the infertility clinic with inability to conceive despite unprotected regular intercourse within the last 2 years. Hysterosalpingography revealed bilateral tubal passage and a subseptus anomaly of the uterus. On ultrasonography the ovaries appeared polycystic, a uterine subseptus was visible and although not very clear, a minimal fundal indentation was present.

Results

A laparoscopy was performed prior to the hysteroscopic septum incision to evaluate the extent of fundal indentation. On laparoscopy, both fallopian tubes and ovaries appeared normal and a 0,5 cmx7 cm band of tissue resembling a trouser brace, starting from the anterior uterine fundus, extending posteriorly to the isthmus was detected. A minimal midline fundal indentation of 5mm was present. Since a uterine septum was also present, the band of tissue was thought to have occurred as a result of the fusion-absorption defect that also led to the development of the uterine septum. The band of tissue was excised and histopathologic examination revealed it to consist 95% of muscle and 5% of vascular tissue.

Conclusions

According to the new ESHRE-ESGE (European Society of Human Reproduction and Embryology – European Society for Gynaecological Endoscopy) classification system for uterine anomalies, a bicorporeal septate uterus is an anomaly in which fusion and absorption defects are thought to occur simultaneously, which may be true for the present case.

Fedele and Bianchi reported uterine septa to consist of fibroelastic and fibromuscular tissue and Favez reported the connective tissue content of uterine septa to be higher than the muscular content. On the other hand Pellerite detected muscular tissue in uterine septa, while Sparac reported septum tissue to be similar to that of normal myometrial tissue.

In the present case, the band that resembled a tissue remnant as a result of maldevelopment was found mostly to be composed of muscular tissue. If formed by the same mechanisms as uterine septa, this may support the finding that some septa are more muscular than fibrotic.

<http://player.vimeo.com/video/221628938?autoplay=1>

ES26-0394 -

Free Communication I Reproductive Medicine I Training + Testing

UK training in robotic gynaecological surgery: a survey of attitudes and experience in Wales

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Background

Uptake of robotic platforms for gynaecological operating in the UK has been slow, mainly attributable to cost and the restrictions of a National Health Service (NHS) budget. With increasing popularity of robotic surgery in the USA and Europe are the UK falling behind, thus denying patients the advantages of emerging technology? We performed a national survey of trainees and established consultant gynaecologists in Wales, UK to evaluate their training experience and attitudes towards robotic surgery.

Methods

A cross sectional survey study was conducted, with a standardised questionnaire distributed via "Survey Monkey"® to registered trainees and consultants in Obstetrics and Gynaecology in Wales, UK. Participation was voluntary.

Results

140 surveys were sent with a 40% response rate. There was good distribution across all levels of training, with 28.5% junior trainees, 28.5% middle grade trainees, 20% senior trainees and 23% consultants completing the survey.

16% reported minimal access surgery as their special interest, with 14% benign gynaecology and 8% oncology respectively.

No participants had access to a robot in their institution for gynaecology operating.

22% had observed robotic operating, with 2% having performed or assisted in live surgery. 18% had used a robotic simulator and 28% were aware of a UK based robotics society.

92% believed robotic surgery was not widely available in the UK. 49% felt the Royal College of Obstetrics and Gynaecology do not adequately promote training in robotic surgery, and 61% do not envisage robotic surgery training being available to them in the near future. Despite this 73% were interested in learning more about robotic surgery.

When questioned about perceived risks and benefits, participants viewed the biggest advantages of robotic surgery compared to conventional "straight stick" laparoscopy as improved ergonomics (91%), improved precision (80%) and reduced surgeon fatigue (80%). They proposed the biggest disadvantages were increased cost (89%) and longer operating time (64%).

Conclusions

Without NHS investment in technology and promotion from the Royal College, training in robotics for gynaecology in the UK will remain insufficient. The increasing use and acceptance of robotic surgery in gynaecology worldwide necessitates inclusion of robotics training into the UK curriculum, without detriment to core skills in open and laparoscopic surgery. As even the most experienced surgeons are not familiar with robotics, the training must be accessible at all levels, which may be difficult to deliver and time consuming.

Gynaecologists in Wales are not proficient in robotics, but most are able to recognise the major advantages and disadvantages. Across all stages of training, the majority are eager to gain more experience in robotics, however unfortunately most are not optimistic that training can or will be provided.

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ES26-0127 - Free Communication I Endometriosis

Transvaginal sonographic findings after segmental bowel resection for deep endometriosis and associated symptoms

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Background

To evaluate the presence or absence of residual posterior disease and adhesions by 2D and 3D transvaginal sonography in patients who underwent segmental bowel resection for Deep infiltrating endometriosis (DIE). Furthermore the presence or absence of residual pelvic endometriosis, adhesions and adenomyosis were correlated to specific symptoms and infertility.

Methods

This retrospective observational study included 50 premenopausal patients (mean age 37.4±5.2 yrs) with bowel DIE who underwent segmental bowel resection. All patients underwent also an accurate 2D, 3D and power Doppler TVS examination and mapping of pelvic disease before and after surgery. All patients are assessed for pelvic pain by visual analog scale (VAS). The sonographic features of adenomyosis, adhesions, presence of ovarian, peritoneal and deep endometriosis were evaluated. Uterine sliding sign and pouch of Douglas (POD) obliteration were also recorded. A previous published mapping system to evaluate pelvic endometriosis was always performed.

Results

At the TVS scan performed within 6 months after surgery we found in our study population 14 patients (28%) with residual DIE, 38 patients (76%) with adhesions in the posterior compartment of these 24 showed total POD obliteration, 32 patients (64%) with sonographic features of adenomyosis. No patients showed ovarian endometriosis. In 25 patients who did not have medical therapy after surgery because of the desire of pregnancy 21 patients (84%) had severe dysmenorrhea (vas >5) and 13 (52%) had dyspareunia (vas >5), 19 patients have resorted to ART.

Conclusions

DIE is a chronic disease that is not completely eradicable. After surgery painful symptomatology could be correlated to residual posterior disease and mostly to adhesions and adenomyosis that very often coexist with DIE. However surgery, when indicated, allows an improvement in painful symptomatology and quality of life. The spontaneous pregnancy rate in our study is not improved by surgery.

**ES26-0237 -
Free Communication I Endometriosis**

Hysteroscopic management of a cystic adenomyoma

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Background

Cystic adenomyoma of uterus is a cyst which is surrounded by myometrium and inside of this cyst is filled with hemorrhagic fluid. Unlike diffuse adenomyosis, this disease is common at adolescents and women who are younger than 30 years old. Herein we present hysteroscopic management of adenomyotic cyst on a virgin patient with non-touch technique in this video.

Methods

23 years old virgin patient admitted to endometriosis outpatient clinic. Patients primarily complain of severe dysmenorrhea, chronic pelvic pain, and dysfunctional uterine bleeding. A submucosal adenomyotic cyst was, sized 40 mm approximately, determined at posterior wall of uterus by transrectal ultrasonography. She received daily 2mg dioneigest (Visanne[®]) treatment for six months. At the end of 6 months of treatment the cyst size was still 35mm so hysteroscopic cyst drainage was planned. Hysteroscopy was performed with the use of the non-touch technique (vaginoscopic approach) as described by Bettocchi and Selvaggi. We used a rigid 2.9-mm hysteroscope with a 12 degree oblique lens and an outer sheath diameter of 4 mm in this study. Normal saline solution was used to distend the uterine cavity. The pressure of the distension media was maintained between 60 and 100 mm Hg. The cyst wall was ruptured by bipolar instrument.

Results

The operation lasted 10 minutes. When the cyst wall was ruptured hemorrhagic fluid drained like the content of an endometrioma. Her postoperative course was uncomplicated, and she had scheduled for follow up. Postoperatively, 2 dose of Leuprolide acetate 11.25mg (lucre depot[®] - 3M; Abbot, Istanbul, Turkey) was prescribed to her. On her third and sixth months transrectal ultrasonography examination the cyst's size was 11*8 mm and 11*5mm, respectively.

Conclusions

Cystic adenomyosis is a rare variant of adenomyosis. Hysteroscopic treatment can perform at medical treatment-resistant cases. Hysteroscopy offers the possibility of clear visualization of intracavitary lesions with a direct access to cystic adenomyosis, and an alternative access for the treatment of cystic adenomyosis while producing minimal tissue damage.

<http://player.vimeo.com/video/219824950?autoplay=1>

**ES26-0276 -
Free Communication I Endometriosis**

Do severe endometriosis patients want specialist pain team management?

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Background

Despite referral to a specialist pain team often being offered as an option to patients seeking help with pain due to severe endometriosis, there is no published literature on whether this group want to engage with them. Our aim was to examine the attitudes of patients with severe endometriosis towards input from a pain management team, the point in their treatment they would desire it and of what nature they would like it to be.

Methods

We prospectively surveyed patients newly referred to the University College London Hospital Endometriosis Centre on their attitudes towards input from our specialist pelvic pain team. We excluded those who had had previous excision of recto-vaginal endometriosis, those who had already received care from a pain team for this pain and those under 16 years old or unable to understand the study (e.g. illiteracy, language barrier or learning difficulties).

Results

The average age of the respondents was 32 years old. 87% had tried some form of hormonal manipulation and 47% had had surgery for their endometriosis in the past. When asked about their priority for treatment 18% gave fertility as their first priority, 27% pain and 54% gave both as equally important. 29% had living children. 80% wanted to see the pelvic pain team, with a pain doctor review being the element they most desired and intervention from the clinical psychologists the least. 86% of patients would consider delaying their treatment to see the pain team. 83% were keen for pain management alongside or instead of hormonal interventions, and all respondents would consider help alongside surgery. 100% expressed interest in seeing them before committing to surgery and 50% would consider it instead of surgery. On average patients wanted a 64% improvement in their symptoms for them to think the intervention was worthwhile.

Conclusions

The majority of patients wanted some involvement from the pain team. A widely held view is that they would want this if medical or surgical treatments had failed to give them the desired results, but in fact this study clearly shows that they would like access to these interventions before, alongside or instead of other treatments. Consideration should be given to involvement of specialist pain team advice and interventions right from the start of patient care.

**ES26-0360 -
Free Communication I Endometriosis**

Surgical management of anterior compartment endometriosis in restoring fertility

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Background

Study Objective: To evaluate the impact of laparoscopic excision of lesions on deep endometriosis of the anterior compartment on infertility.

Design: Retrospective study.

Methods

Setting: Endometriosis tertiary referral center (Canadian Task Force II-2).

Patients: A group of 38 patients who had undergone laparoscopic excision of anterior compartment endometriosis for infertility with histologic confirmation.

Interventions: Patient medical records and operative reports were reviewed. Telephone interviews were conducted for long-term follow-up of fertility outcomes.

Results

Measurements and Main Results: The pregnancy rate after surgical removal of endometriotic lesion was 44.4% (n=8) amongst those with anterior compartment involvement alone and 45% (n=9) in case of both compartment involvement without any significant difference. The symptoms related to bladder endometriosis solved in the 84% of the case with a recurrence rate of 2.6% at the 2-years follow-up not requiring further surgery.

Conclusions

Laparoscopic excision of anterior compartment endometriosis is effective in restoring fertility in patients with otherwise unexplained infertility and in treating bladder related symptoms.

**ES26-0367 -
Free Communication I Endometriosis**

Posterior compartment treatment of DIE with endometrioma

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Background

The treatment of the posterior compartment DIE is always challenging and only following specific technique it can be done safely.

the disattachmet of the sigmoid and opening of both pararectal fossa allows to reduce the incertency leaving the hardest part at the hand in order to delineate the limits of the organs.

Methods

This is the case of a 31 years old woman with 9/10 dipareunia and 7/10 dismenorhoea wishing to conceive since 2 years.

the ultrasound scan showed a nodule of the rectovaginal septum an endometrioma on the right side of 4cm and a small implant on the left side.

The nodul has been removed after the development of both pararectal fossa and the endometrima capsule tripped to reduce the risk of recurrence.

Results

The patient experienced a drastic reduction of painful symptoms after 2 months follow up and got pregnat after 6 with spontaneous conception.

No complication occurred during the surgery

Conclusions

This approach to the posterior compartment endometriosis is safe and feasible allowing the surgeon to avoid major complications

<http://player.vimeo.com/video/221635879?autoplay=1>

**ES26-0411 -
Free Communication I Endometriosis**

**Medical management of deeply infiltrating endometriosis at Imperial College
Healthcare NHS Trust, London**

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Background

Deeply infiltrating endometriosis (DIE) has an estimated prevalence of 1% in women of reproductive age – 90% have rectovaginal lesions but disease may also include the bowel, bladder and ureters. Current practice often favours minimally invasive surgical excision, however, there is increasing evidence that medical management can be as effective as long as obstructive uropathy and bowel stenosis are excluded. The ideal drug to treat DIE should downregulate proliferation, preclude invasion and encourage apoptosis by acting on the hormonal and immunologic environment. Progestogens and combined oral contraceptives decrease the densities of sympathetic, parasympathetic and sensory nerve fibres in DIE.

Several RCTs have directly compared medical treatments with surgery in the management of endometriosis, however, the literature is much scantier when focussing on DIE and most studies have not distinguished between the different types.

Our objective was to establish the proportion of patients with deeply infiltrating endometriosis managed medically at Imperial College Healthcare NHS Trust in London.

Methods

- Retrospective medical case note review of 110 patients discussed at the Imperial College Healthcare NHS Trust Endometriosis MDT between October 2013 and April 2016
- 34 patients were excluded - 18 did not have deeply infiltrating endometriosis identified on MRI, 16 case notes could not be obtained
- Data collected: 1) Previous medical and surgical management; 2) imaging modality and results; 3) management plan at MDT; 4) subsequent medical and surgical management; 5) number of appointments with the surgical team(s); and 6) complications.

Results

- 75 patients included. Mean age 36 (range 24 – 53)
- 5 patients were discussed at the Endometriosis MDT more than once
- Overall, 37/75 (49%) were successfully medically managed - 27/75 (36%) did not require any surgical intervention, 6/27 (8%) required surgery for fertility purposes, and 4/27 (5%) were successfully medically managed for over 12 months but ultimately required surgery
- 34/75 (45%) either declined or were not satisfied with medical management and proceeded to surgery
- 4/75 (5%) were asymptomatic
- Of successfully medically managed patients, 12 took combined oral contraceptives, 7 took oral progestogens, 3 Mirena IUS, 8 Gonadotrophin releasing hormone agonists (GnRH) and 7 had GnRH analogues for 3-6 months then stepped down to another hormonal contraceptive.

Conclusions

We have evaluated 75 patients with DIE whose management has been discussed at our multi-disciplinary meeting. Our analysis suggests that almost 50% of women can be treated successfully with combined contraceptives, progestogens and gonadotrophin releasing hormone agonists. This has the advantage of avoiding patient morbidity associated with complex surgery, including haemorrhage, intra-abdominal infection, injury to the bladder, bowel or ureters, fistulae and anastomotic leaks. In the longer term, neurological damage causing constipation, voiding difficulties and sexual dysfunction can potentially be avoided. All patients with obstructive uropathy or evidence of bowel stenosis were managed surgically.

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ES26-0199 -
Free Communication I Hysteroscopic Surgery

Comparison of outcomes of in vitro testing of a manually controlled hysteroscopic tissue removal system (RESECTR®) and two motorized systems (Truclear®; Myosure®)

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Background

To evaluate the in vitro resection time of a new manually controlled disposable hysteroscopic tissue removal device (RESECTR® Boston Scientific, Marlborough, USA). Previously acquired data of RESECTR® were compared with data obtained after similar testing using two hysteroscopic motor driven systems (Truclear® Medtronic, Andover, MA, USA; Myosure® Hologic Bedford, MA, USA).

Methods

Design

A comparison of previously obtained data for two different sizes of hand driven RESECTR® devices (9 French (Fr.), 3mm: (R9); 5 Fr., 1.66 mm: (R5)) and two brands of motor driven hysteroscopic devices (Myosure Classic (MC), Myosure Light (ML) and Truclear Incisor (TI) and Truclear incisor Plus (TIP)).

Setting

Clinical skills laboratory of a non-university teaching hospital.

Samples

Umbilical cord tissue as a polyp surrogate.

Interventions

A regular office hysteroscope 3.6 mm was used for R5 and a 5.6 mm office hysteroscope was used for the R9, as well as two brands of motor driven hysteroscopic devices (MC, ML, TI and TIP). Data of resection times were previously reported: concerning RESECTR® ([http://www.jmig.org/article/S1553-4650\(16\)30411-3/abstract](http://www.jmig.org/article/S1553-4650(16)30411-3/abstract)) and concerning motor driven instruments: TI (2.9mm), TIP (4 mm), ML (3mm) and MC (3mm) ([http://www.jmig.org/article/S1553-4650\(16\)31036-6/fulltext](http://www.jmig.org/article/S1553-4650(16)31036-6/fulltext)).

Results

Based on diameter, the devices could be divided in three categories:

1) 1.6 mm: R5; 2) 3mm: R9, ML, MC and TI; 3) 4mm: TIP.

Data abstracted from previous studies in our laboratory showed mean resection rates of 2.284 gram per minute (g/min) (range (r): 1.34-2.95) (R9), 0.521 g/min (r: 0.45-0.79) (R5), 2.146 g/min (r: 1.52-3.79) (TIP), 1.587 g/min (r: 1.46-2.07) (MC), 1.667 g/min (r: 1.54-2.34) (ML) and 0.293 g/min (r: 0.35-0.37) (TI).

Conclusions

All devices resected tissue in an adequate way within acceptable time limits. No comparison could be made of the resection speed of R5 since at this time no resembling device is available.

Of category 2 (3mm), the TI (0,293 g/min) was significantly slower than MC (1,587 g/min) and the ML (1,667 g/min). The R9 device was significantly quicker in resection speed of polyp-like tissue (2.284 g/min) compared to category 2 and 3 (TIP (2,146 g/min)).

The cutting speed for both RESECTR® devices depends on the number of squeezes of the hand piece per minute. Each squeeze initiates 6 cutting movements. In addition, the resection rate is related to diameter of the device used. The different design of the device (hand driven and larger inner opening to prevent clogging and remaining suction force) can be causing the differences.

Although the R5 device is clearly slower, it can be used in the smallest hysteroscopic instruments (4-5mm outer diameter) for hysteroscopic tissue removal of polyps in an ambulatory setting. The ingenious and effective devices will decrease the complexity of the existing motorized morcellation procedures.

Clinical implementation studies have to be done to provide more insight in future possibilities.

**ES26-0201 -
Free Communication I Hysteroscopic Surgery**

Impact of routine hysteroscopy (HS) prior to intrauterine insemination (IUI) on pregnancy rates (PR) in infertile couples at Al-Amal hospital, Misurata, Libya

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Background

HS is an accurate tool for management of intrauterine pathology (IUP) as it detects multiple and subtle uterine lesions, and enabling treatment at the same setting. IUI is an effective treatment of low complications rate, to be offered before starting more ART invasive options. As IUP can negatively affect implantation, this study investigated the routine use of HS prior IUI in management of infertile women with the main outcome measure studied was conception / PR.

Methods

Referred 180 patients (with primary and secondary infertility, 129 & 51 women respectively), similar BMI and candidate for (COH) with clomid & gonadotropin in conjunction with IUI cycles were included in a prospective controlled study for two years (April 2015 to March 2017), ages: 23-38 years. All underwent day 3 hormonal evaluation, divided equally & randomly into 2 groups (gps): **(A)** underwent diagnostic HS to rule out IUP and (if found) operated by means of a 5.5 mm Olympus continuous flow HS before IUI which has to be performed the following cycle if normal or 3 cycles after operation, **(B)** as a control (IUI without HS). Semen samples collected after 5 days of sexual abstinence & prepared by swim up technique. IUI performed with a volume of 0.5ml. Luteal support in all patients by oral dydrogesterone for 2 weeks. Clinical PR : +ve pregnancy test and GS visualized by TVS 4 weeks after IUI, and compared between the two gps. Any complications were recorded. Statistical analysis performed using SPSS packages for Windows. P-value significant if (< 0.05).

Results

Total patients lost in follow up: **27(15%): 19(21.1%)** from control gp leaving **71(78.88%)**, and **8(8.88%)** from study gp, leaving **82(91.1%)**. HS revealed no IUP in **53(58.88%)** from study gp, while **37(41.11%)** were with abnormalities: **14(15.55%)** mild adhesions, **8(8.88%)** small endometrial polyps, **6(6.66%)** small submucosal myomas, **4(4.44%)** uterine septum, **3(3.33%)** endocervical lesions, **2(2.22%)** chronic non-specific endometritis, (more abnormalities in women aged ≥ 30 years and those with secondary infertility). Relation between pregnancy and type of pathology not significant (**P > 0.623**). No statistical difference in characteristics between both gps regarding age, cause, type or duration of infertility. Overall clinical PR in both gps after IUI was statistically significant (**P < 0.05**): **38** out of **82(46.34%)** in study gp, and **18** from **71(25.35%)** in the control. All pregnancies in study gp occurred within first 2 IUI cycles. Pregnancies in control gp were as follows: **(11%)** 1st cycle, **(34.4%)** 2nd cycle, **(42.5%)** 3rd cycle and **(12%)** 4th cycle. No significant reactions or surgical complications were recorded.

Conclusions

HS before IUI is an effective and safe procedure in management of any IUP, it improves significantly the chances of conception in infertile women before proceeding to more sophisticated and expensive treatment options.

**ES26-0217 -
Free Communication I Hysteroscopic Surgery**

Hysteroscopic resection of cervical ectopic pregnancy

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Background

Cervical Pregnancy (CP) is rare and life threatening ectopic pregnancy, Current treatment strategies of CP which were described in some reports involve : medical treatment. with Methotrexate, surgical removal of ectopic trophoblastic tissues, cervical cerclage and vaginal packing, ligation of descending branches of uterine arteries and unilateral internal iliac artery embolization.

In this case report we aim to demonstrate that the use of modern minimally invasive technology may enable us to treat CP successfully with preservation of fertility and shorten hospital stay.

Methods

A 34 years lady, para3+1, 8 weeks gestational age presented with history of recurrent attacks of moderate vaginal bleeding. Beta human chorionic gonadotrophin 11,000 mIU, and trans vaginal scan revealed empty uterus with 15mm endometrial thickness, no adnexal masses, no free fluid in pouch of Douglas. A gestational sac with a nonviable fetus of 5 weeks and 6 days was present in the posterior part of the cervix at 6 o'clock near the internal os. This was highly suggestive of a cervical ectopic pregnancy.

Options of treatment were discussed with the patient. She opted for hysteroscopic resection. A single dose of methotrexate was administered 48 hours prior surgery. Under general anesthesia, 20 units of vasopressin in 20 cc saline was injected at 3 and 6 o'clock position in the cervix to reduce the risk of bleeding. The cervix was gently dilated to Hegars 7. Hysteroscopic resection was performed successfully with minimal blood loss. The patient was discharge home next day and bleeding stopped after 7 days.

(ultrasound pictures are available but could not upload them)

Results

Hysteroscopic resection of CP was done successfully with proper counselling and preoperative preparation

Conclusions

Hysteroscopic resection of CP could be a safe option of treating CP with fertility preservation. Proper pre-op preparation will be needed such as counseling, consent for hysterectomy, cross match enough units of blood, cervical injection of vasoactive solution such as vasopressin. More studies are needed to establish the safety criteria and feasibility of the procedure.

<http://player.vimeo.com/video/219585325?autoplay=1>

ES26-0247 -

Free Communication I Hysteroscopic Surgery

Hysteroscopic resection of uterine septum improves dysmenorrhea; a preliminary report

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Background

The septate uterus is the most common structural uterine anomaly. It results from failure of the resorption between two fused Müllerian ducts. A fibromuscular septum extends longitudinally inside the uterine cavity. It has been associated with infertility, first and second trimester pregnancy losses and preterm delivery. The possible mechanisms for these adverse effects is diminished expansibility of uterine cavity and insufficient blood supply of uterine septum. The aim of the present study is to assess the relationship between uterine septum and dysmenorrhea.

Methods

A prospective cohort study was conducted. All infertile patients who underwent diagnostic and operative hysteroscopy between September 2016 and January 2017 were assessed for eligibility. The study group consisted of patients who underwent hysteroscopic septum resection (n=32). The control group consisted of patients who underwent diagnostic hysteroscopy and had no intrauterine pathologies (n=28). Pain evaluation for dysmenorrhea was performed before surgery by using a 10 cm visual analog scale (VAS). To determine the effect of septum resection on dysmenorrhea the VAS score evaluation was repeated 3 months after surgery for the patients in the study group. A score of 5 to 8 was considered moderate dysmenorrhea; and ≥ 8 as severe dysmenorrhea. The patients were not prescribed analgesics or any type of hormonal treatment for dysmenorrhea following surgery.

Results

The mean ages of the study and control groups were 31.8 ± 8.7 years and 33.6 ± 6.0 years, respectively ($P=0.398$). Among all, 34 (56.7%) patients were also documented for the absence of endometriosis by concomitant laparoscopy. The mean preoperative VAS score of patients having uterine septa was significantly higher than the mean VAS score of controls (4.5 ± 2.4 vs. 3.2 ± 2.1 , respectively; $P=0.038$). The number of patients with moderate dysmenorrhea were 15 (46.9%) in the study group and 7 (25%) in the control group ($P=0.079$). The number of patients with severe dysmenorrhea were 3 (9.4%) in the study group and 1 (3.6%) in the control group ($P=0.369$). There was not a statistically significant correlation between the depth of septum and VAS score (Spearman's rho 0.128; $P=0.484$). The mean dysmenorrhea VAS score of patients with uterine septa significantly decreased 3 months after hysteroscopic resection (4.5 ± 2.4 vs. 2.3 ± 2.6 ; $P=0.001$).

Conclusions

Uterine septum seems to be an etiologic factor for dysmenorrhea. Hysteroscopic resection of uterine septum results in a significant improvement of dysmenorrhea. Further studies with large number of patients are required to clarify the issue.

**ES26-0306 -
Free Communication I Hysteroscopic Surgery**

'No-Touch' truclear polypectomy - a novel method of optimising patient experience and operative outcomes

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Background

The recent introduction of hysteroscopic tissue retrieval systems (Truclear, Myosure, Bigatti) has taken hysteroscopic surgery to a new level. Many operative hysteroscopic procedures can now be performed in the out-patient setting without the need for general anaesthesia. It is accepted practice to perform these procedures through a vaginal speculum following cervical dilatation under local anaesthesia.

Methods

We would like to report a series of 50 successful cases of see-and-treat, out-patient 'No-Touch' Truclear polypectomies, performed using the Truclear 5C Tissue Retrieval System. These procedures were performed without using a vaginal speculum, local anaesthetic or formal cervical dilatation.

Results

All the patients found the procedure acceptable, and all would undergo the same procedure again, if required.

Conclusions

The 'No-Touch' technique of hysteroscopic polypectomy using the Truclear 5C retrieval system dispenses with traditional procedural accoutrements which are associated with notable patient discomfort and several additional costs. Use of the 'No-Touch' technique is therefore recommended as a novel method of improving both patient experience and operative outcomes.

Chinese Expert Consensus on the diagnosis and management of intrauterine adhesions

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Background

Intrauterine adhesions (IUAs) seriously affects the female reproductive physiology and mental health. However, there is no effective treatment methods on the restoration of reproductive function and menstruation, due to high recurrence ratio and low pregnancy rate following transcervical resection of adhesion (TCRA). Obstacles to improve the efficacy including a lack of unified diagnostic criteria, nonstandard surgical procedures, underappreciated re-adhesion management, and inadequate choice of the reproductive technology (ART) of IUAs. The CSOG Gynecological Endoscopy Working Group established a project aiming at developing a consensus for the standardized diagnosis and management of IUAs. The CSOG working group and invited experts in the field have been appointed to run the project.

Methods

The consensus is developed based on: (i) the evaluation of currently available clinical practice, (ii) the consensus and recommendations for the diagnosis and treatment of endometrial regeneration and re-adhesion prevention with the use of specialized experts panel consensus method, and (iii) the reference to the evidence-based medicine classification of the Canadian Task Force on Preventive Health Care and United States Preventive Services Task Force.

Results

(1) Hysteroscopy should be the first choice of diagnosis with the assessment of the position & range of adhesions, distribution of endometrium, structure of uterine cavity and whether it involves fallopian tubes. Moreover, Stage of IUAs in China was proposed according to the clinical practice. (2) TCRA can be considered as the first choice for the patients with infertility, recurrent abortion, and hypomenorrhea. The selection of energy instruments during TCRA is based on the principle of residual endometrium preservation. Patients without symptoms and fertility requirements do not need intervention; neither with hypomenorrhea with no fertility requirements. (3) Comprehensive ancillary measures are recommended to prevent re-adhesions. a). Intrauterine device (IUD) preventing re-adhesions is not widely accepted. b). Balloon can reduce adhesions after TCRA. c). Biological gels have certain effect on re-adhesions prevention, but its benefit for pregnancy rate is unclear. d). Postoperative hormone treatment using estrogen after TCRA, with or without a progestin, may reduce re-adhesions. However, there are no unified criteria for dosage and duration selection of estrogen. e). Current evidence is not sufficient to demonstrate the value of amnion in endometrial regeneration after TCRA. f). Stem cells therapy on endometrium regeneration after TCRA needs further research. (4) ART should be performed individually. For moderate to severe IUAs, ART can be considered accordingly, even with endometrial thickness in late proliferative phase no higher than 7 mm. For mild IUAs with other factors affecting pregnancy, ART is recommended.

Conclusions

The CSOG expert consensus for the standardized diagnosis and management of intrauterine adhesions is presented.

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ES26-0021 -

Free Communication I Laparoscopic Surgery

Caesarean scar ectopic pregnancy (csep): case series of 5-year experience of Birmingham women's hospital and literature review

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Background

csep was rare but with increasing caesarean sections it is not uncommon. the diagnosis and treatment of csep is challenging. a delay in diagnosis and/or treatment can have catastrophic events like uterine rupture, major haemorrhage, hysterectomy and serious maternal morbidity. the objective of this case series was to evaluate the various treatment options offered for csep and highlight management of each individual case.

Methods

this is a retrospective case series of 14 patients who were diagnosed or were referred to our hospital with csep from 2012 till date. the diagnosis was confirmed with pelvic ultrasound alone or adjuvant with MRI. the notes were reviewed for the types of treatment offered to these women and the outcome of the treatment.

Results

5 out of 14 women had intramuscular (IM) methotrexate treatment ;

only 1 case did not need any further treatment,

1 later underwent suction evacuation of the pregnancy, 1 required laparoscopic resection of the pregnancy and 2 had further treatment with transvaginal scan guided injection of methotrexate into the gestational sac followed by laparoscopic resection of the pregnancy.

3 out of 14 women had methotrexate injected into the sac as the first line of management and had successful outcome not requiring any further treatment.

8 out of 14 women had laparoscopic resection of the ectopic pregnancy, 5 out of these 8 women; surgery was offered as first line of management and successfully treated with combination of laparoscopy +/- hysteroscopy +/- cystoscopy. the other 3 women who underwent surgery were after failure of im and/or intragestational injection of methotrexate .

1 woman was successfully treated with ultrasound guided suction evacuation alone.

analysis of all these women's obstetric history revealed that 10/14 (71.4%) had multiple caesarean sections(≥ 2), one had csep, one had cervical pregnancy and one had hydatidiform mole previously.

Conclusions

The women at high risk for csep appear to be those with history of multiple caesarean sections. intragestational methotrexate injection treatment alone does seem to offer better success rate as compared to im methotrexate injection alone. methotrexate may reduce the beta hCG level but the ectopic mass can persist causing pain needing surgical intervention. in our experience surgery seems to be the best option for the treatment for csep but it needs to be individualized and we cannot decide or comment about the future.

**ES26-0070 -
Free Communication I Laparoscopic Surgery**

Low cost laparoscopy for the treatment of interstitial ectopic pregnancy: a case report

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Background

The term interstitial pregnancy refers to an ectopic pregnancy where the products of conception are implanted in the interstitial part of the fallopian tube. The reported incidence varies between 1.0% and 6.3% of ectopic pregnancies (1 in 2,500-5,000 pregnancies). Interstitial pregnancy is a highly morbid condition with the associated mortality reported as 2,5%. Several treatment approaches have been described, including expectant, medical and surgical management. Endloop, automatic staplers and advanced bipolar coagulation techniques have been successfully used.

Methods

We are presenting a case of laparoscopic resection of interstitial ectopic pregnancy with monopolar scissors and suturing of the remaining uterine cornua with laparoscopic sutures. The patient was diagnosed with a left tubal ectopic via ultrasound scan and biochemistry. Medical management with systemic methotrexate administration failed, as indicated by rising HCG levels. Therefore the patient underwent laparoscopy for surgical treatment. In theatre interstitial pregnancy was diagnosed during laparoscopy. Salpingectomy, resection of the cornua and closure of the uterine wall with 4 figure of 8 and 1 simple suture was performed.

Results

The estimated blood loss was 200mls. The patient recovered well and was discharged 8 hours after the procedure.

Conclusions

Low cost laparoscopy, using monopolar diathermy and laparoscopic sutures, is safe and efficient in selected cases of interstitial ectopic pregnancy.

<http://player.vimeo.com/video/219967292?autoplay=1>

**ES26-0132 -
Free Communication I Laparoscopic Surgery**

Spontaneous pregnancy rates following a laparoscopic CO₂ laser surgery for endometriosis

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Background

Following conventional surgical treatment for women with ovarian endometriosis, the ovarian reserve is reduced and fertility rates are low. However, studies have shown that the use of CO₂ laser presents an alternative surgical method, due to its unique features of precision, controlled tissue penetration and low collateral thermal damage to the ovary. Our aim was to assess the spontaneous pregnancy rates following laparoscopic CO₂ laser surgery for endometriosis in women who have undergone cystectomy or vaporization.

Methods

A total of 2245 female patients (ages 20- 45 years) who have undergone laparoscopic CO₂ laser surgery for endometriosis between the years 1999 – 2011 were assessed. 1153 patients were scored as stage I-II of the disease, and 1092 patients as Stage III-IV according to the American Fertility Society classification (AFS) (5.7% with an additional deep infiltrating nodule). Patients with Male factor infertility and poor ovarian reserve were excluded from the study, and were directed to assisted reproductive technology (ART) centers. CO₂ laparoscopic laser (Lumenis) was used in each operation, either for cystectomy vaporization or combined technique.

Results

The size range of the operated endometriomas was 2-10 cm diameter. The cumulative pregnancy rates of the patients with stage I-II and stage III-IV were 62% and 48%, respectively.

Conclusions

CO₂ Laparoscopic laser surgery is a safe and efficient method for endometriosis surgical treatment, regarding pain and infertility symptoms. The use of CO₂ laser can also protect the ovarian reserve following surgery better, compared with conventional laparoscopic techniques.

Bladder endometriosis: a case report involving laparoscopic ureteral reimplantation

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Background

Urinary endometriosis affects most frequently the bladder and the ureter. Despite bladder endometriosis usually causes urinary discomfort, ureteral endometriosis is often asymptomatic and can lead to loss of kidney function.

Methods

The video illustrates the case of a 37-year-old woman who came to our center with the diagnosis of bladder endometriosis and the proposal of TUR (transurethral resection) as a treatment. She complained of heavy dysuria and dyspareunia. She had had a subtotal hysterectomy for metrorrhagia.

The physical examination revealed a painful bladder nodule on the anterior vaginal right wall. The Douglas pouch and the cervix were free.

The transvaginal ultrasonography showed a bladder endometriotic nodule on the postero-right wall. The MRI revealed a 35mm lesion infiltrating the posterior right bladder wall reaching the intramural ureteral wall and the cervical remaining stump. There were no signs of ureteral dilatation.

In office cystoscopy showed that the right meatus was free, less than 1cm away from the nodule.

The patient underwent a laparoscopy with the opening of the bladder and the resection of the nodule. Due to the partial infiltration of the intramural portion of the right ureter, a reimplantation was necessary. The resection of the remaining cervical stump was performed and an omentoplasty was placed in between the bladder and the vaginal sutures.

Results

The patient was discharged on the 4th postoperative day. She went home with a bladder catheter that she kept for 2 weeks and “pig tail” catheters that were removed after 2 months. Her recovery was uneventful.

Conclusions

TUR should not be proposed as a treatment for bladder endometriosis because of the risk of bladder perforation and incomplete resection of the implant. Laparoscopy should be the gold standard technique in these cases and the final decision of ureteral reimplantation should be taken in the operating room by urologic and gynaecologic surgeons.

<http://player.vimeo.com/video/221860952?autoplay=1>

**ES26-0172 -
Free Communication I Laparoscopic Surgery**

Laparoscopic management of tailgut cyst: a rare case

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Background

Tailgut cyst, also known as retro-rectal hamartoma, is one of the rare congenital malformations that arises from postnatal part of the hindgut and is usually located anterior to the sacrum and posterior to the rectum. Tailgut cysts can be asymptomatic or presented with lower abdominal pain or compression symptoms.

Methods

A 15 year old virginal girl presented to the emergency room with acute pelvic pain and abdominal bloating. According to the abdominal examination, she expressed unspecific deep pelvic pain. Semi-solid pelvic mass was detected by rectal digital exam just above the anal ring and slightly lateralized to the right. A complex echogenic cystic mass measuring 6x6 cm was detected at transabdominal ultrasound and it was located below the cervix and posterior to the lower half of the vagina. On MRI scan; 6x5 cm semisolid lesion with regular borders was detected below the coccygeal level in rectorectal-pararectal space that has a lower boarder extending to as low as 2cm above the dentate line. Tumor markers were in normal range.

Results

Laparoscopy was performed, and revealed a normal uterus, bilateral normal adnexa, and normal appearing Douglas pouch. Rectovaginal space was opened with sharp and blunt dissection. Rectum was mobilised and on both side of the rectum pelvic floor muscles visualised. On the left side of the pelvis, regularly bordered, 80% of the semi-solid mass was examined and carefully dissected from rectum and pelvic floor. Then the tumor ruptured and jellylike-mucoid material was aspirated. Capsule was totally dissected from the pelvic floor muscles and rectum.

Conclusions

Congenital retrorectal cysts are usually asymptomatic and present with non-specific symptoms. Tail gut cysts usually appear between the ages of 30 and 60 but our patient was 15 years old. Surgery is the primary treatment option and complete excision for benign lesions promises a life-long disease- free expectancy, and in case of recurrence, the local excision can be safely carried out. A vast range of approaches is described in the literature, varying between transabdominal in means of laparotomy or laparoscopy, trans-sacral and trans-rectal or combination. While the posterior approach is the usual way especially in low lying lesions laparoscopy may be a surgical option to evaluate the borders of lesion and to dissect the neurovascular structures of pelvic floor. However laparoscopic approach offers benefits such as an excellent visualization of the pre-sacral space and its content and reduced surgical trauma.

Laparoscopic approach is difficult for tailgut cyst especially below S2 level but laparoscopy enables good exposure and dissection.

<http://player.vimeo.com/video/219488061?autoplay=1>

Safety of sils salpingoophorectomy in patients selected according to iota criteria

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Background

Standard laparoscopy represents the access of choice for most ovarian pathologies. However, emerging techniques as single incision laparoscopy (SILS) are challenging this concept. SILS is a minimal invasive surgical technique which allows the removal of big ovarian masses without the need of extension of trocar excision or posterior colpotomy. This study aimed to evaluate the feasibility and safety of SILS salpingoophorectomy after a selection of patients according to IOTA criteria.

Methods

This was a retrospective study of women diagnosed with ovarian masses who underwent SILS cystectomy, oophorectomy or salpingoophorectomy between January 2013 and December 2015. All the patients were scheduled for a preoperative ultrasound evaluation with a classification of the ovarian mass according to the strategy proposed by the International Ovarian Tumor Analysis (IOTA) Group for discriminating between benign and malignant adnexal masses. The authors analyzed the surgical outcomes of SILS in terms of operation-time, amount of blood loss during the operation, switching to multi-port access method, adverse events (chemical peritonitis, opening of the mass, conversion to laparotomy, blood loss > 500ml) and severe adverse events (life threatening events). The diagnostic performance of the IOTA criteria was also evaluated using histology as the reference standard.

Results

The candidates of this study were eighty-seven women (median age 49.3 (range 16-85) years) who received SILS laparoscopic surgery; 26 patients (28,7%) underwent cystectomy, 1 monolateral oophorectomy (1.1%), 3 bilateral oophorectomy (3.5%), 24 monolateral salpingoophorectomy (27.7%) and 33 (37.9%) bilateral salpingoophorectomy. In 89.65% of the cases the intraoperative blood loss was less than 100ml, 9.2% 100-300ml and 1.1% 300-500ml. No patient had a blood loss of more than 500ml. Switching to multi-port access occurred in 16.1% of the cases, adverse events in 3.4%. No severe adverse events happened. Based on the IOTA classification, of the total 87 masses, 46 (52.9%) were classified as benign, 6 (6.9%) as malignant and 35 (40.2%) as uncertain. The overall positive likelihood ratio was 0.64. Thirteen patients had borderline tumor (6/87) or malignant tumor (7/87), and eleven of them (12.6% of the total) needed a second surgery; the preoperative ultrasound classified these masses as uncertain (7/13) or malignant (6/13). In our court, there was no upgrading of the tumor staging due to the surgery. The median size of the resected adnexal tumors was 8.3 cm (range 2-30cm) and there was no significant correlation between size and incidence of adverse events or increased intraoperative blood loss.

Conclusions

SILS is feasible and safe for the surgical treatment of adnexal masses after an adequate preoperative echographic evaluation according to IOTA criteria. It allows the removal of resectable ovarian tumors of most sizes without the need of an extra accesses or extensions. For this reason, SILS is a particularly appropriate technique for this purpose.

**ES26-0213 -
Free Communication I Laparoscopic Surgery**

Laparoscopic subtotal hysterectomy with in - bag morcellation vs uncontained morcellation

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Background

1. Laparoscopic subtotal hysterectomy (LASH) requires morcellation in order to retrieve the uterine tissue from the abdominal cavity. Cell dissemination is a risk of the morcellation process in benign and occult malign uterine tissue. Therefore special morcellation bags have been presented lately. We investigated the feasibility of LASH with in-bag-morcellation in benign uterine diseases. The results of the comparative analyze and the in-bag-morcellation technique will be presented.

Methods

Comparison of LASH with in-bag-morcellation to LASH with uncontained morcellation. We measured operating time, blood loss (pre- and post surgical hemoglobin), recovery and patients satisfaction with the result. Additionally we compared the detailed surgical differences according to the used technique, such as trocar diameter, number of incisions and costs.

Results

All surgeries has been carried out with out complications. We found no significant differences in operating time, blood loss, recovery and patients satisfaction. In bag morcellation requires the same number of trocars, but the total incision in mm is 27, while in uncontained morcellation technique its only 22 mm.

Conclusions

LASH with in-bag-morcellation is a safe and feasible method in the hands of the skilled laparoscopic surgeon with no time loss or other disadvantages for the patients. On the other hand in-bag-morcellation seems to minimize the risks of cell dissemination compared to uncontained laparoscopic morcellation.

**ES26-0216 -
Free Communication I Laparoscopic Surgery**

A novel surgical technique in the treatment of complex pelvic organ prolapse - the triplefix (sacropexy and pectopexy)

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Background

- Surgical treatment for pelvic organ prolapse (POP) underwent significant changes in recent years. Our studies have concluded that the elevation angle of the vagina (EAV) is the most important factor in pelvic reconstructive surgery for pop and a predictor for pop symptoms.
- Our main aim is to reconstruct a high EAV and thus minimise the voiding dysfunctions by correcting complex pelvic organ prolapse in a lasting way. In order to obtain a high EAV we combine the bilateral pectopexy with a sacrocolpopexy resulting in a triple fixation of the cervix.
- Choosing the material according to its biomechanical characteristics is necessary for optimizing this procedure in an attempt to minimize mesh-related complications.
- We verify the position of the mesh and the EAV using MRI.

Methods

The procedure is conducted under general anaesthesia with the patient supine in semi-lithotomy and in the Trendelenburg position. After locating the anatomical location above the left iliopectineal ligament, a small 1-2 cm peritoneal incision is performed on the left side and the space is developed until the ligament is exposed. A suture is made with the sling needle on the left iliopectineal ligament and the sling is knotted. A small 0.5 cm incision is made suprapubically and a reusable clockwise helical tunnelling device with an opening in the end is inserted into the abdomen. A clockwise rotatory manoeuvre of the helical device is used to create a sub-peritoneal tunnel along the path of the left round ligament between the peritoneal opening above the cervical stump and the opening above the left iliopectineal ligament. The needled end of the mesh sling is inserted into the opening at the end of the helical tunnelling device that is retrieved bringing with it the needled end of the sling to the cervical stump. Two horizontal sutures (back and forth) are made on the cervical stump. The same steps are conducted on the right side using a second counter-clockwise helical tunnelling device. Subsequently the sacrocolpopexy is performed using the helical tunneling device. A sub-peritoneal tunnel is created along the path of the sacro-uterine ligament between the promontory opening and the cervical opening. All the incisions are re-peritonised to completely cover the mesh. The sling is knotted to achieve moderate tension so that the cervical stump (or uterus) is elevated and the cervix is repositioned at the vaginal apex.

Results

The aim of the video is to present the triplefix technique and teach the viewer how to apply this novel intervention.

Conclusions

This is a novel laparoscopic procedure, which aims to give a long-lasting cure to women with complex POP by reconstructing a high elevation angle of the vagina and thus ameliorating bladder dysfunction and reducing high residual volumes.

<http://player.vimeo.com/video/219576846?autoplay=1>

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ES26-0031 -

Free Communication I Laparoscopic Surgery

Minimally invasive surgery for the management of ovarian epithelial cancer: feasibility, morbidity and survival

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Background

Laparoscopy is becoming the gold standard in gynecological oncologic surgery, but it remains controversial for the management of ovarian carcinomas. The aim of this study is to evaluate laparoscopy for the management of both early and advanced stages of ovarian epithelial cancer

Methods

We performed a single institution retrospective study. All patients who underwent a laparoscopic surgery for primary ovarian cancer between the 1st January 2010 and the 31st December 2016 were included in the study. Standard surgical procedures were performed according to national guidelines. Neo-adjuvant chemotherapy was administered when indicated. Preoperative clinical data, perioperative data and survival outcomes were analyzed

Results

Fifty patients were included. Forty one (82%) were successfully managed by laparoscopy without conversion to laparotomy. Absence of residual tumor was achieved for all cases (100%). Three intraoperative complications (7.3%) occurred, all resolved laparoscopically. Median length of stay was five days. Seven patients (17%) had postoperative complications but only one (2.4%) was grade 3. Median time to start adjuvant chemotherapy was 27 days. For a median follow-up of 18 months, twenty nine patients (71%) are still alive with no recurrence, ten relapsed (24%). Median overall survival was 64 months and median progression-free survival was 38 months.

Conclusions

Minimally invasive surgery may represent a valuable surgical alternative for management of ovarian epithelial cancer in selected cases, with a low morbidity rate and no impact on progression free survival. A prospective multicentric study for laparoscopic management of advanced stages is currently under evaluation in our department.

ES26-0033 -

Free Communication I Laparoscopic Surgery

Single port laparoscopic ovarian detorsion during 21st weeks of pregnancy

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Background

Laparoscopic surgery in pregnancy may cause direct trauma to the gravid uterus or fetus especially during the closed Veress needle or trocar insertion. Therefore, majority of the surgical approaches are still performed via laparotomy. We present a unique case of ovarian torsion during second trimester pregnancy which was detorsioned with single incision laparoscopic surgery.

Methods

A 27 years old woman, 21 weeks 6 days pregnant, gravida 1, was referred to our clinic because of acute and severe left abdominal colic pain. There was severe colic pain and vomiting. She had abdominal and rebound tenderness of the left abdominal and flank region at physical examination. There was no uterine contractility and vaginal bleeding. We performed abdominal ultrasonography and it showed that 21 week pregnancy without placental abnormalities and fetus had normal cardiac activity. Ultrasonography revealed that left ovary slightly enlarged without cystic formation and there was no arterial and venous blood flow on colour, pulsed and power doppler examination. Therefore, with the suspicion of the ovarian torsion surgical intervention was decided.

Surgery was performed with a combination of the single incision laparoscopic surgery and noncurved straight laparoscopic instruments. Intraoperatively, we observed that enlargement of left ovary with gangrenous changes due to torsion for two rounds over the pedicle and detorsion was performed by using noncurved straight laparoscopic instruments and a few minutes later ovarian gangrenous changes was resolved.

Results

Symptoms of patient was resolved after the surgery and patient was discharged two on postoperative 2th days without any maternal and fetal complication. The patient was delivered on the 40 th weeks of pregnancy without any complication.

Conclusions

We believe that single incision laparoscopic surgery with open entry technique might be best surgical option for these pregnant women to prevent possible injury due to the enlargement pregnant uterus.

<http://player.vimeo.com/video/215629443?autoplay=1>

**ES26-0034 -
Free Communication I Laparoscopic Surgery**

Minimally invasive radical hysterectomy for cervical cancer compared with laparotomy: single institution experience

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Background

Radical hysterectomy (RH) via laparotomy has been for many decades the traditional surgical approach for early stage cervical cancer. Many established cancer centers worldwide have recently shown laparoscopic radical hysterectomy to be a safe and feasible alternative to the conventional laparotomy for early cervical cancer management.

Methods

Retrospective cohort study.

44 women met eligibility requirements. Of these, 17 underwent a laparoscopic approach, and 27 underwent laparotomy.

The aim of this study was to assess outcomes of patients with cervical cancer undergoing upfront RH and lymphadenectomy to determine if mode of surgery affects these outcomes.

Results

Regarding disease free survival there was no significant difference between both groups ($p=0.528$). The mean operating time was almost equal in both groups (274.65 minutes for the laparoscopy vs. 251.81 minutes for the laparotomy, $p=0.324$). The mean number of pelvic lymph nodes retrieved was higher in the Laparotomy group (39.41 versus 29.12, $p=0.044$). Preoperative hemoglobin difference was significantly higher for patients receiving laparotomy (3.29 g/dl vs. 1.81 g/dl, $p=0.002$). Laparotomy was associated with higher rates of postoperative urinary retention (40,7% vs.11,8%, $p=.0.050$). And finally the Length of hospital stay was shorter in the laparoscopy group (Mean: 8 days vs.17 days, $p<0.001$)

Conclusions

Laparoscopic Radical hysterectomy does not compromise patient outcomes including disease free survival and rate of recurrences. Lower surgical morbidities and shorter hospital stay are a mark of laparoscopic RH.

**ES26-0163 -
Free Communication I Laparoscopic Surgery**

What is changing in the approaches of hysterectomy for benign indications in a tertiary referral center?

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Background

Hysterectomy is believed as one of the oldest surgical procedures in the history of medicine. The development of asepsis, anesthesia, surgical skills, suture techniques, blood products and antibiotics led to the excessive increased in surgeries including hysterectomy by the twentieth century.

There are many advantages of the vaginal and laparoscopic routes. The benefits like less post-operative pain, shorter hospitalization time, quicker return to daily activities are the reason of preference of laparoscopic operations for gynecological procedures by skilled surgeons.

It carries quiet importance to know which patients should be appropriate for different routes of hysterectomy operations. Therefore; we aimed to analyze the characteristics of the patients who had undergone hysterectomy with different routes and also to determine the changes in routes of hysterectomy over years.

Methods

A total of 842 women suffering from gynecological pathologies who underwent hysterectomy between January 2014 and 2015 were included to the study.

Results

Percentage of abdominal hysterectomy (AH) decreased steadily from 96.2% to 63.1% during six years. Mostly applied route for hysterectomy was abdominal (63.1%), then laparoscopic (21.7%) and then vaginal (15.2%). Patients were analyzed in each route of hysterectomy. VH was applied in older patients with higher parity and body mass index. Patients with AH and laparoscopic hysterectomy (LH) had higher postoperative hemoglobin decline than vaginal hysterectomy (VH). More blood transfusion secondary to blood loss was observed in AH group. The most frequent indication was myoma uteri in AH and LH group, whereas the only indication in VH group was urogynecologic reasons. There were no differences between groups in terms of surgical site infections.

Conclusions

The rate of minimal invasive surgeries including VH and LH had tended to increase in recent years in our clinic. Patients with older age, greater BMI and higher parity were included in VH group according to our results. VH was associated with less post-operative hemoglobin decrease rate and less transfusion rate than AH and LH. Despite there was no significant difference in hemoglobin decrease between AH and LH, the transfusion rate was higher in AH group than in LH group. However, we found no association in surgical site infection with the type of the hysterectomy operations.

Cost analysis has consistently demonstrated that vaginal hysterectomy is the most cost-effective route.

However; in our country, all health insurance is free of charge so the surgery types have not yet well evaluated for cost-effectivity. The cost-effectivity is not an effective factor to choose the route of hysterectomy for our country.

In conclusion; the minimal invasive surgeries; including AH and VH were found to be in an increased manner. Also, those routes of surgeries were associated with less blood transfusion than AH.

**ES26-0250 -
Free Communication I Laparoscopic Surgery**

Suture techniques in laparoscopic myomectomy

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Background

This video demonstrates three types of suture technique in laparoscopic myomectomy: simple 'U' shape suture, baseball suture, and Lembert suture.

Methods

4 ports surgery using 10mm telescope and 3 ancillary ports. Umbilical port is created with XS Alexis wound retractor and one surgical glove. This is where the telescope entry and specimen removed.

We sutured the inner myometrium first, and then sutured the outermost layer (myometrium and serosa). Inner myometrium is sutured with V-lock in multiple layer, and outermost layer is sutured in three different ways: simple 'U' shape suture, baseball suture, and Lembert suture.

Results

Simple 'U' shape suture enters the uterus with a needle throughout the serosa to the myoma bed and emerge at the superficial level like a U shape, the needle is then grasped and reapplied in a reverse fashion. This type of suture is easy to perform, but left much suture material exposed, which is not suitable for barbed suture material like v-lock.

Baseball suture enters the uterus from the myometrium and leaves to the serosa at the same side, and then goes to the myometrium on the opposite, and then repeats until the wound is closed in a baseball fashion. This allows a minimum of exposed suture material and decreases adhesion formation. However, the operator sometimes has to reverse manipulate the needle holder during baseball suture, which increases the difficulty of the surgery.

Lembert suture is the classical suture pattern for closing gut. The needle is directed to cross the incision, penetrating the serosa and small part of the myometrium, then back out through the serosa, across the incision to repeat the maneuver on the other side. When the suture is tightened, serosa approximates and will decrease the risk for further adhesion formation.

Conclusions

Simple "U" shape suture is easy to perform, but has the disadvantage of suture material exposure. Lembert suture is similar to simple suture, despite suture material exposure and consuming, it has excellent serosal approximation. On the other hand, baseball suture decreases suture material consuming, but sometimes difficult to perform.

<http://player.vimeo.com/video/220472914?autoplay=1>

ES26-0273 -

Free Communication I Laparoscopic Surgery

Mini-laparoscopic lateral suspension repair of apical pelvic organ prolapse

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Background

Laparoscopic lateral suspension (LLS) using mesh represents a surgical technique to treat apical pelvic organ prolapse (POP) preserving the uterus. Mini-laparoscopy could be a safe and cosmetic approach.

Methods

Observational cohort study includes a prospective series of 35 consecutive patients with symptomatic anterior and apical prolapse, who underwent Mini-LLS for symptomatic apical POP between April 2013 and July 2016 performed by two expert surgeons (ST e LM) at the Gynaecologic Unit in Santa Chiara Hospital, Trento, Italy. Pre-, peri- and postoperative data were collected to analyse surgical outcome learning curve.

Results

Surgical indication was central +/- anterior compartment prolapse, N 8 (22.86 %) stage 2, N 27 (77.14 %) stage 3 according to the POP quantification (POP-Q). The median age was 53.54 years (SD 9.13) and the median BMI was 25 (SD 2.51). The 65.7% of patients have a menopausal hormonal status and the majority 29 (82%) of them were sexually active. The mean LLS operative time (LLS-OT) was 107.57 min (range, 185-63 min). None of the patients were converted to laparotomy either have intraoperative complications. Mean blood loss was < 50 ml. Foley catheter was removed on the morning after surgery. All patients were successfully mobilized on the first day after surgery. According with the NRS, no patients referred pain greater than 4 at 6,12 and 24 hours. The median recovery time was 2.4 day (58 hours, SD 22). In 2 cases there was postoperative complications: lower back pain (N 1, 2,8 %) and urinary tract infection (N 1, 2,8%). Recurrence of POP was observed in 3 cases (8,6 %): only in one case the recurrence was symptomatic and required surgical intervention (promontosacrpey). No cases of erosion/extrusion was reported after six months of follow up. As far as the learning curve, the raw LLS-OT data were plotted in chronological case order and the CUSUM learning curve was observed to consist of two different phases: phase 1 (the initial 12 cases) and the phase 2 (the last 23 cases). The mean OT decreases with experience (phase 1: 113.54 minutes versus phase 2: 104.43 minutes). The time reduction was statistically significant considering the CT ($P < 0.05$).

Conclusions

Mini-LLP with mesh is a safe and reproducible technique with good anatomical results, low complication rates and a learning curve of about 12 cases.

Laparoscopic identification and management of uterine niches

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Background

Uterine niches are outpouchings of the endometrium, disrupting the continuity of the myometrium. These are primarily encountered following caesarean sections. These niches are either asymptomatic, or occasionally present with post-menstrual spotting, and sometimes with pelvic pain.

With the rising rates of caesarean sections, increasing numbers of cases with uterine niches are expected to be encountered in the course of practice of minimally-invasive surgeons. Minimally-invasive surgeons meet with such lesions during either hysteroscopic or laparoscopic procedures, and should always have that diagnosis in mind to be able to identify, and hence, treat these lesions.

Methods

We report a case series of 10 cases suffering post-caesarean uterine niches, who presented with either post-menstrual bleeding or chronic pelvic pain.

All cases were subjected to standard hysteroscopic examination, followed by laparoscopy. Upon identification of the presence of uterine niches, often after having to dissect adhesions at the uterine scar site, and the utero-vesical pouch, the edges of the niche were trimmed, using cold scissors, until fresh edges are reached.

Consequently, single-layer closure of the fresh edges was performed using laparoscopic suturing by an absorbable 2-0 metric polyglactin material.

Urinary bladder integrity and uterine suture site were checked using methylene blue injection into the urinary catheter and uterine cavity, consecutively.

Results

Identification and repair of uterine niches is feasible using minimally-invasive surgical procedures. It is advisable to deter menstruation in such patients to promote healing of the repaired niche sites.

Following successful repair, remarkable improvement of the patient's symptoms ensues.

Conclusions

With the rising rates of caesarean sections, a parallel rise of the incidence of uterine niches is encountered. Minimally-invasive surgeons should be familiar with the identification strategies and repair techniques of such lesions.

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ES26-0318 -

Free Communication I Laparoscopic Surgery

Tissue extraction technique for large uteri

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Background

The purpose is to present the demonstration of tissue extraction technique for large uteri.

Methods

A 44 years old woman refers to our clinic with complaint of abnormal uterine bleeding and pelvic pain. On abdominal examination, palpable, mobile and five-month gestational age uterus was noted. Transabdominal ultrasonography revealed 12 cm uterine leiomyomas with normal ovaries. Serum levels of tumour marker antigens were in normal range. Endometrial sampling reported as proliferative endometrium. Overall, the laparoscopic surgery was decided. Under general anaesthesia, after establishing a pneumoperitoneum, a 10-mm optic port was inserted through umbilicus for optic system. Two 5-mm trocars were placed in each lower quadrant laterally at the para-median line just below the umbilicus and one 5-mm trocar was placed on the left upper quadrant just above the umbilicus. After performing a tough total laparoscopic hysterectomy, vaginal route was chosen for uterine tissue extraction. But it was still enormous for removal through the vaginal route. If the tissue is too large for this approach, scalpel or power morcellation could be employed. Additionally, power morcellation requires a considerable time after operations main steps. Alternative techniques for large uteri are mini-laparotomy and laparotomy. But these are not quite appropriate for minimally invasive approaches. For selected patients uterus could cut straight two or three times from fundus up to cervix. Thence the uterus takes the shape of a spiral or fan for straightforward extraction. The optic was then switch to 5 mm optic to use a 10-mm laparoscopic scalpel through the umbilical port. Two incisions were made to get uterus to spiral shape. Thus, uterine tissue was taken out from colpotomy incision using vaginal route with ease. Repair was made with laparoscopic suturing.

Results

On postoperative day one patient was discharged without any complication.

Conclusions

Getting uterus to spiral shape for tissue extraction should be kept in mind in appropriate patients.

<http://player.vimeo.com/video/221852754?autoplay=1>

**ES26-0346 -
Free Communication I Laparoscopic Surgery**

Laparoscopic hysterectomy and bilateral salpingo-oophorectomy in patients with gender identity disorder: in a single tertiary center experience

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Background

Transsexuals (Gender Identity Disorder) are individuals who believe that their gender identity does not match their birth sex. In this condition, they want to remove and replace their internal and / or external genital organs. In our clinic we perform total hysterectomy and bilateral salpingo-oophorectomy through laparoscopy to those patients. We aimed to present our surgical statistics and giving brief results those of female patients.

Methods

All data were retrospectively screened. Sixty-one patient diagnosed with Gender Identity Disorder underwent total laparoscopic hysterectomy and bilateral salpingo-oophorectomy between 2011-2017 in our clinic.

Results

Sixty-two patient's operative and demographic data's were as following; mean ages were 26.6 (range 20 - 47), mean operation time 116 min. (range 78-270) mean pre-operative hemoglobin levels were 14.6 gr/dL (range 11- 17), mean postoperative hemoglobin levels were 12.9 gr/dL (range 10- 15), mean uterus weight 82 gr. (range 35-170), mean BMI 28 kg/m² (range 22-31) mean hospitalization time were 2.5 day (range 2- 3). Regarding perioperative outcomes, no laparotomic conversion was needed during laparoscopic surgical procedure. Peri-operative and post-operative complications were not recorded.

Conclusions

In current surgical methods minimal invasive route, has many advantages over open surgeries in the treatment of a wide range of gynecologic diseases have been acknowledged. Total laparoscopic hysterectomy and bilateral salpingo-oophorectomy plays significant role in the gynecologic care of female- to-male transsexuals.

ES26-0326 -

Free Communication I Laparoscopic Surgery

Laparoscopic marsupialization pelvic pseudocyst

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Background

Pelvic pseudocyst is usually caused by postsurgical pelvic adhesions. In these cases peritoneal fluid and adnexa are entrapped in adhesions and form pseudocyst, without true cystic walls, with complex appearance. Minimally invasive management of benign cysts include ultrasound-guided aspiration but recurrence is quite common and may cause morbidity.

Methods

Laparoscopic approach yields better results for peritoneal and intra-abdominal adhesions. Some authors have reported a reduction in adhesion formation after laparoscopic surgery compared with open surgery.

Results

37-year-old multigravida woman who was successfully managed by laparoscopic adhesiolysis and marsupialization. A 37-year-old multigravida woman presented with abdominal distension. Physical examination revealed tenderness without rebound in her left lower abdomen. She had undergone two cesarean section and laparotomy for endometrioma. Transabdominal ultrasonography showed an irregularly shaped cystic lesion with thickened walls measuring 10.0 cm 6.8 cm. Her serum CA-125 level was 25 U/mL. In magnetic resonance imaging, pelvic inflammatory cyst with pelvic adhesions was suspected. Operative laparoscopy revealed severe pelvic adhesions and a large pseudocyst embedded in the omentum and bowels on the left side of the pelvis. The adhesions were lysed and the pseudocyst was ruptured. Meticulous laparoscopic adhesiolysis and marsupialization were performed. The patient was discharged without any sequelae 3 days after the operation.

Conclusions

Pelvic adhesion formation is a natural healing process after pelvic surgery. Operative laparoscopy is a minimally invasive alternative for evaluating and managing pelvic pathologies, and has a presumably lower risk of postsurgical adhesion formation. When performed by a well-trained surgeon, the laparoscopic approach allows evaluation of the nature of pseudocysts and lysis of adhesions intraoperatively.

<http://player.vimeo.com/video/221561043?autoplay=1>

ES26-0349 -

Free Communication I Laparoscopic Surgery

Jain point: a new safe portal for laparoscopic entry in previous surgery cases

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Background

abdominal adhesions are increasingly common and occur in upto 93 % patients with previous surgery and 10 % patients without any surgery. It is the minimally invasive surgeon's dilemma to select the safest site for the first blind port. The present study was performed to assess the safety and feasibility of a new laparoscopic entry site in cases suspected of adhesions due to previous surgery.

Methods

It is a retrospective study undertaken at our tertiary care referral center for advanced gynecological laparoscopic surgery from January 2011 to May 2017.

Total 5004 laparoscopic cases were done between January 2011 and May 2017, in 1326 patients there was a history of previous abdominal surgeries. The laparoscopic entry site was through a newly devised point. It is a point in the left paraumbilical region at the level of umbilicus, in a straight line drawn vertically upward from a point 2.5 cm medial to anterior superior iliac spine. We included cases with previous laparoscopy and laparotomies. Fellows fondly coined the term, "Jain Point".

Indications were divided between gynae and non gynae surgeries. Non Gynae surgeries were laparotomies for intestinal obstruction, mesh hernia repair, appendectomy, cholecystectomy, laparotomies done in childhood, for congenital abnormalities like ectopia vesicae and colon pull through for hirschsprung disease. Gynae indications were previous ectopic, myomectomy, hysterectomy, endometriosis, caesarean sections, genital tuberculosis, septicemia, advanced abdominal infection. Multiple surgeries in single patient were counted only as one previous surgery to avoid inflation of figures. In some cases of generalized Tuberculosis, there were extensive omental adhesions plastered all over abdomen .however,no direct bowel adhesions were present at this site.

Results

The indications of previous surgeries in our study were such in which patients are prone to form adhesions at the previous surgery site and at umbilicus. In all of these cases incidence of adhesions was at umbilicus , right side of abdomen and pelvis, but Jain Point was found free of adhesions and we have consistently used Jain Point in these challenging cases as the first blind port.

Bowel adhesions or injury was not encountered. In few cases of abdominal tuberculosis, PID and septicemia , omental adhesions were noted but did not initiate any bleeding on trocar entry.

Conclusions

There were no significant entry-related, intra-operative, or postoperative complications with the use of this entry point. Jain point is more lateral from main incision line hence chances of adhesions are less. Jain point becomes the main ergonomic working port. We advocate the more liberal use of Jain point in laparoscopy with multiple previous surgeries by other high volume centers in different variety of cases to further establish its safety .

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ES26-0157 -

Free Communication I Technical innovations in minimal invasive surgery

Minitouch endometrial ablation: the Walsall Manor experience

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Background

Ambulatory gynaecology is rapidly evolving. The Minitouch endometrial ablation epitomises this evolution. Presently there is scarce data on efficacy of a combination treatment with Minitouch and Mirena coil. We aim to describe the outcomes of patients who underwent Minitouch ablation with and without placement of the Mirena coil for heavy menstrual bleeding (HMB) between March 2015 and February 2017 (n=109); specifically the effect on menstruation and patient acceptability.

Methods

The procedures were performed at the outpatient gynaecology clinic of Walsall Manor Hospital. Patients took two forms of simple analgesia preoperatively and received pre-ablation local anaesthetic infiltration into the endometrium. Procedure time was 60-90 seconds depending on cavity size. All patients were offered Mirena coil insertion post-ablation. Known complications of all procedures were noted. Patients were followed until May 2017 through semi-structured telephone interviews by independent doctors to reduce response bias.

Results

Patients' median age was 44 years, median parity was 2, and median uterine cavity length was 5 cm. Follow-up data from 60 patients is available. 58.3% (35/60) reported amenorrhoea post-procedure. An additional 33.3% (20/60) reported hypomenorrhoea. 3 patients reported a post-procedure complication (infection). Most patients consented to the Mirena coil insertion, 5 of which have subsequently had this removed due to dissatisfaction. Despite 75% (45/60) describing Minitouch as "painful" (>5/10 on pain score), 90% (54/60) of responders would recommend it to family and friends. Most of those who would not recommend the procedure would do so if it was done under general anaesthetic.

Conclusions

We have demonstrated an overwhelmingly positive response and patient acceptability of combination treatment of menorrhagia with Minitouch and Mirena coil. Minitouch is an important addition to our ambulatory gynaecology practice.

ES26-0240 -

Free Communication I Technical innovations in minimal invasive surgery

Cardio-vascular monitoring of a surgeon during laparoscopic and robot-assisted hysterectomy

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Background

Russia is on the third place of the number of obese people (26% according to WHO). Among this number 4% are morbidly obese. That number is growing every year. It is proved that overweight causes endometrial hyperplasia or/and cancer. In Russia the growth of endometrial cancer made 11,2% from 2010 to 2015.

Methods

From 2012 to 2017 hysterectomy was performed at 180 patients with morbid obese (BMA > 40) by one surgeon: out of them 60 – robot-assisted (RA TH) and 120 – laparoscopic (LTH). The state of surgeon's adaptive systems (blood pressure, pulse, Holter) was monitored in 25 cases (15 – RA TH, 10 – LTH).

Results

The average time of RA TH was 91 min. The surgeon's blood pressure before the surgery was 150/80, during the surgery – 145/90, at the end – 140/80. The pulse was 62, 64 and 60 respectively. According to the Holter SDNN was 99 mc; rMSSD - 60,4 mc

At the laparoscopic approach the average time was 75 min. The surgeon's blood pressure before the surgery was 130/80, during the surgery – 155/90, at the end – 150/90. The pulse was 62, 84 and 80 соответственно. According to the Holter SDNN was 93,4 mc; rMSSD - 92,6 mc.

Conclusions

In patients with morbid obese the surgeon's cardio-vascular index at LTH was over norm. The same index at RA TH was close to norm. That proves RA TH is more comfortable and less harmful for the surgeon.

ES26-0283 -

Free Communication I Technical innovations in minimal invasive surgery

Fluorescence sentinel lymphnode detection during Robotic Laparoendoscopic Single Site surgery

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Background

in the new era, the introduction of technologies as Single Site Surgery, Robotics and Sentinel lymphnode fluorescence detection, has reduced invasiveness in the treatment of endometrial cancer patients. The feasibility of near infrared fluorescence during Robotic Laparoendoscopic Single Site (RSS) surgery may offer some advantages over traditional robotic surgery.

Methods

13 non consecutive low risk endometrial cancer (EC) and endometrial atypical hyperplasia (EAH) patients underwent sentinel lymphnode (SLN) biopsy, extra fascial hysterectomy and pelvic washings utilizing the da Vinci Si Surgical System (Intuitive Surgical, Sunnyvale, CA) with a single multichannel port inserted through a 2.5 cm umbilical incision. Four milliliters of ICG was diluted to 1,25 mg/mL and was injected into the cervical stroma (3 and 9 o'clock) before surgery.

Results

indications for surgery included: 4 (30.7%) EAH, 7 (53.8%) IA FIGO stage G1 EC and 2 (15.4%) IA FIGO stage G2 EC at preoperative endometrial biopsy and instrumental exams. Median patients' age was 60 (range: 55-69) and body mass index was kg/m² 23 (range: 21-33). 6 (46.1%) patients had prior abdominal surgery. Median uterine weight was 113gr (range: 50-230). Mean operative time: 155 minutes (range: 112-175). One peri-operative complication was encountered, and all patients were discharged within 48 hours of surgery. SLN was detected in 84.6% of cases (2 case no detection, 7 cases bilateral detection and 4 cases monolateral detection). Frozen section on the uterus was performed only in the case without SLN detection and no SLN frozen was performed. 24/24 SLN results negative at the final histological exam. Upperstaging occurred in 4/13 cases (2 endometrial atypical hyperplasia and 2 G1 endometrial cancer).

Conclusions

RSS SLN biopsy and hysterectomy are feasible in selected patients. SLN detection permitted retroperitoneal evaluation. Further studies are needed to underline if there are benefits over standard robotic surgery.

<http://player.vimeo.com/video/221851311?autoplay=1>

ES26-0371 -

Free Communication I Technical innovations in minimal invasive surgery

Succesful treatment of ectopic pregnancy in the caesarean scar with the rendez-vous-technique after conservative treatment with cook-catheter and methotrexate

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Background

Caesarean scar defects are a frequent complication of caesarean delivery with a prevalence of 56-84%. Caesarean scar pregnancy implantation occurs in the fibrous tissue scar and is thought to invade the myometrium through a microscopic dehiscence or scar defect. The diagnosis and treatment is challenging since those pregnancies can be associated with serious maternal complications as placenta accreta, uterine rupture and severe hemorrhage.

Methods

We present the case of an asymptomatic 33 year-old woman, G3 P1, who was referred to us at 6+0 weeks of gestation. Her past obstetrical history was significant for one prior caesarean section and one curettage due to missed abortion. Transvaginal ultrasound demonstrated a viable pregnancy in the cesarean section scar of 17x12x18mm. The serum bHCG was 5858 IU/l. The patient was counseled about the diagnosis and treatment options including continuation of the pregnancy. A conservative approach was chosen to terminate the pregnancy and prevent severe hemorrhage by inserting an intrauterine Cook catheter. The catheter balloon was filled with 20 ml NaCl and was placed with direct pressure on the gestational sac. A subsequent ultrasound examination showed a non-viable pregnancy. After 3 days the cook catheter was removed. Ultrasound showed a residual echogenic mass of 19x15x15 mm with minimal perfusion and the serum bHCG was 3362IU/l. In the following a single dose of methotrexate was administered additionally due to rising bHCG levels. 87 days after the intervention without maternal bleeding, the bHCG levels were undetectable. However the echogenic mass continued to show perfusion and the patient presented with low level fresh vaginal bleeding over two weeks with a decline in hemoglobin to 103 g/l. We decided to perform minimally invasive surgery combining a laparoscopic and hysteroscopic approach three months after the initial treatment.

Results

Operative findings revealed a mass in the caeserean scar which was resected hysteroscopically under laparoscopic guidance. After laparoscopic dissection of the bladder from the lower uterine segment, the scar was excised over a length of 3cm under hysteroscopical guidance and closure was performed with 4 interrupted stitches. The operation was performed without complications and the patient was discharged the following day. Histological examination showed decidual tissue and the uterine scar demonstrated necrosis and chronic inflammation.

Conclusions

This case is a rare example of caeseran scar pregnancy which was managed succesfully without severe maternal complications. Treatment options include expectative management, systemic and local administration of methotrexate or KCL, balloon catheter insertion, open local excision, hysterectomy and minimally invasive surgery. The best managment however, is unknown. The major benefit of our approach is the delayed minmally invasive surgery with the ability to clearly localize the scar pregnancy through the magnified view provided by hysteroscopy while at the same time surgically exciding and refreshing the prior scar by laparoscopy.

ES26-0403 -

Free Communication I Technical innovations in minimal invasive surgery

Smartphone speculum: design, development, and initial experience

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Background

To discuss the design and development a novel speculum, and review initial user experience across UK and EU.

Methods

This novel speculum for the 21st century was developed by USA-based interdisciplinary students through an iterative design process. This was done via active transatlantic collaboration with UK and EU physicians over the Internet, phone and in-person discussions. Several centers in UK and EU have been evaluating potential enhancements offered by the device to both the patients' as well as physicians' experience, during routine outpatient gynaecology procedures.

The device consists of a low-cost single-use vaginal access probe attached to a smartphone. After obtaining appropriate patient consent, it was used instead of a standard speculum. After first introducing the gel lubricated probe to locate the cervix, subsequent steps varied based on the primary procedure that ranged from simple vaginoscopy and cervix inspection to insertion of an IUD.

Results

Patients tolerated the insertion of the probe well. Operating physicians evaluated the adequacy of lighting as well as visualization of vaginal cavity and cervix using a five-point scale. Ease of use of other instruments such as vulsellum, forceps, and IUD through the access channel in the probe was also evaluated. Patient pain scores during probe insertion and manipulation were captured on a ten-point visual-analogue scale, and recorded along with the physician's assessment of patient comfort during the steps. When available, each patient's recollection of pain during prior speculum examinations was recorded for an informal comparison. The findings from this initial experience will be presented at the meeting.

Conclusions

This smartphone speculum offers several advantages over a traditional speculum. Besides improving patient comfort and ergonomics for the operator, the integration with a smartphone enables a platform with a future potential to add functions like real-time audio notes and image/video capture with an ability to integrate with electronic health record systems.

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ES26-0054 -

Free Communication I Urogynaecology + Fibroids including morcellation OR tissue extraction + Laparoscopic surgery

Easy, safe, speedy, and economic removal of a large uterus

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Background

When performing laparoscopic hysterectomy in a case with a large uterus, tissue removal can be a time-consuming and difficult procedure, especially in obese or nulliparous women. There have been several reports regarding methods of extraction – suprapubic incision for removal, electric morcellation with or without bag, or trans vaginal in-bag morcellation. Here we describe an easy, safe, speedy, and economic method of extraction of a large uterus.

Methods

Initially, we insert a tissue collection bag into the abdomen. When the estimated weight of a specimen exceeds 500 grams, we insert an isolation bag which is usually used for bowel isolation in open surgeries. After collection of the specimen into the bag, the drawstring is pulled out of the vagina, and wound retractor® is inserted in the bag and adapted at the vaginal stump. Then we morcellate the specimen using surgical knives or scissors.

Results

We applied our method to 148 patients undergoing laparoscopic hysterectomy between January 2015 and April 2017. In 145 patients (98.0%), we could perform it successfully. In 3 cases, we could not adapt a retractor in a suitable position, and used conventional extraction method using vaginal speculums. Severe endometriotic lesions with frozen pelvis were present in all of them. In all successful cases, including obese and nulliparous patients, tissue extraction was smooth, and blood loss during removal was a negligible amount, probably due to continuous compression of the vaginal stump with a retractor.

Conclusions

Removal of a large uterus can be performed easily, safely, and quickly using our method compared with conventional methods. Retractors and tissue collection bags are cheap and they can avoid other organ injuries and diffusion of possible malignant cells. Moreover, continuous compression of vaginal stump might minimize blood loss. However, it might be difficult to apply this method in cases with severe endometriosis. We consider that there are four important elements for novel devices or methods to be widely accepted: Easiness, Safety, Speed, and Economy(ESSE). Our method meets all four requirements, and is highly feasible for any gynecological laparoscopist.

ES26-0061 -

Free Communication I Urogynaecology + Fibroids including morcellation OR tissue extraction + Laparoscopic surgery

Lee laparoscopic sacrocervicopexy

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Background

Pelvic organ prolapse is a very common disorder which lifetime risk for surgical correction is around 11%. Many techniques were described. Sacrocolpopexy is the gold standard, being associated with a lower rate of recurrent vault prolapse, reduced grade of residual prolapse, longer time to recurrence, and less dyspareunia compared with the vaginal procedures, such as sacrospinous ligament fixation and uterosacral ligament suspension. In order to avoid one of the most important sacrocolpopexy complications – mesh erosion - laparoscopic sacrocervicopexy was developed. The objective of this video is to describe a modified laparoscopic sacrocervicopexy technique.

Methods

Sacro cervicopexy is similar to sacrocolpopexy, in which a graft material is used to suspend the cervix to the anterior longitudinal ligament of the sacrum. It can be performed either with uterine preservation or after supracervical hysterectomy and avoids the risk of mesh erosion. Additionally, it preserves the integrity of the uterosacral and cardinal ligaments, which are the main supports of the vaginal apex. Here we describe a laparoscopic sacrocervicopexy technique which main specificity is the fixation of the mesh at the level between the external and internal cervical os – a little bit lower – and between the uterosacral and the cardinal ligaments, being easily fixed without tension, to the anterior longitudinal ligament of the sacrum, and then covered by posterior peritoneum.

Results

No complications or recurrence were seen during 1-year follow-up of the 30 cases performed with this technique to date.

Conclusions

This is a minimally invasive technique, safe and effective for pelvic organ prolapse correction, in which the uterus or the cervix can be preserved.

<http://player.vimeo.com/video/217873882?autoplay=1>

ES26-0241 -

Free Communication I Urogynaecology + Fibroids including morcellation OR tissue extraction + Laparoscopic surgery

We present our experience with the alternative use of mesh that we used in robotic hysteropexy surgery

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Background

Robotic hysteropexy was performed in a patient with total prolapse who was 34 years old with two normal births and one cesarean birth.

Methods

Mesh was cut 16 x 4 and 15 x 1 cm separately and the mesh was sutured to each other by passing through the windows opened in the uterus parietal peritoneum with 1 cm mesh on the mesh anterior vaginal wall of 6 cm and 15 cm mesh back vagen wall. And the other tip promontoriuma 15 cm in diameter was sutured. The parietal peritoneum was completely closed. The patient was discharged on the first postoperative day with cure.

Results

These three pieces of separate mesh use provide convenience during operation. According to our experience, it provides faster, more convenient and easier mesh placement than conventional mesh placement

Conclusions

Our alternative method of use of mesh in sacrohysteropexy robotic surgery is an effective and feasible method

<http://player.vimeo.com/video/220185286?autoplay=1>

ES26-0307 -

Free Communication I Urogynaecology + Fibroids including morcellation OR tissue extraction + Laparoscopic surgery

Total paracervical reconstruction: low-cost site-specific pop repair

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Background

Due to FDA warnings regarding mesh-related complications and plenty of medicolegal problems worldwide there are big interest to diminish use of foreign material with good anatomic outcome and improvement of QoL. With development of Integral Theory we clearly understand importance of anatomical restoration and augmentation all the ligaments and restore fascia in pelvis using polypropylene tapes. In Russia such commercial kits didn't present that's why we developed our "low cost" trocar guided variation of pIVS.

Methods

Procedure begins with mobilization of the defect of RVF, identification sacrospinous ligaments. On the anterior wall we mobilize defects of pubocervical fascia, CL and enter paravesical space. We use 2 low elastic polypropylene tapes. Posterior sling pass through SSL "inside-out" manner in the medial part transgluteally and place middle part in front of cervix via lateral fornices. The anterior sling is passing through obturator foramen 1cm higher ATLA and 2cm frontally to ischial spine. Both slings fix to the cervix at the level of attachment of PCF. After that, both fasciae stiches to the cervix with prolene 3-0 and plication of cardinals. Vaginal wall restored. If indicated, lax perineal body, anal spinster or PUL also repaired. We use technique of minimally invasive perineoplasty with restoration of bulbocavernous and transverse perineal muscle. Since 2016 we have done 28 procedures in 4 clinics in Moscow region performed by senior surgeons. Indication was: symptomatic POP 2-4 stages (POPQ). Simultaneous operations were: trachelectomy 14%, LS supracervical hysterectomy in 7%, TVT-O (32%), PB repair (89%) include EAS repair (3,5%). To estimate outcome we used: QOL (PFDI-20, PFIQ-7, FSFI) and factor analysis of the symptoms, ultrasound examination of pelvic floor, Rö defecography if indicated.

Results

Operation time was 85±25min. Blood loss never exceed 150ml. In all cases pain was mild (1-4VAS) localized in perineal body or buttocks treated with NSAID 2-3 days. Mean follow up were 6±3months. No erosions. There were statistical improvements before and after the operation: PFDI-20 115,5/48,7 (p<0,01), PFIQ-7 68,7/14,4 (p<0,01). Sexually active patients (64%) report improvements according FSFI 18/25,8(p<0,01). There was significant improvement the following symptoms: "bulge" -96 to 0%, pelvic pain -42 to 3,5%, dyspareunia -28 to 3,5%, obstructive urination -32 to 0%, frequency -60,7 to 7%, urgency -4,2 to 0%, SUI 11 to 7% (14% cases including de novo SUI midurethral sling was performed), obstructive and dyssynergic defecaton 17 to 7%, AI 7 to 0% without worsening of any symptom. Anatomical results are significantly improved (Ba,Bp,C or D≤-2).

Conclusions

Sort-term results, low postoperative pain score, few complications, good anatomical and functional outcomes in most cases and low cost makes possible to consider this approach as effective minimally invasive method of “functional surgery”. However, we need long-term multicenter study with more number of patients.

<http://player.vimeo.com/video/221502230?autoplay=1>

ES26-0310 -

Free Communication I Urogynaecology + Fibroids including morcellation OR tissue extraction + Laparoscopic surgery

Laparo-vaginal variant for advanced apical POP in young patients

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Background

POP still remains unresolved problem. In spite of plenty of methods described rate of recurrences are still high. Moreover we don't have 100% certainty in good anatomical position of uterus and vagina after this operation. We know that many 'classical' operations didn't provide normal anatomic position of pelvic organs which can lead to failure. That's why in complex cases it's reasonable to use some sort of prosthesis. Frankly speaking all this procedures per se are not ideal. For SSF vaginal vector of proximal vagina goes backward facilitate cystocele recurrence and SCP especially promontofixation suspend vagina very high and frontally.

Methods

Form January 2015 for young and sexually active patients with advanced prolapse (C<+15 cm) we use combination of bilateral SSF of vagina or cervix with prolene sutures and our developed 25 year ago laparoscopic version of Kapanji operation with fixation of vault or cervix in front of rectus sheath with polypropylene. The Sling passing form lateral trocar ports retroperitoneally via parametrium and fix it with nonabsorbable sutures to cardinal-uterosacral complex or vaginal vault. Free ends of the slings pass in subcutaneous fat and suturing together with mild tension in front of rectus sheath.

Results

Total 9 patients enrolled in the study. Age was 42 ± 4 year. Total procedure time was 114 ± 14 min. Blood loss was minimal. In all cases we've got excellent results. Pain was minimal. Follow up time was at least 10 month. No mesh related complications. The position cervix or vaginal vault was very high as well as anterior or posterior compartments. All patients didn't experienced any sexual discomfort.

Conclusions

This laparo-vaginal method is highly effective for the young sexually active patients with 4-th degree advanced apical POP. On the one hand it provides correction all defects at perineal level and 2-nd level, on the other hand strong long-term fixation of apical compartment with minimal complications in experienced hands. We believe that only MRI studies could really confirm the physiologically correct position of all structures of pelvic floor after the surgery in spite of cost.

ES26-0358 -

Free Communication I Urogynaecology + Fibroids including morcellation OR tissue extraction + Laparoscopic surgery

Comparison between four- and six-arm pelvic organ polypropylene mesh implantation for the treatment of pelvic organ prolapse

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Background

The incidence of pelvic organ prolapse increases with age, and the frequency of pelvic organ prolapse surgery has increased with time. The purposes of pelvic organ prolapse treatment are to restore pelvic anatomy and function, to ameliorate patient symptoms, and to improve quality of life. The present study aimed to compare the anatomic and functional outcomes between four- and six-arm polypropylene mesh implantation.

Methods

We retrospectively evaluated patients who underwent surgical mesh implantation between January 2011 and July 2014. Group A was composed of patients who underwent four-arm mesh implantation (n=29), and Group B consisted of patients who underwent six-arm mesh implantation (n=26). We compared operation durations and complications between the two groups. We also evaluated the patients using the Urogenital Distress Inventory (UDI-6) assessment form.

Results

The average ages of Groups A and B were 48.2±8.3 and 39.3±5.6 years, respectively. There were no significant differences in BMI, incontinence duration, operation duration, or post-operative UDI 1-2, 3-4 and 5-6 scores between the two groups. However, the post-operative UDI-6 scores of both groups were significantly lower than their pre-operative scores.

Conclusions

We concluded that four- and six-arm mesh implantation facilitated anatomic and functional recovery as well as improvement in quality of life. Additionally, there were no differences in operation duration or the incidence of complications between the two procedure groups; thus, it can be concluded that these two surgical methods are comparable for treating POP. However, additional prospective studies involving more patients are needed to confirm our findings.

ES26-0405 -

Free Communication I Urogynaecology + Fibroids including morcellation OR tissue extraction + Laparoscopic surgery

5 years results of laparoscopic sacropexy (and pectopexy) for POP using three different methods of subperitoneal tunneling.

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Background

Ideally, operative treatment of POP and especially sacrocolpopexy aims to reconstruct the natural anatomical support provided by the uterosacral ligaments. The gold standard for this procedure is the abdominal sacrocolpopexy, by opening the retroperitoneal space, positioning the mesh and closing the peritoneum with a running suture. Although it is associated with high success rates of over 90% and also low recurrence rates, it is associated with a long operating time (244 min¹) it also generates well known postoperative complications related to open surgery like pain, more blood loss etc. In an effort to reduce tissue damage and adverse effects minimally invasive techniques like the laparoscopic and the DaVinci approach have been developed.

One of the greatest challenges in performing colposacropexy or colpopectopexy is reducing postoperative adhesions, mesh erosions and scarring. This can be achieved by creating a subperitoneal tunnel for the mesh with the help of a helical reusable tunneling device or alternatively standard laparoscopic or robotic instruments.

Methods

From 01.2011 to 06.2017 we performed unilateral sacropexy in 446 patients: 274 were performed laparoscopically with a reusable helical tunnelling device, 14 were operated with the DaVinci using standard instruments and 158 were performed laparoscopically using standard instruments. In all cases a macroporous polypropylene mesh was used, most of them being MRI visible. The fixation of the mesh was performed with non resorbable sutures at the level of the promontorium/S1. The same experienced surgeon performed all operations except two. Postoperatively we evaluated the time needed for tunneling of the mesh (from insertion to total peritoneal coverage), the total operation time as well as postoperative results in term of low abdominal pain, discomfort and bowel dysfunction.

Also, the learning curve for usage of the RTD was evaluated. The position of the mesh was controlled using MRI.

Results

The mean tunneling time for laparoscopic tunneling with standard instruments was **25 min** (range: 10-40 min).The mean tunneling time for DaVinci tunneling was **15 min** (range 10-20 min).

The mean tunneling time for laparoscopic tunneling with the RTD was **3 min** (range 2-4 min).

The learning curve for usage of the RTD was 2 operations.

In all cases, MRI images showed a distance of 2 cm between the right ureter and the mesh. The median hospitalization time was 3 days.

Conclusions

When performed by an experienced surgeon the usage of the RTD drastically reduces the total operating time by shortening the tunneling time substantially. The fastest way to perform the operation was laparoscopically using the RTD.

This procedure, apart from having the advantages of a minimal invasive surgery, is easy to learn, easy to perform, has shorter operating time, has a minimal mesh area reducing the risk of erosion and is MRI visible.

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ES26-0013 -

Free Communication I Oncology + Reproductive Medicine

A retrospective review of endometrial hyperplasia and assessment of associated risk factors

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Background

The aim of this retrospective study was to ascertain the incidence of endometrial hyperplasia and examine risk factors, method of diagnosis, treatment and follow up histology in symptomatic women presenting to the ambulatory gynaecology unit at Mayo University Hospital

Methods

Clinically relevant details of women with all subtypes of histologically confirmed endometrial hyperplasia were collected from January–December 2015. Out of 1090 women, 40 were diagnosed with endometrial hyperplasia. Twenty-seven (67.5%) had simple hyperplasia, 10 (25%) complex hyperplasia, and 3 (7.5%) complex hyperplasia with atypia. Mean age was 55.3years

Results

Eight patients with simple hyperplasia were treated with IUS-mirena coil, 6 had oral progesterone, 1 decapeptyl and 1 underwent polypectomy. Follow up histology resolved in twenty (74%) patients, 2 had no follow up and 1 progressed to complex hyperplasia. Out of the ten patients with complex hyperplasia, 5 were treated with an IUS-mirena coil and 2 underwent surgical management. Follow up biopsies were normal in 50%. Out the 3 cases with atypical hyperplasia, 2 patients underwent surgical management. One of these women subsequently received brachytherapy for endometrial cancer and the other was treated with oral progesterone.

Conclusions

Regarding associated risk factors 6 had hypertensio, 5 polycystic ovarian disease and 3 diabetes mellitus. Only 4 patients had body mass index(BMI)recorded. Best practice suggests assessment of risk factors associated with endometrial hyperplasia. Body mass index was recorded for only 10% of patients. We plan to re-audit in 1 year

ES26-0027 -

Free Communication I Oncology + Reproductive Medicine

Nrf2 contributes to cisplatin resistance via suppressing the iron export related genes SLC40A1 in human ovarian cancer cells

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Background

Overexpression of Nuclear factor erythroid 2 (NF-E2)-related factor 2 (Nrf2) contributes to cisplatin resistance in ovarian cancer. Solute carrier family 40 member 1 (SLC40A1), as an iron exporter, possesses many putative Nrf2 binding sites. In this study, we aim to elucidate that SLC40A1 may function as one potential downstream gene of Nrf2.

Methods

Two pairs of cisplatin-sensitive (A2780 & COC1) and cisplatin-resistant (A2780cp & COC1/DDP) ovarian cancer cells were used to detect the expression of Nrf2 and SLC40A1 by Western blot and Real-time PCR. Cell counting kit-8 assay was used to determine the cell viability. Chromatin immunoprecipitation and dual-luciferase reporter assay was applied to explore the correlation between Nrf2 and SLC40A1.

Results

Elevated level of Nrf2 along with reduced level of SLC40A1 was detected in cisplatin-resistant ovarian cancer cells as compared with their cisplatin-sensitive counterparts. Exogenous knockdown of Nrf2 led to increased level of SLC40A1 in cisplatin-resistant ovarian cancer cells. While overexpression of Nrf2 resulted in decreased level of SLC40A1 in cisplatin-sensitive ovarian cancer cells. Further, chromatin immunoprecipitation and dual-luciferase reporter assay revealed that Nrf2 could directly inhibit the transcription of SLC40A1. Besides, overexpression of SLC40A1 was able to reverse cisplatin resistance induced by Nrf2 and decrease the intracellular iron concentration, while knockdown of SLC40A1 restored cisplatin resistance and increased the intracellular iron concentration. Desferal, as an iron chelator, was found to overcome cisplatin resistance through iron deprivation in cisplatin-resistant ovarian cancer cells. Its function was boosted when combined with brusatol, an Nrf2 inhibitor. On the other side, FeCl₃ treatment could decrease cisplatin sensitivity through iron overload in cisplatin-sensitive ovarian cancer cells.

Conclusions

This is the first study demonstrating that Nrf2 can transcriptionally suppress the expression of SLC40A1. Iron overload induced by SLC40A1 may result in cisplatin resistance in ovarian cancer. Targeting iron metabolism may be a new therapeutic strategy to reverse drug resistance in ovarian cancer treatment.

AFC (antral follicle count) nomogram can be used for counseling before laparoscopic excision of ovarian endometrioma

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Background

To compare serial changes of antral follicle count (AFC) as marker of ovarian reserve after laparoscopic cystectomy for ovarian endometrioma with AFC nomogram.

Methods

The study included 53 women between 18 and 35 years old attended the gynecological and infertility clinic of El-Shatby Maternity University Hospital presented by ovarian endometrioma diagnosed by recent ultrasonography measuring five centimeters or more unilateral or bilateral. We excluded patients with High basal FSH level (more than 10mIU/ml), suspicious of malignancy by ultrasound, any previous ovarian surgery, any endocrinological diseases affecting ovarian reserve and polycystic ovary syndrome

Interventions: All cases were subjected to the following:

1-Ultrasonography (vaginal 6MHZ) using to Determine AFC ,preoperative and postoperative first cycle, then three months and after sixth months using standardized method of assessment.

2. Ovarian cystectomy (stripping): Laparoscopic operations were performed with three 5-mm trocars in the lower abdomen and a 10-mm intraumbilical main trocar. We used 5-mm scissors and graspers, and normal saline solution for irrigation. Before initiating ovarian surgery, the ovaries were completely freed with sharp dissection, after a cleavage plane between the cyst wall and ovarian cortex was identified, the ovaries were pulled slowly and gently in opposite directions by means of two atraumatic grasping forceps. After removing the pseudocapsule from the abdominal cavity, if needed selective minimal (15 watt) bipolar coagulation of bleeding was performed, without excessive coagulation of the surgical defect to avoid damaging the ovary. ⁽⁹⁴⁾ Then histopathological assessment for cyst wall to confirm endometrioma and exclude any possibility of malignancy.

Results

AFC measured preoperatively , after surgery by 1 month ,3months and 6 months .the AFC mean(SD) preoperatively is 9.41(2.28) after 1month,3 and 6 months was 6.11(2.04),6.53(2.09)and 6.28(2.15) respectively.

Plotting this result on the AFC nomogram we observe that patient with ovarian endometrioma mostly show AFC below 50th centile and the effect of surgery decreases the AFC but also mostly above 5th centile so not below normal AFC with age.

Conclusions

If AFC nomogram is validated for age so we can counsel the patient for the effect of surgery on their ovarian reserve.

ES26-0039 -

Free Communication I Oncology + Reproductive Medicine

The optimal surgery of cervical papillary squamous cell carcinoma (PSCC) with indefinite tumor stromal invasion: leep, hysterectomy or radical hysterectomy? A Retrospective Study from China

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Background

Cervical papillary squamous cell carcinoma (PSCC) is easily diagnosed based on the colposcopic selective biopsies. However, it was always hard to understand the tumor depth of it. Overtreatment of the preinvasive and microinvasive diseases was a troublesome problem for physicians. We performed a retrospective study to detect the diagnosis and treatment of the PSCC of the uterine cervix with indefinite tumor stromal invasion by the colposcopic selective biopsy.

Methods

From January 2008 to December 2015, consecutive patients of PSCC with indefinite tumor stromal invasion diagnosed by colposcopic selective biopsies in the Obstetrics and Gynecology Hospital of Fudan University, Shanghai, P.R.China were assessed in the study. By reading the case histories, we also investigated the subsequent diagnosis and treatment strategies after the colposcopic selective biopsy for PSCC. Finally, we summarized potential improvements and simplification of management strategies with indefinite tumor stromal invasion by the colposcopic selective biopsy.

Results

All 29 cases with clinically visible lesions were performed radical hysterectomy and the ultimate pathological results were all invasive squamous cell carcinoma. In these cases, 8 cases were undergone LEEP and 2 cases were undergone second biopsy, which seemed to be unnecessary. Of the 26 cases with clinically no visible lesions, 17 had lesions in the cervix by check of various image investigation and 12 of the 17 cases were undergone LEEP. The pathological results showed different lesion scale except cancer in situ. Radical hysterectomy were performed in 5 cases who did not undergone LEEP and 1 micro invasive cancer were revealed. The case of micro invasive cancer was obviously overtreated.

Conclusions

We recommend that PSCC with indefinite tumor stromal invasion evaluated by the colposcopic selective biopsies and with clinically visible lesions receiving radical hysterectomy directly instead of biopsy again and LEEP. Less invasive surgery was suggested to PSCC with clinically no visible lesions.

ES26-0042 -

Free Communication I Oncology + Reproductive Medicine

Cancer arising from endometriosis

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Background

The video presents a 78 year-old G₁P₁ female with a history of endometriosis who had post-coital vaginal bleeding. She had a history of a total abdominal hysterectomy at the age of 46 due to pelvic pain, and later underwent bilateral salpingo-oophorectomy and treatment of endometriosis at the age of 56 due to continued pain. She was on hormonal supplementation with transdermal estrogen. Preoperative examination and imaging revealed a 5 cm friable mass at the vaginal cuff and a smaller pelvic mass in the left pelvic sidewall.

Methods

The patient underwent small diameter laparoscopy using a multi-puncture technique. The left pelvic sidewall mass near the left ureter was carefully resected and found to be endometriosis on final pathology. The vaginal cuff mass was also resected and determine to be endometriosis juxtaposed with well-differentiated endometrioid adenocarcinoma.

Results

A month after her surgery, the patient had adjuvant external beam radiation to the pelvis for a duration of 4 weeks and was free of disease on post-treatment CT scan of the abdomen and pelvis.

Conclusions

Although not fully elucidated, there is a strong relationship between endometriosis and ovarian cancer. Therefore, among patients with a history of endometriosis, continued regular gynecologic follow up is recommended not only for recurrence but also for possible malignant transformation.

<http://player.vimeo.com/video/216607785?autoplay=1>

ES26-0044 -

Free Communication I Oncology + Reproductive Medicine

Improving the performance of reflex HPV testing in the triage of ASCUS: the way forward

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Background

Cervical cancer is the second commonest cancer in women worldwide. Infection with oncogenic types of human Papillomavirus (HPV) is the most important risk factor for developing cervical cancer. Reflex High risk HPV (HR-HPV) testing is of significant value in the assessment of Papanicolaou (Pap) smear results where ASCUS are identified.

The aim of this study is to find ways to improve the performance of reflex HR-HPV testing in triage of ASCUS and analyze the factors impacting it.

Methods

In this study, we generated a database of 9641 women who had cervical smears collected during the study period from the cytopathology record in a large tertiary hospital in UAE. These included 297 smears with ASCUS diagnosis. All cases were retrospectively followed up with a mean duration of 2.44 years. We analyzed data according to the outcome based on several follow-up Pap smear analysis as the reference assessment.

Results

We detected HR-HPV infection in 17.9% of cases. 9.1% <25, 28.8% 25–34 and 62.1% ≥35 years old. HR-HPV prevalence was higher among premenopausal women (20.7%) compared to postmenopausal women (9.5%) (P-value = 0.044). The rate of progression to high grade lesions was also higher (28.7%) in the premenopausal group compared to (12.8%) in the postmenopausal group. Reflex HPV testing had an overall sensitivity of 41.1%, specificity of 88.2%, positive predictive value (PPV) of 62.1%, and negative predictive value (NPV) of 75.9% in detection of cervical lesions. These figures were higher on combining premenopausal status and complaint of abnormal bleeding or discharge/itching (66.7%, 93.3%, 66.8% and 93.3% respectively).

Conclusions

The sensitivity, specificity and NPV of reflex HPV testing in the triage of ASCUS cases can be more accurate in premenopausal women upon adding age group and presenting complaint as a triage item. This improves the performance of reflex HPV testing and the subsequent selection of high risk patients for colposcopy.

ES26-0069 -

Free Communication I Oncology + Reproductive Medicine

Density of tubal ring vascularization: a new marker for prediction of success of medical treatment in tubal ectopic pregnancy

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Background

The diagnosis of ectopic pregnancy has been facilitated especially by the use of Doppler ultrasonography. Presence of peri - trophoblastic blood flow and detection of a low-resistance and high-velocity flow pattern specific to trophoblastic tissue by Doppler ultrasonography. The aim of this study was to evaluate the efficacy of a Doppler ultrasonography in prediction of the success of methotrexate treatment in cases with tubal pregnancy in which single dose conservative methotrexate treatment was planned.

Methods

A total of 104 patients who were diagnosed to have non-ruptured ectopic pregnancy, hemodynamically stable and suitable for methotrexate treatment were included in the study. The spectral wave form of the mass was classified according to the vascularization density by Power Doppler. It was defined as Grade 1 when the vascularized area was at the peripheral 1/3 of the mass, Grade 2 when it was at peripheral 2/3 and Grade 3 when it comprised the mass completely respectively. All patients received a single 50 mg/m² dose of systemic MTX. Serum β HCG level was measured on the 4th and 7th days of treatment. Patients without a decrease of 15% or more in the serum β HCG level between the days 0 and 7 were. It was considered unsuccessful treatment. Main outcome measure of the study was the efficacy of the degree of pre-treatment vascularization in prediction of the success of medical treatment. Secondary outcome measures were the predictive value of some parameters such as age of gestation, diameter of the mass, CRL and the initial and day 4 level of β hCG in predicting the success of the treatment.

Results

According to the degree of adnexal vascularity by Doppler ultrasonography, 24 patients with Grade I vascularity were classified as Group 1, 11 patients with Grade II vascularity as Group II and 13 patients with Grade III vascularity were classified as Group III. The success rate of MTX treatment was found to be 72,9%. A response to systemic MTX treatment was detected in 58,3%; 81,8% and 92,3% of the cases with a degree of vascularization of the pregnancy mass of Grade I, II and III, respectively. When the treatment response of the groups was compared, a linear by linear association was detected by Chi-square test. Possibility of response to MTX treatment was found to be increased by increase in the level of vascularization of ectopic pregnancy mass.

Conclusions

Detection of the degree of vascularization by Doppler ultrasonography in prediction of treatment success can be evaluated as a remarkable parameter considering its easy applicability and low cost.

ES26-0399 -

Free Communication I Oncology + Reproductive Medicine

Surgical staging in endometrial cancer in hospital Sant Pau between 2009-2016

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Background

Principal objective is to analyze the % of cases affected with "skip metastasis", defined as negative pelvic bilateral lymphadenectomy (PBL) and positive paraortic lymphadenectomy (PAL).

Secondary objectives were to describe the surgical approach and complications associated to surgical staging in Endometrial Cancer (EC).

Methods

We analyzed all the patients who were diagnosed EC and were surgically staged with PBL and PAL in the study period between 2009-2016.

In our protocol, we consider that it is indicated a PBL and PAL in: Deep miometrial invasion (> 50%), Grade 3 and EC type II (Clear cell, Serous Carcinoma, ...) without any exclusion criteria.

Pelvic lymphadenectomy included external iliac and obturator fossa nodes and in Paraortic lymphadenectomy the cranial limit of dissection was considered left renal vein.

The primary outcome was the comparative analysis of the percentage of cases with negative PBL and positive PAL throughout the study period. **Secondary outcome measures** were the comparative analysis of age (years), BMI, pathologic diagnosis, surgical time (minutes), estimated intrasurgical blood loss (ml), need for transfusion. Postsurgical complications were assessed and classified following the Dindo Classification.

Results

During the study period 316 EC were diagnosed and treated in our hospital. 70 patients were surgically staged with PBL and PAL.

Median age was 65.04 years old (± 10) and median BMI was 29.8 (± 6.2). The % of pathologic diagnostic was: Endometrioid Adenocarcinoma (58.6 %), Serous Adenocarcinoma (20 %), Mixed Adenocarcinoma (10 %), Clear Cell Adenocarcinoma (4.3 %), Indiferenciated Adenocarcinoma (1.4 %).

Median surgical time was 239.75 minutes (± 73.24) and median estimated blood loss was 336.73 cc (± 469.6). Only 5.4% of patients needed one or more red blood transfusions. 11.5% patients experimented an intra-surgical complication (2 cases of urologic complications, 4 vascular and 2 anesthetic) which were solved during the intervention. 12.8% presented a post-surgical complication (> III-IV Clavien Dindo Classification) during the first month and only 2.8% beyond the first month.

Median number for Pelvic Bilateral Lymphadenectomy was 12.15 (± 4.92) and for Paraortic Lymphadenectomy was 10.32 (± 1.77).

15.7% of pelvic nodes were positive for metastasis and 12.6% of paraortic nodes were positive for metastasis.

Patients were surgically staged as: 71.4% Stage I, 2.9% Stage II, 22.8% Stage III, 2.9% Stage IV.

79% of cases had PBL and PAL negative for metastasis, 7.3% had PBL positive and PAL negative, 7.3% had PBL positive and PAL positive, and 4.4% had PBL negative and PAL positive.

Conclusions

We consider that lymphadenectomy shouldn't be avoided in EC following a strict protocol, as we found a 21% of cases of lymph node metastasis.

The % of cases where a skip metastasis was diagnosed is 4.4%, which is consistent with data published in the literature.

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ES26-0093 -

Free Communication I Technical innovations in minimal invasive surgery

Hysterectomy via vaginal assisted natural orificial transluminal endoscopic surgery: initial experience of 10 cases

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Background

Single site surgeries have benefits over conventional multiple-port surgeries considering cosmetic anxiety and reduced port site pain. In this report, we aimed to declare our initial experience on hysterectomy cases performed vaginally assisted NOTES technic

Methods

The study was conducted with the data of 10 patients planned for hysterectomies for various indications between January 2017 to May 2017 in our department. All of the procedures were performed by the same experienced surgeon (C.K.). The following data were collected retrospectively: age, body mass index (BMI), parity, previous abdominal or pelvic surgery, total operating time, preoperative Hb, postoperative Hb, peri-operative complications, and VAS score for evaluating postoperative pain.

The patient was laid dorsal lithotomy position under general anesthesia. A cervical circumcision was performed. For the anterior colpotomy the vaginal mucosa and the bladder were pushed up along the uterine cervical fascia using a small surgical gauze. The anterior peritoneum identified and was opened using scissors. The same dissection procedure was performed for achieving posterior peritoneum till opening the pouch of Douglas. A self constructed port was inserted through the anterior and posterior colpotomy openings into the abdominal cavity.

After pneumoperitoneum with 10 mmHg CO₂ insufflation, a 10-mm rigid zero-degree telescope was then inserted for optic imaging (Karl Storz visualization system; Karl Storz Tuttlingen, Germany). A disposable conventional laparoscopic grasping forceps and a tissue sealer (Enseal G2 articulating tissue sealer, Ethicon Endo Surgery, Cincinnati, OH, USA) was used as standard equipments. After exploration of the abdominal cavity and pelvic organs, both sacro-uterine ligaments were sealed and transected using tissue sealer. This procedure was repeated for the parametrium, both uterine arteries, ovarian ligaments, and Fallopian tube. Both infundibulopelvic ligaments were sealed and transected if a bilateral salpingo-oophorectomy was planned. The vaginal opening was closed by using a Vicryl-1 (Ethicon, Piscataway, NJ, USA) suture.

Results

Mean age of the patients was 53.75±9.8 (43-72). The mean gravidity was 2.5 ±0.5 (2-3) and parity was 2.5 ±0.5 (2-3). The mean BMI was 29.6±5.9 (21-42). The mean uterus weight was 187.5±76.6 (100-300) and mean operation duration was 69.2±26.9 (42-120) mins. The mean preoperative hemoglobin was 12.2±1.3 (10-14) gr/dl, postoperative hemoglobin was 10.6±(9-13) gr/dl and mean decrease in hemoglobin was 1.6±1(0-4) gr/dl. The mean hospital stay was 2.1±0.3(2-3) days. Mean postoperative 6th hour VAS score was 6.1±0.5(5-7) and 24th hour VAS was 2.8±0.6(2-4).

Case No	BMI	Prev. Op	TVUS	Indication	Operation	Duration	Pathology
1	25.7	None	-	HSIL	Hyst+BSO	60	HSIL
2	32.8	Append.	-	HMB	Hyst+BSO	60	<u>Adenomyosis</u>
3	27.3	None	-	End Ca	Hyst+BSO	42	End Ca Grd 1
4	23.4	None	40 mm <u>myoma</u>	HMB	Hyst+BSO	45	Myoma
5	21	None	70 mm <u>myoma</u>	Pain	<u>Hyst+BS</u>	80	<u>Myoma</u>
6	27.7	2 C/S	60 mm <u>fmyoma</u>	HMB	<u>Hyst+BS</u>	110	<u>Myoma</u>
7	31.2	None	60 mm <u>myoma</u>	HMB	<u>Hyst+BS</u>	70	<u>Myoma</u>
8	42.2	1C/S, <u>Umbl</u> <u>hernia</u>	-	HMB	Hyst+BSO	120	Simple Hyperplasia
9	31.3	1 C/S	-	HMB	<u>Hyst+BS</u>	60	<u>Adenomyosis</u>
10	33.3	None	70 mm <u>myoma</u>	Pain	<u>Hyst+BS</u>	45	Myoma

Conclusions

Although these findings are from our initial experience, we believe feasibility of this technic and will perform further studies with larger studies.

ES26-0195 -

Free Communication I Technical innovations in minimal invasive surgery

Ambulatory gynaecology unit: improving the quality of women's healthcare in the NHS

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Background

Introduction:

The move away from the traditional care pathways to a more patient-centred, cost-effective approach to medical practice lies at the heart of modern NHS. An Ambulatory Gynaecology unit was set-up at Hinchingbrooke Hospital, Gynaecology department, as an attempt to improve the quality of women's Healthcare, and deliver a more cost-efficient gynaecological service in 2012.

Objectives:

We describe lessons from the ambulatory gynaecology unit, where adoption of modern technology such as minimally invasive procedures has improved patient choice, experience and reduced the overall cost of treatments for the NHS.

Methods

All clinicians, including nursing staff involved in running the unit and carrying out minimally invasive procedures were contacted for information on the services offered to women. Relevant audits of the procedures were reviewed for safety, efficacy and patient satisfaction. Further information was obtained from the clinic proforma. The hospital finance department provided financial data.

Results

The procedures performed in the ambulatory gynaecology unit include endometrial ablation (Novasure), hysteroscopic morcellation (Myosure), hysteroscopic sterilization (Essure), cystoscopy, bulkamid, and Manual vacuum aspiration. Over 275 new procedures were completed between 2016 and 2017. The procedures were well tolerated with a high patient satisfaction rate of 96% in one audit. 3 separate audits were conducted and findings of these are presented as individual posters. These demonstrate excellent patient safety profile and patient experience. The net activity income from these procedures for 2016-2017 was 140K. Some of these procedures attracted best practice tariffs. There were indirect savings through release of theatre capacity and reduced day-case bed occupancy.

Conclusions

Ambulatory gynaecology is the present and future of a modern gynaecology service. The establishment of an Ambulatory Service can be challenging due to commissioning and financial pressures. Medical and nursing staffs need to be appropriately trained and appropriate protocols; guideline and clinical structure need to be put in place. Despite the challenges the successful implementation of the Ambulatory Gynaecology Service at our hospital has led to the provision of high quality, safe and cost effective women's healthcare. It is a training hub for junior doctors preparing to be modern gynaecologists.

ES26-0198 -

Free Communication I Technical innovations in minimal invasive surgery

Robot-assisted natural orifice transluminal endoscopic surgery

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Background

To demonstrate the robot-assisted natural orifice transluminal endoscopic surgery (NOTES) with da Vinci Xi® robotic system to perform total hysterectomy.

Methods

The 42 y/o, G2P2 (C/S), woman presented with abnormal uterine bleeding for 3 months. The transvaginal ultrasonography showed endometrium with 0.98 cm in thickness and globular enlarged uterus with 8.49 cm in length that was consistent with adenomyosis. The hysteroscopic examination showed endometrial polyps and focal area of endometrial hyperplasia. The pathological examination showed endometrial polyps and focal simple endometrial hyperplasia without atypia.

Results

The total operative time was 56 minutes. Blood loss was 10 ml. No complication happened. The patient was very satisfied with this operation.

Conclusions

The da Vinci Xi® robotic system has the advantages of smaller arms and easier docking procedures than previous version, so it could be used in NOTES.

<http://player.vimeo.com/video/219545751?autoplay=1>

ES26-0225 -

Free Communication I Technical innovations in minimal invasive surgery

Ischial spinous colpopexy

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Background

The number of different types of surgeries for prolapse is in itself proof that the treatment for prolapse is an evolving concept.hence the scope for introducing something which can be done effectively.

Methods

Patients were chosen with grade 2 to 3 prolapse who came in the perimenopausal age group.total laparoscopic hysterectomy was done.the medial part of the ischial spine or the lateral bony pelvis was dissected.a no 2 non absorbable suture was passed through it.the suture was passed posterior to the ureter and multiple bites were taken through the anterior and posterior vagina after dissecting the rectovaginal and vesicovaginal spaces(before completing the hysterectomy).the suture is brought back in the same manner and the knot is adequately tightened.

Results

10 cases were done with grade 2 to 3 prolapse.No complication was noted.lap burch was combined in 3 patients with concomitant sui.mean operative time was 2 hrs 10 minutes.no recurrences were seen after one year.

Conclusions

ischial spinous colpopexy is an effective way of dealing with prolapse in the perimenopausal age group.

The obvious advantages being

- 1 No use of mesh
- 2 vagina remains supple
- 3 reasonable operative time
- 4 total hysterectomy can be done
- 5 no vaginal shortening

<http://player.vimeo.com/video/228025397?autoplay=1>

ES26-0281 -

Free Communication I Technical innovations in minimal invasive surgery

Safe intraperitoneal placement for laparoscopic entry

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Background

Fifty percent of laparoscopic bowel and vascular injuries occur at the time of entry. These serious complications can lead to significant morbidity and even mortality. This video demonstrates three techniques that have been developed to minimize the risk of these injuries during laparoscopic entry.

Methods

Prior to video recording, the surgeons ensured that hospital protocol was followed and patient consent was obtained. The following techniques are demonstrated: 1) Caudal displacement of the umbilicus prior to insertion of the veress needle 2) The left upper quadrant entry. 3) The use of a visualized trocarless cannula.

Results

1) Caudal displacement of the umbilicus allows for a median displacement of 6cm between the site of entry and the common iliac vessels. 2) The left upper quadrant should be used in specific cases instead of the umbilicus as the point of entry for the veress needle. 3) The use of a visualized trocarless cannula instead of a primary trocar allows for real time recognition of injury and converts linear penetrating force to radial torque.

Conclusions

These three techniques can help decrease the risk and improve intraoperative recognition of serious bowel and vascular injuries during laparoscopy.

<http://player.vimeo.com/video/221350400?autoplay=1>

ES26-0319 -

Free Communication I Technical innovations in minimal invasive surgery

Para aortic lymphadenectomy performed by using 2.4 mm MiniLap® Percutaneous Surgical System with Minigrip® handle

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Background

The purpose of the study is to evaluate the feasibility, efficacy, and safeness of para aortic lymphadenectomy performed with a minimally invasive approach by using 2.4 mm MiniLap® Percutaneous Surgical System with MiniGrip® Handle (Teleflex Inc., Wayne, PA). Indeed, advances in minimally invasive surgery have made laparoscopic staging technically feasible in stage I epithelial ovarian cancer and Minilaparoscopy could represent a forward towards minimizing surgery-related trauma and complication.

Methods

In this video we describe our technique for minilaparoscopic para aortic lymphadenectomy performed with Percutaneous Surgical System with MiniGrip® Handle. We present the case of a 52 year-old women and her accidentally diagnosis of ovarian cancer after a right adnexectomy performed for an ovarian cyst with frozen section.

Results

Complete Surgical staging was performed. The operation was performed successfully with no intraoperative or postoperative complication. Operative time was 130 minutes overall, and blood loss was 120 mL. Twenty-nine pelvic and aortic lymph nodes were removed. The pathology report came back clean. The patient was discharged on day three and twenty three days later started adjuvant chemotherapy.

Conclusions

This is the first experience to report Minilaparoscopic surgical staging with MiniGrip for stage I Ovarian Cancer. The use of these instruments does not increase the operation time or the rate early or late complications. Adequate exposure of the surgical field is a key point in the success of this type of surgery. We performed bowel suspension by T'LIFT®, a disposable device with a simple lock system. Minilaparoscopic procedure with MiniGrip is technically feasible when performed by trained surgeons. However We noticed that the grasper are more sharp than the traditional laparoscopic instruments and the percutaneous instrument because of the small size. Furthermore the possibility to do dissection is limited. To avoid bowel damaged during lymphadenectomy, we keep away bowel with the aid of a small gauze.

<http://player.vimeo.com/video/221536802?autoplay=1>

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ES26-0081 -

Free Communication | Complications in surgery | Endometriosis | Imaging

Unusual case of endometriosis that mimicked cervical cancer with bilateral hydronephrosis

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Background

Endometriosis affects 5-10% of fertile women. The most common presentation is pelvic pain.

We report a case of unusual presentation of endometriosis in a 30 years old woman initially reviewed by the urologist with bilateral hydronephrosis and deranged kidney function tests. (Endometriosis can lead to hydronephrosis but most cases report unilateral hydronephrosis)

The patient was then reviewed by the gynaecological team to investigate unusual vaginal bleeding. On colposcopy a cervical mass was seen which bled on touch, making the diagnosis highly likely as cervical cancer.

Methods

This was further investigated with MRI and biopsy.

Results

The histology confirmed endometriosis and excluded any malignancy, the MRI showed severe endometriosis of pelvis involving the trigone of the bladder, causing the bilateral hydronephrosis.

Conclusions

The patient underwent several urological operations and finally ureteric bi-lateral reimplantation. The endometriosis was controlled by medical management. The patient has recovered well and asymptomatic.

ES26-0112 -

Free Communication | Complications in surgery | Endometriosis | Imaging

Highly vascularized uterine myomas at ultrasound and correlation to histopathology

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Background

To correlate the ultrasound appearance of highly vascularized uterine myomas to the histopathological diagnosis.

Methods

This retrospective study included patients presenting with an ultrasound diagnosis of uterine myoma characterized by a circumferential and intralesional vascular pattern with a color score assessment of 3 or 4, according to the Morphological Uterus Sonographic Assessment (MUSA). All the patients underwent myomectomy or hysterectomy after the ultrasound examination. The ultrasound appearance of the myomas was analyzed and described using the terms and definitions of the MUSA paper. The echogenicity of each myoma, the presence of cystic areas and the total myoma volume were recorded. The ultrasound characteristics were compared with the histological diagnosis.

Results

52 patients were included in this study. Mean patient age was 42.5 years, 45 (86%) were in premenopause, 26 (50%) showed symptoms (pelvic pain, menorrhagia). At histological examination 25 (48%) myomas were compatible with a diagnosis of atypical leiomyoma (76% (19) hypercellular leiomyoma, 16% (4) myxoid leiomyoma, 8% (2) apoplectic leiomyoma). 25 (48%) were typical leiomyomas and 2 (4%) were adenomyomas. Cystic areas within the lesion were found in 32% (8/25) of atypical leiomyomas and in 16% (4/25) of typical leiomyomas.

Conclusions

Ultrasound features such as circumferential and intralesional vascularity with a color score of 3 or 4 and the presence of cystic areas may be predictive of atypical leiomyomas. Such features may be used to differentiate typical uterine myomas from the atypical variants in a pre-operative setting and to identify patients that may benefit from a conservative medical treatment rather than a radiological treatment.

ES26-0206 -

Free Communication | Complications in surgery | Endometriosis | Imaging

A comparison of surgical outcomes based on route of hysterectomy: a multi centre district hospital experience

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Background

The aim of this study was to evaluate our and outcomes based on approach of hysterectomy, by establishing our perioperative and postoperative complication rates with each surgical route.

Methods

This was a retrospective, observational review of all routes of hysterectomies performed for any benign gynaecological indications, pre-malignant conditions, low or intermediate risk of ovarian malignancy and FIGO (preoperative) Stage 1A Endometrial carcinoma within the health board between January 2013 and December 2015. Data from all three hospitals within the University health board were included in the study.

All patients undergoing a hysterectomy for any indication included above performed by General Obstetrician-Gynaecologists and Gynaecology Oncologists between January 2013 and December 2015. These include Laparoscopic Hysterectomy (LH), Vaginal Hysterectomy (VH) and Abdominal hysterectomy (AH) Subtotal abdominal hysterectomy (SAH).

Results

A total number of 580 patients were included in the study between January 2013 and December 2015. Of these, 83 patients underwent laparoscopic hysterectomy (of these, 6 cases were converted to laparotomy). 262 women had an abdominal hysterectomy, 203 women had a vaginal hysterectomy and 32 women had a subtotal abdominal hysterectomy. Intraoperative complications include bladder injury (1 in LH; 1 in VH; 3 in AH), bowel injury (1 in LH; 3 in AH), uterine perforation (1 in LH), blood loss 500mls+ (1 in LH; 17 in AH; 1 in VH; 1 in SAH), blood transfusion (5 in AH; 1 in VH). 2 laparoscopic cases were performed in 2013; 8 cases in 2014 and 72 cases in 2015.

Post operative complications include return to theatre (1 in LH; 1 in AH; 1 in VH); Urinary retention (2 in LH; 4 in AH; 5 in VH); Haematoma (1 in LH; 2 in AH; 1 in VH); Readmission with Urinary tract infection (2 in LH; 3 in AH) Wound infection (2 in LH; 6 in AH). Hernia (1 in LH; 1 in AH).

Conclusions

Laparoscopic hysterectomies have a low complication rate with a low rate of conversion to open. All routes of hysterectomies included in this study have low complication rates and are comparable with data from published studies. The number of laparoscopic hysterectomies per year has increased over this time period within the study. Blood loss exceeding 500mls and the need for blood transfusion is higher in the open abdominal hysterectomy group

ES26-0208 -

Free Communication | Complications in surgery | Endometriosis | Imaging

How well correlates preoperative pain or imaging with pathological diagnosis of adenomyosis in fibromatous uterus?

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Background

Endometriosis is a common condition of a woman of reproductive age defined by the presence of active endometrial tissue outside the endometrial cavity, including the uterine muscle, called adenomyosis in this case. The incidence of adenomyosis is difficult to quantify outside of the surgical intervention, even with imaging methods.

Methods

Materials and Methods

Site: departments of obstetrics and gynaecology, University Hospital of Constanta, Romania.

For the last 5 years, we have included all patients hospitalised for with fibromatous uterus and who subsequently underwent hysterectomy. We have studied how many of those, hospitalised for pelvic-abdominal pain, proved to have, at histopathological examination, adenomyosis. Comparison was made with those patients who underwent hysterectomy, with proven adenomyosis, but without initial pain.

Patients were assessed both clinically, paraclinically and by imaging (US, CT and MRI) preoperatively.

Benign diagnose was achieved by endometrial curettage biopsy. Surgery was performed both by laparotomy/open procedure and laparoscopic.

Results

We intended to study the correlation between the painful symptoms encountered in the fibromatous uterus, exacerbated by menstruation that brings the patient to the doctor and the presence of adenomyosis on the hysterectomy pathology specimens.

Conclusions

Patients who experienced pelvic pain, accentuated during menstrual phase, and who underwent hysterectomy for complicated fibromatous uterus, were also more prone to be diagnosed with adenomyosis on the histopathological result.

ES26-0315 -

Free Communication I Complications in surgery | Endometriosis | Imaging

Pattern recognition to prognosticate endometrial cancer with office hysteroscopy

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Background

Our purpose was to evaluate a specific glomerular pattern for prognostication of endometrial cancer (EC) and investigate the correlation between signaling proteins and EC.

Methods

In a retrospective single-center study, the office hysteroscopy's picture and video of 4197 women were reviewed. 48 women who were suspected of type I endometrial cancer were analyzed: 26 have glomerular pattern (group 1) and 22 without it (group 2). Moreover, the specific protein molecules of the signaling pathways that regulated the formation of glomerular pattern were investigated the correlation with endometrial cancer.

Results

It was found that the histopathological grading after hysterectomy with glomerular pattern had grade 2 or grade 3 disease on final histology (n = 25; 96%). The sensitivity and specificity of this test were 84.6% and 81.8%, respectively, with a likelihood ratio of 4:6 in predicting and prognosticating those women who have high-grade tumor or invasive disease.

Conclusions

This hysteroscopic picture might be used as a novel marker for risk stratification of endometrial cancer. The signaling protein molecules might be applied as medical targets and diagnostic molecular markers.

ES26-0351 -

Free Communication | Complications in surgery | Endometriosis | Imaging

Gynaecologic scar endometriosis

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Background

Gynaecologic scar endometriosis is considered a rare occurrence, with a quoted incidence of between 0.03% and 1% following caesarean section. We present a case of abdominal wall endometriosis post caesarean section, and the associated striking MRI images, as well as a review of the literature on diagnosis and management of gynaecological scar-site endometriosis.

Methods

Our patient presented with a palpable lump and pain per abdomen. She had initially noticed a lump in her abdomen following the birth of her twins and was seen at another hospital where a fine-needle aspiration was performed which confirmed endometriosis. Subsequent imaging by MRI and CT confirmed an intramuscular mass located very close to the inferior epigastric artery. This led us to conduct a literature review of other rare cases of surgical site endometriosis, summarised below.

Results

Endometriotic nodules at gynaecological scar sites (including caesarean section, episiotomy, and laparoscopy port site scars) are a recognised phenomenon. Presentation tends to be with a palpable mass that increases with size during menstruation, and is painful, sometimes with catamenial bleeding if superficial. The mean time from surgery to onset of symptoms is quoted as 3.6 years. Only a small proportion (16%) of patients with endometriosis at gynaecological scar sites have associated pelvic endometriosis. The pathophysiology is not well understood, and direct implantation, migration, and metaplasia have all been suggested as theories. There are no studies on methods of preventing scar site endometriosis, though suggested preventative measures have included: lifting the uterus out of the pelvis prior to uterine incision, high pressure irrigation and using separate needles for uterine and abdominal wall closure. Diagnosis may be aided by USS, CT, MRI or FNA. With regard to treatment, medical options include oral contraceptive pills and GnRH analogues, with return of symptoms once medication is discontinued. Surgical treatment is by wide local excision with negative margins. If there is involvement of the muscles of the abdominal wall, there is a risk of consequent herniation requiring mesh repair.

Conclusions

Gynaecological scar endometriosis is a rare entity requiring a high index of clinical suspicion for diagnosis. Our highly unusual case of abdominal wall endometriosis following Caesarean section led us to review the current literature on diagnosis and management of gynaecological surgical site endometriosis.

ES26-0363 -

Free Communication | Complications in surgery | Endometriosis | Imaging

A ureter complication in total laparoscopic hysterectomy

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Background

we describe the case of 42 years old female with large uterine leiomyomas who presented with fatigue, heavy menstrual bleeding and enlarging mass arising from the posterior uterine fundus.

Methods

a 42 years old g2 p2 women who presented with fatigue, heavy menstrual bleeding and enlarging mass arising from the posterior uterine fundus. a pelvic and abdominal exam was performed. examination of her abdomen revealed a firm mass arising from the pelvis and extending to the umbilicus. laboratory studies were significant for anemia (hemoglobin 8,5 g/dl). ultrasonography of the abdomen showed a approximate 8 cm type 2-5 leiomyoma that based from uterine fundus and 4 cm type 4 leiomyoma corpus of the uterus also and uterus grown up globally. we planned total laparoscopic hysterectomy (tlh) to her. patient was operated. we entered first trocar to the abdominal cavity by lee huang point then others was entered. pelvic parietal peritone was opened to see bilateral ureters. after ureter dissection was completed we started tlh. when we ligated cardinal ligaments, right ureter was cutted that was noticed and consulted urology. laparotomy was maked and ureter injury was found that was 2cm above from ureterovesical junction. urology made ureteroneocystostomy and anastomosis was controlled via metilen blue then hysterectomy was completed.

Results

after we completed hysterectomy, watched operation video and we noticed that when cardinal ligament was ligated, uterus was rotated. although we dissected ureters due to the rotation of uterus, the right ureter was displaced and caused damage to the ureter during cardinal ligament ligation.

Conclusions

if the uterus rotates during the ligation of the cardinal ligament, even if the ureteral dissection is performed, the ureter may be damaged. we think that during the tlh, when performing the ligation of the cardinal ligament, attention should be paid to whether the uterus rotates. we think that using 30° scopes in large uterus will decrease ureter complications

<http://player.vimeo.com/video/223117210?autoplay=1>

Major complications of total laparoscopic hysterectomy in patients with prior caesarean section

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Background

To evaluate the major complications and safety of total laparoscopic hysterectomy (TLH) in patients with prior caesarean section (CS)

Methods

The medical records of 504 patients that were treated with TLH due to benign indications were reviewed retrospectively between May 2013 and April 2017 at Health Sciences University Kanuni Sultan Suleyman Training and Research Hospital. Data were collected with respect to age, parity, surgical indications, operation duration, length of hospital stay, histopathological diagnosis, major intra and postoperative complications and categorised into two groups by CS history: patients without CS and patients with prior CS. Bowel, bladder, ureter and great vessel injuries, vaginal cuff dehiscence comprised major complications. Transumbilical direct trocar entry method was used for most of the patients for accessing the abdominal cavity. A 10-mm primary trocar and 3 secondary 5 mm ports, first on left lateral side, second on right side and a third port suprapubically in midline were inserted. The energy sources used were mostly Ligasure and Enseal. Colpotomy was performed on the rim of the Clermont Ferrand uterine manipulator with monopolar cautery. The specimen was removed vaginally. Vaginal vault was closed laparoscopically with barbed no.1 suture.

Results

In 4 years, 504 TLH were performed. The mean age standard deviation (SD) in the prior CS group was 46,88±5,57 and significantly lower than the patients without CS ($p=0.017$). Parity, operation duration, hospital stay, preoperative and postoperative hemoglobin levels did not differ between groups. The most common indication for TLH was myoma uteri (%60.1). Conversion rate to laparotomy in prior CS group and no CS group was 2% and 1,69%, respectively. The rates of major complications in prior CS group and no CS group were 0,16% ($n=6$) and 1,21% ($n=2$), respectively and did not differ significantly ($p>0.05$). In the no CS group, 1 bladder injury, 3 bowel injury and 2 great vessel injury occurred. In two patients small retroperitoneal hematoma was observed, since hematoma limited expectant management was done. 3 cm defect of bladder injury was repaired laparoscopically. 1 ileum injury probably due to direct trocar insertion detected postop 3rd day was treated with ileostomy. 1 bowel injury in rectosigmoid area detected postop 3rd day was primarily repaired. 1 bowel injury in serosa of rectosigmoid detected intraoperatively sutured. In the prior CS group 1 bowel injury in serosal surface of rectosigmoid colon was repaired by laparoscopic suturing. 2 cm defect of bladder injury was sutured laparoscopically. Neither ureter nor vaginal cuff dehiscence occurred in either group.

Conclusions

In conclusion, TLH in the prior CS can be performed safely since major complication rate was not different from the patients with no CS. Major complications were rare and mostly diagnosed intraoperatively and managed successfully, leaving no long term sequela.

A case of 5-mm nonbladed trocar site complication

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Background

complications from laparoscopic surgery occur in 0.1% to 10% of procedures. complications that occur at the port site include infection, bleeding, and port site herniation (psh). psh is a rare (%1) but potentially dangerous complication of laparoscopic surgery ranging from early small omental herniation to delayed hernia formation with or without bowel entrapment. psh is a rare complication but requires prompt diagnosis and immediate treatment to avoid morbidity. psh have been classified by hitoshi et al into three groups based on the pathology. most of the psh occur through the ports of 10mm size or more and through umbilical or midline site. the incidence of psh ranges from 0.2% to 3.1% in large case series and reviews. risks factors for developing a push like increased bmi, entry and closure techniques, and preexisting fascial defects, size, number and type of trocar tips, excessive manipulation of the trocar site etc. have already been identified. usage of larger size trocars of 10mm diameter or more carries an increased risk of herniation. the current practice is to close the fascial defects of 10mm or more. smaller trocars are not routinely closed. fascial closure does not prevent incisional hernia development.

Methods

our patient was 37 years old nullipar women with diagnosis about bilateral endometrioma like adnexal mass. our case who complained about very severe abdominal pain, abnormal menstrual bleeding; underwent laparoscopic cystectomy. 3 trocar were used 2 of them 10 mm one of them 5mm. 5 mm trocar fascia did not be closed. in the follow-up of the hospital after the tough surgery ; patient began complaints about tenderness of abdomen , crp elevated, fever was high. no pathology could be detected on imaging. for not regression of patients complaints she underwent diagnostic laparoscopy. omentum herniation through 5mm size trocar was seen and was corrected with manually. the peritoneum and fascia were closed with a 3-0-polygalactin. patient was recover after second surgery in following up.

Results

psh is unlikely through 5mm fascial defects unless they are enlarged to considerable size. the most important factor which predisposes to herniation in 5mm port site is probably excessive trocar manipulation. nezhat c et al., who has reported maximum number of hernias through 5mm port site also recommends closure of fascia of 5mm port when there is excessive manipulation

Conclusions

expert opinion and small case reports suggest that in cases of prolonged manipulation of 5-mm trocar sites the surgeon should consider fascial closure, because extension of the initial incision may have occurred. though 5 mm psh is a rarer entity compared to 10 mm psh, it is a completely preventable cause of morbidity. there is no evidence to recommend routine closure of 5-mm trocar incisions; the choice should continue to be left to the discretion of the individual surgeon. we would recommend surgeons consider fascial closure in 5-mm incisions where extensive, prolonged manipulation occurred that may have extended or widened the initial defect.

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ES26-0230 -

Free Communication I Laparoscopic Surgery

The long-term impact of ovarian cystectomy on ovarian reserve and reproductive performance: a cohort study

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Background

Although recent evidence suggests a significant decline of ovarian reserve following ovarian cystectomy, the long-term impact of this procedure on fertility potential remains unknown. The purpose of this study was to assess ovarian reserve and reproductive performance up to 10 years after excision of benign non-endometriotic ovarian cysts.

Methods

This observational cohort study included 34 women who underwent excision of benign non-endometriotic ovarian cysts between 2005 and 2014 and 42 healthy controls matched for age and body mass index (BMI). The primary endpoint was serum anti-Müllerian hormone (AMH) concentration as a marker of ovarian reserve. Secondary outcomes included serum FSH levels, ovarian volume, antral follicle count (AFC) and pregnancy rates (in women seeking fertility before and after surgery). The sample size was estimated to detect a minimum clinically important difference in serum AMH level of 0.5 ng/ml with 86% power and a 0.050 significance level. Hospital records were reviewed for details of surgery and all participants completed a reproductive history questionnaire and attended a hospital visit for an interview. They also underwent a transvaginal ultrasound scan (for AFC and ovarian volume) and gave a blood sample (for measuring serum AMH and FSH concentrations). Numerical data were compared between the two groups using Wilcoxon (Mann-Whitney) rank-sum test. Pregnancy rates amongst those seeking fertility were compared using chi-square test.

Results

The median (interquartile (IQR)) ovarian cyst diameter was 7.0 (5.0, 8.0) cm and the median (IQR) duration of follow up was 6.0 (3.0, 8.0) years. The median (IQR) serum AMH concentration of the study group was 1.25 (0.40, 2.40) ng/ml, which was not significantly ($p=0.458$) different from that (1.56 (0.66, 2.73) ng/ml) of the healthy controls. Subanalysis of women aged <40, also revealed no significant ($p=0.811$) difference in serum AMH levels between the two groups (Study ($n=28$), 1.70 (0.70, 3.07) **vs.** controls ($n=29$), 1.80 (0.69, 3.30) ng/ml). Similarly, there was no statistically significant difference in other ovarian reserve markers including AFC (study, 7.00 (5.00, 9.25) **vs.** control, 8.50 (5.00, 10.75); $p=0.426$), serum FSH (study, 7.15 (6.275, 9.125) **vs.** Control, 6.60 (5.40, 8.65) iu/l; $p=0.643$), ovarian volume (study, 6.73 (3.71, 9.60) **vs.** control, 6.45 (4.93, 8.90) ml, $p=1.0$). Pregnancy rates amongst women seeking fertility in the study group were significantly ($p=0.04$) lower after surgery (14/28, 50%) compared to rates before surgery (13/16, 81%). Pregnancy rates were also significantly ($p<0.001$) lower in the study group after surgery (14/28, 50%) compared to the healthy controls (25/25, 100%).

Conclusions

Excision of benign non-endometriotic ovarian cyst does not cause any long-term decline in ovarian reserve. However, there appears to be a significant long-term decline in the chances of pregnancy after this procedure, but the study was underpowered for this outcome.

ES26-0254 -

Free Communication I Laparoscopic Surgery

Management of three cesarean scar patients with surgically and medically

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Background

Our objective is to present three cases of cesarean scar pregnancies treated with different modalities.

Methods

First Case; a 32 year old, G5P3A1 pregnant woman was admitted to our emergency unit with bleeding. On her history; she had 3 previous cesarean sections (CS) and the last CS was 5 years ago. On her vaginal examination bleeding was seen at the cervix and transvaginal ultrasonography revealed a 7 week fetus without cardiac activity was located in the cesarean scar. She underwent laparoscopic excision of scar pregnancy. During operation, adhesions were dissected, left ureter was identified and bilateral uterine arteries were ligated with absorbable polyglactine no:1 sutures to minimize blood loss (figure 1) before excision. Defect was closed with continuously double-layer sutures (figure 2). Second case was accepted to our emergency clinic from another hospital with excessive bleeding after dilatation and curettage for 6 weeks cesarean scar pregnancy. She was 24 years old and had 2 previous CS. On her examination, excessive bleeding was seen and a 20 F foley catheter was placed in uterine cavity to control bleeding (figure 3). On her laboratory Bhcg level was 6790 mIU/ml and hemoglobin level was 6,7 gr/ml at the day of curettage. Two units of red blood cells and 2 units of fresh frozen plasma were transfused. Balloon was removed 24 hours later, bleeding was minimal. At day 4, Bhcg level was 2985 mIU/ml and ultrasonography showed collection in uterine cavity and placental tissue at the cervix. 75 mg methotrexate im was given to the patient. Third case; a 43 year old G6 P1 patient was admitted to our clinic with vaginal bleeding. On her transvaginal ultrasonography 11 mm gestational sac (5 weeks) at cesarean scar was identified (figure 4) with a 1320 mIU/ml bhcg level . After laboratory tests, patient was treated with 50 mg systemic methotrexate. At 4. and 7. days b HCG levels were 987 and 665 mIU/ml respectively.

Results

All three patients had discharged with uneventful follow up.

Conclusions

Management of cesarean scar pregnancy ranges from conservative medical therapy to surgical treatment. Systemic methotrexate, dilatation and curettage and laparoscopic resection with uterine artery ligation are feasible methods for scar pregnancy treatment depending on the gestational age and clinical status of the patient.

<http://player.vimeo.com/video/220610313?autoplay=1>

ES26-0255 -

Free Communication I Laparoscopic Surgery

Vasopressin during laparoscopic myomectomy: does it really extend its limits?

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Background

Myomectomy is a fairly hemorrhagic operation. Hemostasis during the open approach is principally achieved with fast suturing after enucleation of the fibroid (-s). During laparoscopic myomectomy suturing is usually not as fast, and especially in the case of large or multiple tumors significant blood loss can occur before uterine reconstruction. Over the years, several measures have been tried to achieve reduction of blood loss during open and laparoscopic myomectomy, including use of bipolar energy, application of a variety of vaso-constrictive and uterotonic agents, use of tourniquets, temporary clipping of the uterine arteries, and use of barbed sutures.

Methods

We conducted this retrospective study to investigate whether the use of vasopressin played an important role in the safe expansion of the indications of laparoscopic myomectomy in our practice, comparing recent cases performed without use of this drug, with cases performed in the immediately preceding era when vasopressin was available and routinely used in our department to perform this procedure. We included 50 patients who underwent laparoscopic myomectomy without use of vasopressin (which became unavailable in Greece), or any other vaso-constrictive agent, at any stage of the procedure (Group 1). These cases were compared (at a 1:2 ratio) with 100 patients with myomas operated laparoscopically during the immediately preceding period, when vasopressin was still available and used routinely (Group 2).

Results

In Group 1, two cases were laparoconverted, one for intractable bleeding and the second for severe persisting hypercapnea. No laparoconversions occurred in Group 2. The rates of transfusions (6% vs. 4%), severe hypercapnea (16% vs. 7%), and subcutaneous emphysema (14% vs. 9%), were higher in Group 1 compared with Group 2, but not significantly different. Mean blood loss and procedure length were 322 vs. 148 mls, $p < 0.001$, and 131 vs. 116 minutes, $p = 0.078$, respectively. No life-threatening adverse effects related to the use of vasopressin occurred in group 2.

Conclusions

Laparoscopic myomectomy performed without use of any vasoconstrictive agent results in significantly increased blood loss especially in cases with large, intramural and multiple fibroids. Increased absorption of CO₂ may also occur from the open vessels of the myoma bed, and from emphysema developing at trocar sites, resulting frequently from efforts to control bleeding. Operative experience and fast suturing may partially counterbalance lack of effective vasoconstriction.

ES26-0257 -

Free Communication I Laparoscopic Surgery

Laparoscopic management of synchronous bladder and rectovaginal endometriosis

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Background

Urinary tract endometriosis (UTE) is rare. Bladder is the most common site affected. Diagnosis can be difficult given the nonspecific symptoms associated with bladder endometriosis (BE). Treatment depends on several factors but surgical excision of the endometriotic lesion is the definitive treatment. Laparoscopic approach has several advantages in these cases.

Aim: To analyze women with BE submitted to surgical treatment and to evaluate the clinical and reproductive outcomes, complications and recurrence rates.

Methods

Materials and methods: Thirteen patients submitted to surgical treatment for bladder endometriosis, from January 2012 to March 2017, were retrospectively reviewed. Preoperative data, intraoperative findings, type of surgical procedure, intraoperative and postoperative complications were analyzed.

Results

Two women were treated by laparoscopic shaving of the bladder nodule and 11 by laparoscopic partial cystectomy. There were excised, simultaneously, nodules of the rectovaginal septum, uterosacral and round ligaments. No conversions to laparotomy were observed. No major nor minor intra- or postoperative complications were observed and none patient required repeated interventions. Improvements in clinical symptoms and fertility outcomes were reported after surgery. There was 1 case of *de novo* urinary symptoms 2 years later.

Conclusions

Laparoscopic surgery in cases of BE seems to improve symptoms and pregnancy rate with a low rate of complications and recurrence. Surgical approach requires an experienced gynecologist and urologist team.

<http://player.vimeo.com/video/220718537?autoplay=1>

ES26-0271 -

Free Communication I Laparoscopic Surgery

Effects of diode laser 980 nm, power 25-30 W, for achieving haemostasis vs. bipolar electro-coagulation on the ovarian reserve after laparoscopic stripping surgery of endometrioma(s).

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Background

The aim of the study is to investigate the impact on ovarian reserve the use of diode laser 980 nm, power 25-30W for hemostasis after laparoscopic stripping surgery of endometrioma(s) in patients with endometrioma by measuring of serum AMH levels; and to compared these results with our previously finished study in which after endometrioma stripping surgery bipolar coagulation were used for haemostasis.

Methods

Prospective cohort study, began in December 2015 included 20 reproductive- aged women (18-42 years), after laparoscopic stripping of the most part of the endometrioma, the hemostasis of the residual ovarian tissue was performed by using diode laser 980 wavelength and power of 25-30W. The results of this study, we compared with the part of the results of our previously finished study that we have conducted since Dec 2013 to Dec. 2016. In our previous study, we included 33 patients, after endometrioma stripping surgery we used bipolar electrocoagulation for hemostasis. All the operations were performed by the same laparoscopic skilled surgeon (L.A.) and Ass (V.K.) and the same stripping technique. Diagnosis of endometrioma(s) was set on clinical and ultrasound examination and was confirmed histopathologic. AMH was measured on third day of the cycle before the operation, 1 and 6 months after the operation. Results were analyzed by standard software SPSS.

Results

In diode laser group, 20 patients: AMH baseline med(range) ng/mL: 3.9(0.42-9.9), AMH 1months med(range)ng/mL: 3.2 (0.38-7.07), AMH 6 months med(range)ng/mL: 3.38(0.4-8.2)); overall p-value*: p=0.223; (p* Friedman rank sum test). There was no statistically significant decrease of AMH levels after the laparoscopic stripping surgery of endometrioma with the use of diode laser 980nm, 25-30W for hemostasis. Percent change of AMH in diode laser group: 1 months vs baseline 14.21%; percent change of AMH in diode laser group: 6 months vs baseline 22,78%. In bipolar electrocoagulation group 33 patients: AMH baseline med(range)ng/mL: 3.05 (0.78-7.7); AMH 1months med(range)ng/mL: 1.83(0.12-3.9); AMH 6 months med(range)ng/mL: 1.15(0.16-3.72); overall p-value* p<0.001; p-value** AMH 1months vs baseline p<0.001; AMH 6 months vs baseline p<0.001; AMH 1months vs 6 months p=0.00107. (p value*= Friedman rank sum test; p value**= Wilcoxon's signed rank test). There were statistically significant decrease of AMH levels after laparoscopic stripping surgery with bipolar electrocoagulation. Percent change of AMH in bipolar group : 1 months vs baseline 38.06%; percent change of AMH: 6 months vs baseline 51.23%.

Conclusions

When we have a patient with endometrioma it's clear that we have a problem of preserving ovarian reserve. The question is how we should manage them when they require surgical management, especially for women who want to preserve fertility. It is likely that the future will be looking for new sources of energy that will have a better effect on the preservation of healthy ovarian tissue.

ES26-0277 -

Free Communication I Laparoscopic Surgery

Surgical management of voluminous benign ovarian cysts

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Background

Benign ovarian cysts are common in women during period of genital activity and after menopause. Their management varies depending on their symptomatology, nature and size. The objective of this video is to describe the surgical management of voluminous benign ovarian cysts by puncture and aspiration, using a balloon trocar to secure the gesture.

Methods

We report the case of a sixty years-old patient without medical history, presenting a twenty centimetres unilocular cyst of the right ovary presumed benign at the preoperative evaluation.

Results

The surgery starts with an abdomino-pelvic exploration and a peritoneal cytology. In the second surgical step, we introduce a balloon trocar directly in the cyst using the tip of the trocar. The balloon is then inflated to ensure the sealing of the puncture and the cyst is aspirated. When the cyst is emptied, the orifice of the cyst is closed with an Endoloop® to allow the adnexectomy.

Conclusions

Laparoscopic treatment of voluminous ovarian cysts has to respect strict surgical rules. A rigorous preoperative evaluation is mandatory. Cyst puncture via a balloon trocar is a good tip to manage these cysts but is strictly prohibited in case of a suspicious mass.

<http://player.vimeo.com/video/221299064?autoplay=1>

**ES26-0397 -
Free Communication I Laparoscopic Surgery**

Laparoscopic repair of niche

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Background

Cesarean section is one of the most commonly performed surgeries in women. the cesarean section scar site can serve as the abode of pathologic conditions in subsequent pregnancies, namely cesarean scar

pregnancy , morbidly adherent placenta, and scar dehiscence/ rupture. these conditions have the potential to cause significant maternal and perinatal morbidity.

the underlying defect in the uterus following cesarean section predisposes to scar dehiscence/ rupture in subsequent pregnancies. This can also occur after other uterine surgeries like myomectomy, metroplasty, and septoplasty.

With the rising caesarean section rate more women experience the long term effects of a cs. more than half of the women develop a niche after a CS. These niches are related to post menstrual spotting, dysmenorrhoea, chronic pelvic pain and may be associated with subfertility and obstetric problems. Apparently, there are more relevant factors for niche development. One of these factors could be closing technique of the uterus

Cesarean section diverticulum is muscle dehiscence at the incision site as a result of incomplete healing, which forms a pouch-like defect at the anterior wall of the uterus. Some authors have suggested that the incidence of Niche in random female populations by transvaginal ultrasound (TVU) is 24–70%. There is no consensus on the gold standard for the detection and measurement of Niche

Methods

Transvaginal ultrasound is a non-invasive and lowcost examination that should be considered as the initial choice for screening because it highly correlates (100%) with hysteroscopy in the diagnosis of this defect.

Studies are needed to detect universal diagnostic criteria, indications for treatment and prophylaxis mechanism.

Results

Diagnosis of niche in patients who have symptoms using TVS, and treatment with a combined hystroscopic-laparoscopic surgery.

Conclusions

Laparoscopic repair of the niche is a feasible and effective methode

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ES26-0008 -

Free Communication I Laparoscopic Surgery

A rare retroperitoneal mass located on external iliac vessels; cyst hydatid

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Background

Cyst hydatid is caused by echinococcus granulosus and hydatid cyst is usually seen in rural areas . It is often colonized primarily in liver then in the lungs and other organs . Primary retroperitoneal hydatid disease is extremely rare and difficult to diagnose preoperatively. We herein report a case of a retroperitoneal hydatid disease located on external iliac vessels

Methods

A 38 year old primer infertile woman with abdominal and back pain referred to our clinic from general surgery clinic to rule out pelvic disorders. There wasn't any abnormality on physical examination. In USG (ultrasonography) examination of abdomen and pelvic region ; liver, spleen, kidneys , uterus and adnexes were normal. A bilobule anechoic cyst approximately 76 mm in diameter and with a medium thickness wall structure was observed in the anterolateral vicinity of the external iliac vascular structures in the inguinal region in the right lower quadrant of the abdomen. CT(computerized tomography) was recommended for differential diagnosis. CT scan supported US findings of cyst appearance, diameter, localization however it was reported primarily as a ovarian cyst then as hydrosalpinx. Serum tumor markers including CEA, ca-125, α fp and β hcg were negative.

Results

Operative laparoscopy was performed and retroperitoneal mass on right hipogastric vessels was observed . During the dissection of the mass , the mass was ruptured and a clear fluid was seen. Then a free white thick capsule-like structure was observed and this structure caused us to think of hydatid cyst because of the germinative membrane vesicle. The diagnosis of hydatid cyst was confirmed by pathological examination.

Conclusions

It should be kept in mind that a patient with retroperitoneal cystic masses might be a very rare retroperitoneal cyst hydatid although it is most commonly colonized in the liver and other solid organs.

<http://player.vimeo.com/video/209207960?autoplay=1>

Whether prophylactic bilateral salpingectomy will reduce quality of life and ovarian function?

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Background

Prophylactic bilateral salpingectomy has been widely applied for reducing the incidence of ovarian cancer, however, the effect on patient's quality of life and ovarian function is unknown. We aim to evaluate the impact through both prospective and retrospective studies.

Methods

The patient cohort was collected from a certain gynecological surgeon group in a single university-based hospital from 2016.6 to 2017.3. The study was divided into two parts: the retrospective one (2016.6-2016.10) and the prospective one (2016.11-2017.3). All of these patients received either total hysterectomy with prophylactic bilateral salpingectomy (TH + BS) or total hysterectomy with prophylactic bilateral salpingo-oophorectomy (TH + BSO) for benign reasons. Clinical characteristics including age, BMI, surgical information were recorded. Quality of life was evaluated through questionnaires including SF36, CRADI-8, UDI-6, and FSFI. Ovarian function was evaluated by using Kupperman Index (KI) and the volume of ovaries, as well as the laboratory examination of E₂, FSH, and AMH. For prospective study, one-month follow up was done, while for retrospective study, data were compared between pre-operation and 6-months post operation. T test was used for the statistical analysis, and P <0.05 was considered to be statistically significant.

Results

In total, forty-one patients were enrolled, with 30 patients received TH+BS, and 11 received TH+BSO. One-month post-operative data showed that patients who underwent TH + BS had a significant decrease in physical function (90 VS 68.98, P = 0.003), physical role function (84.1 VS 20, P = 0.000), and sexual function (FSFI score 17.82 VS 3.32, P = 0.000). While UDI and CRADI-8 scores didn't show changes with statistical significance (8.33 VS. 2.67, 1.88 VS 3.28, P = 0.071, P =0.606, respectively). The KI was significantly increased (0.11 VS 3.71, P=0.007), while AMH and E₂ were significantly decreased (0.62 VS 0.52, 149.58 VS 67.57, P = 0.016, and 0.000, respectively). In the control group (TH + BSO), overall quality of life and the FSFI were both reduced significantly (80.44 VS 52.4, P = 0.013; 18.64 VS 3, P = 0.002).

Six-month post-operative data showed that only FSFI score dropped severely for prophylactic salpingectomy patients (27.27 VS 22.07, P= 0.013), while the total quality of life, the urinary and the colorectal function was almost the same as pre-operative one. The average volume of bilateral ovary was slightly decreased (right ovary 7.17 cm³ VS 5.68 cm³, P = 0.456; left ovary 6.98cm³ VS 5.70cm³, P = 0.31).

Conclusions

It deserves to draw physicians' attention that prophylactic bilateral salpingectomy may reduce women's physical function, ovarian function, sexual function as well as perimenopausal symptoms changed significantly in an one-month observation. While after 6 month's adaptation, no negative impact could be detected as to the volume of ovary or total quality of life.

ES26-0080 -

Free Communication I Laparoscopic Surgery

Successful laparoscopic management of adnexal torsion in the third trimester pregnant woman: a case report

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Background

Adnexal torsion (AT) is a rare but emergency condition that should not be missed in the case of acute pelvic pain in pregnant women. It presents with abdominal pain, frequently accompanied by nausea, vomiting, and/or leukocytosis. It can occur in all trimesters, but is less common in the third trimester. Here, we reported the management of this rare pregnancy complication during the third trimester of pregnancy in order to highlight the importance of laparoscopic intervention and to avoid midline and pararectal abdominal incisions. Conservative and proper treatment is necessary to avoid both maternal and fetal complications.

Methods

A thirty year-old woman who had G₃P₂ and the history of 2 cesarean sections referred to our clinic from emergency service due to nausea & vomiting and left abdominal pain of 24 hours. She was at 30 weeks of gestation according to her last menstrual period. Transabdominal ultrasonography (USG) demonstrated a viable in utero fetus compatible with 30-week gestation and with normal amniotic fluid volume. Furthermore, the left ovary was measured as 134 × 100 mm (fig. 1) and no blood flow was detected on color and power Doppler USG of the left ovary. On admission to our hospital the patient's vital signs were within normal limits. Physical examination revealed a tenderness and pain in the left lower quadrant up to the level of umbilicus. We thought AT and decided a laparoscopic approach after the family's informed consent.

Results

Laparoscopic surgery was performed that a 10-mm port placed at midway between the xiphoid process and the umbilicus (Lee-Huang point) through a 10 mm 0-degree telescope. Two 5-mm working ports in the right and left iliac fossae were inserted. During the laparoscopic exploration, the left ovarian necrosis was seen due to twisting; hence oophorectomy was performed (fig. 2). Ovarian hemostasis was achieved using cauterization, and the tissue was retrieved through mini-laparotomy with a small phannenstiel incision. The postoperative course was uneventful. Pathological examination of the specimen revealed ovarian necrotic tissue which 13 cm in diameter (fig. 3).

Patient was discharged from hospital on the first day after surgery with a viable pregnancy. 17-hydroxyprogesterone caproate 250 mg intramuscular was administered weekly until 34th week of gestation to prevent preterm delivery. In follow-up, she underwent cesarean section with phannenstiel incision on the 37th week of gestation and delivered healthy infant.

Conclusions

Laparoscopy is usually indicated during pregnancy in the evaluation of acute abdominal/pelvic pain. It is usually performed in the first or second trimester, but it may be technically possible even in the early third trimester. We showed the treatment of AT by laparoscopic surgery during the third trimester of pregnancy being a safe procedure both for the mother and for the fetus.

**ES26-0089 -
Free Communication I Laparoscopic Surgery**

**The purpose is to demonstrate a surgical case of extrapancreatic solid
pseudopapillary tumor**

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Background

Solid pseudopapillary tumors (SPTs) are unusual neoplasms that mostly occur in the pancreas and predominantly affect young women. As a low-grade malignant neoplasm of the exocrine pancreas, they occasionally metastasize, usually to the liver or peritoneum. It has been reported that <1% of SPTs are primary extrapancreatic SPTs. SPTs are associated with a favorable prognosis. After surgical resection, 95% of patients are disease-free, and mortality is <2%.

Methods

We presented a case about a 16-year-old girl who presented a symptom of abdominal pain one year ago. CT scan revealed multiple abdominal cavity mass. The largest diameter was 15cm in Douglas'pouch. The surgery was performed in other hospital, including resecting the tumor located in the area between the pancreatic and splenic vein, omental metastasectomy and other resections of metastases in pelvic. The pathological result was extrapancreatic solid pseudopapillary tumor. After one year follow-up, there was a 2.5*1.9cm nodule adjacent to the right iliac vessels found by CT and a 3.6cm cystic lesion adjacent to the right accessory found by ultrasonography. This time, we resected all these nodules by laparoscopy.

Results

This video is a good demonstration of resecting all these nodules by laparoscopy. And the pathological result was extrapancreatic solid pseudopapillary tumor.

Conclusions

This video is a good example of resecting extrapancreatic solid pseudopapillary tumor and this is an extremely rare case.

<http://player.vimeo.com/video/219360576?autoplay=1>

**ES26-0102 -
Free Communication I Laparoscopic Surgery**

Surgical management of ectopic pregnancies in Lanarkshire from January to December 2016

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Background

An ectopic pregnancy is any pregnancy implanted outside of the endometrial cavity. In the UK the incidence is approximately 11/1000 pregnancies, with an estimated 11000 ectopic pregnancies diagnosed each year¹

Unfortunately women still die from ectopic pregnancy with six maternal death reported between 2006-2008². However the case fatality rate has decreased over recent years, suggesting that earlier diagnosis and treatment may have improved outcomes.

The aims of our audit were: assessing Lanarkshire's practise by the standards set out by RCOG; compare surgical management of ectopic pregnancies between 2006 (previously audited) to 2015; determine how surgical management of ectopic pregnancies affected hospital stay, intraoperative and postoperative complications.

Methods

A retrospective analysis was performed on the 49 identified surgically managed cases of ectopic pregnancy in 2015 in Lanarkshire. Data was collected from Clinical Portal using the same data collection questions as the 2006 audit from Clinical Portal.

Results

Surgical details: Of the 49 patients, salpingectomy was performed in 43 (88%) patients and 1 patient had salpingostomy. In the other 5 patients 2 had retrieval of corneal pregnancy, 1 had salpingoophorectomy, in 1 case the procedure was abandoned due to the risk of colostomy and 1 had partial salpingectomy.

We found that 87.7% of the patients in this audit have laparoscopy compared to 55% in the previous audit and 8.2% had laparotomy compared to 55% in the previous audit. In 2 cases (4.1%) the type of surgery is not known as there was no data available.

Other outcomes: Average hospital stay after laparoscopy was 1.7 vs 3 days in 2006 and following laparotomy 2.2 vs 4 days. When we compared the intraoperative blood loss we found that blood transfusion during laparoscopy was 7% compared to 25% during laparotomy in this audit. We also found that 1 (2%) patient received blood transfusion after laparoscopy in this audit with no blood transfusions recorded in 2006. Following laparotomy no blood transfusions were recorded in this audit compared to 17% in 2006. We found that ultrasound findings were only available in 49% of the patients' notes, and operative blood loss was recorded only for 24 (49%) patients. 6% of the patients who underwent surgery had previously had Methotrexate.

Conclusions

There has been a shift in surgical practise with more ectopic pregnancies being managed via laparoscopic technique. The proportion being managed laparoscopically has almost doubled. The average hospital stay post operatively dropped for patients who have had either laparoscopy or laparotomy approaches. The relative increase in laparoscopic cases means that overall there are far less 'bed days' associated with ectopic pregnancies in 2015 .as compared to 2006.

Free Communication 21

ES26-0422 -

Free Communication I Laparoscopic Surgery

A spontaneous lymphocele in a retroperitoneal periadnexial location

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Background

Lymphocele is a rare disease.

Methods

A 42-year-old woman presented with a persistent adnexial cyst and pelvic pain. Transvaginal sonography revealed a left unilocular cystic lesion of diameter 6 cm. Tumour markers were normal. Cyst was present for 1 year. Laparoscopic left salpingoopherectomy was planned for persistent adnexial mass.

Results

During surgery uterus, right and left adnexa were observed normal. A cyst was present in obturator fossa retroperitoneally. Cyst wall was adhered to external iliac vein and obturator nerve. Cyst content was gelatinous in nature. Cyst capsule was extirpated.

Conclusions

Laparoscopic surgery is the best treatment for lymphocele in abdominal and pelvic cavity.

<http://player.vimeo.com/video/221749606?autoplay=1>

ES26-0365 -

Free Communication I Laparoscopic Surgery

One-step surgical evaluation of uterine cavity, fallopian tubes and pelvis for infertile women in conscious sedation (The Olics Method)

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Background

To introduce a one-step surgical method for infertility evaluation, using the Operative Laparoscopy in Conscious Sedation) (OLICS) and Operative Hysteroscopy in Conscious Sedation) (OHICS) methods, concurrently

Methods

Otherwise healthy patients who required infertility evaluation were included. The primary endpoints were the safety of the procedure and rate of conversion to general anesthesia, together with the ability to evaluate the pelvic cavity using laparoscopy, hysteroscopy and dye passage, within the time limitation. The secondary endpoints were patients' satisfaction, VAS and early discharge. Patients were included in the study if they met the following inclusion criteria: patients required infertility evaluation with no cardiac or respiratory disease or any chronic illness, and without history of prior longitudinal abdominal surgery. Body mass index (BMI) that did not exceed 25. Previous pelvic inflammatory disease (PID) was not a contraindication for the study if the other inclusion criteria were met.

Results

Sixteen patients underwent laparoscopy under conscious sedation. Three (18.8%) cases were converted to general anesthesia due to severe adhesions which could not be treated within 20-30 min. All patients maintained spontaneous breathing throughout the procedure and no episodes of hypotension or bradycardia occurred. Optimal pain control was obtained in all cases with a reported VAS <4. No episode of post-operative nausea and vomiting occurred. Six hours after the procedure, all patients met the Post-anesthetic Discharge Scoring System criteria and were ready for discharge.

Conclusions

One-step infertility evaluation by laparoscopy / operative hysteroscopy, while avoiding general anesthesia is feasible and safe. It is beneficial to the patient and to healthcare system. We believe that infertility evaluations should be done in one-step and if possible, following our inclusion criteria, and by using the OLICS method.

ES26-0382 -

Free Communication I Laparoscopic Surgery

Ureteral endometriosis and kidney function loss

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Background

Around 1% of patients with pelvic endometriosis have ureteric endometriosis. Colicky abdominal-flank pain, dysuria, hematuria and uremia are the main symptoms. 80 % of ureteric endometriosis is due to external ureteric compression and 20% is of the internal type, involving the ureteric wall and mucosa. Endometriosis may cause obstruction in the urinary system leading to hydronephrosis or progress asymptotically leading to loss of kidney function. Medical therapy in patients with hydronephrosis is insufficient and the ureter needs to be freed surgically to allow for the passage of urine.

Methods

A 39 year G1 P1 old patient on combined oral contraceptive pills for the past 2 years for progressively increasing abdominal-flank pain, dysmenorrhea, and dyspareunia presented to the gynecology clinic. 2 years previously she underwent laparoscopic cystectomy and LUNA for pelvic pain management upon ultrasonographic and MRI findings of a left sided grade 2 hydronephrosis and a 4-5cm endometrioma on the left ovary. She presented to our clinic with pelvic pain and ultrasonography revealed a 8x8 cm endometrioma, a dilated ureter and a grade 4 hydronephrosis above the level of the endometrioma. On IV pyelography no passage from the left kidney was visible, and kidney function was found to be 14% on scintigraphy. A double-J stent was applied under ureterorenoscopic vision, and no internal constriction was detected. An external ureteric compression was thought to be present.

Results

On laparoscopy, the left ovary and sigmoid colon were densely adherent with each other, and the ureter was dilated above the adnexial area. Adhesions were dissected without injuring the neighbouring tissue. A left sided salpingoophorectomy was performed. A left sided ureterolysis with resection of endometriotic foci was performed. The left ureter was mobilized from the cardinal ligament to the pelvic brim. No areas of deep infiltrating endometriosis involving the bowel was detected. Scintigraphy performed on the 6th postoperative month revealed the kidney function to have increased up to 26% .

Conclusions

Extrinsic ureteric compression due to endometriosis can be effectively treated with laparoscopic ureterolysis. Patients with deep infiltrating endometriosis should be evaluated for urinary system endometriosis to prevent silent kidney function loss.

<http://player.vimeo.com/video/221647511?autoplay=1>

ES26-0423 -

Free Communication I Laparoscopic Surgery

Implementation of a novel efficacy score to compare sealing and cutting devices in a porcine model

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Background

In general surgery, minimally invasive laparoscopic procedures have been steadily increasing over the last decade. The application of advanced bipolar and ultrasonic energy devices for sealing and cutting of blood vessels plays a vital role in routine clinical procedures. The advantages of energy-based instruments are enhanced sealing capability combined with both fast sealing-time and minimal thermal injury. The purpose of this study was to compare the safety and efficacy profiles of nine laparoscopic sealing and cutting devices in a porcine model, with a new scoring system.

Methods

Comparative studies in a porcine model were performed to assess vessel sealing, burst pressure, thermal spread, maximum heat, sealing/cooling time, and compression strength over the full jaw. Nine different devices from five manufacturers were tested in this study.

The **Sealing and Cutting Devices (SCD)** score has been developed to enable standardized comparisons of various devices. For this purpose, the most important parameters were identified through a consensus approach.

Results

All sealed vessels with different devices could withstand a median pressure of more than 300 mmHg (range: 112–2046 mmHg). The time for the sealing procedure was 7.705 s (range: 5.305–18.38 s) for the ultrasonic and 7.860 s (range: 5.08–10.17 s) for the bipolar devices. The ultrasonic instruments reached a median temperature of 218.1°C (range: 81.3–349.75°C) and the bipolar devices a temperature of 125.5°C (range: 94.1–133.35°C). The tissue reached a median temperature of 61.9 (range: 47.1–80.6°C) after ultrasonic sealing and 76.7°C (range: 63.1–94.2°C) after bipolar sealing. The median SCD score was 10.47 (range: 7.16–13.72).

Conclusions

All the instruments used seemed safe for use on the patient. The SCD score allows an indirect comparability of the instruments.

ES26-0392 -

Free Communication I Laparoscopic Surgery

Laparoscopic hysterectomy: early return and quality of life preliminary trial

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Background

Laparoscopic hysterectomy has already proven it's safty, the reduction of pain, and retrun to normal bowel movements versus laparotomia. However, the hospitalisation duration is still of 3-4 days and no prospective study shows that it is possible to reduce this duration in France.

Methods

During the years 2013-2016, 42 patients were randomised between a group of 'short' hospitalisation of 1 day, versus a groupe of 'conventionnal" hospitalisation of 3 days. The hysterectomy was performed for benign pathologies. Euroquols 5D-3L quality of life scoring system was analysed, as well as pain VAS's, STAI score system, SF-36 score system dans PADSS scores.

Results

Quality of life was the same between the two groups the day 0, 7 ant a month postoperative. But the third day, the score of the groupe 'short hospitalisation" was significantly lower. However, the pain VAS's were significantly better on the group 'short hospitalisation" the first and second day postoperative. STAI scores were also the same as well as SF-36 scores. PADSS score shows that 85% of the patients could have return home 8 hours after surgery.

Conclusions

This preliminary trial is encouraging to reduce hospitalisation duration, to one day or even less although the temporarily lower quality of life at day 3.

**ES26-0398 -
Free Communication I Laparoscopic Surgery**

Laparoscopic approach for surgical correction of obstetric complications in postpartum

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Background

Postpartum hemorrhage (PPH) and puerperal sepsis are still the most dangerous conditions in modern obstetrics regardless of the recent developments in medicine. Surgical treatment to manage them is used as a last resort when earlier procedures have failed, or sometimes from the start, when a severe life-threatening situation requires solution in the shortest time possible.

Methods

We present 2 cases when laparoscopy was successfully implemented 1) to stop postpartum coagulopathic/septic hemorrhage and 2) to treat septic complication of partial placenta accreta. Laparoscopic vessels ligation and total hysterectomy were used in these cases, correspondingly. Beside with this, literature review and pubmed search for publications with similar approach is provided to compare with.

Results

We have found only two publications of laparoscopic bipolar coagulation of uterine vessels to manage delayed postpartum hemorrhage and 8 reports of septic uterus removal with the aid of endovisual technologies in puerperium.

Conclusions

Although there are known benefits of laparoscopic route such as proper dissection and better visualization of the retroperitoneum, its limited usage is explained by organizational matters.

Laparoscopic management of Sacrouterine ligament Myoma mimicking a complex adnexial mass

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Background

Myomas are the most common tumors of the female genital tract. They are the leading cause of hysterectomies and related operations in females. The most common symptoms related to myomas are abnormal uterine bleeding, pelvic pain and complications related to compression of nearby organs. Occasionally fibroids could mimic complicated ovarian masses

Methods

40 years old nulligravid woman was referred with abnormal uterine bleeding and complicated adnexial mass. Her past medical history was unremarkable. Transvaginal ultrasound revealed 56 x 54 mm semisolid, cystic, fluid filled mass on right adnexia. Moreover MRI revealed a complex semisolid and cystic mass located on right adnexia. Tumor markers were within normal limits. In order to reveal the nature of the adnexial mass a laparoscopy was performed

Results

On laparoscopy a mobile, soft retroperitoneal mass measuring 5 cm was revealed which was located between right uterosacral ligament and pelvic sidewall. In order to see the exact connection of this mass with right ureter and retroperitoneal great vessels, retroperitoneal space was opened and pararectal space was developed. Right ureter, right external artery and vein were all identified and there was no direct connection between these retroperitoneal structures and these cyst. Then the peritoneal reflection lying just above the mass was excised and the cyst was dissected of the peritoneal reflection. Meanwhile the bladder was filled up and rectum was controlled with a probe to see whether there is a connection between these structures. There was no anatomic relation between the cysts and nearby organs. After careful dissection the cyst was revealed to be a pedunculated myoma of the sacrotureine ligament protruding into pararectal space. Myomectomy was performed and the myoma was exteriorized by the help of an endobag in order to prevent tumor spillage in case of an unexpected LMS or atypical myoma. The operation duration was 85 minutes with a 50 cc bleeding. The post operative period was uneventful and the patient was discharged on the 2nd postoperative day. The final pathology was reported as a degenerated myoma.

Conclusions

Myomas could be located in unexpected and unusual locations and rarely in retroperitoneal region. Retroperitoneal approach is important to see and identify the anatomic relation of a usual retroperitoneal masses.

<http://player.vimeo.com/video/221659636?autoplay=1>

**ES26-0415 -
Free Communication I Laparoscopic Surgery**

Timely diagnosis and treatment of peritoneal tuberculosis in laparoscopic era

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Background

Peritoneal tuberculosis, which accounts for about 1-2% of all cases of tuberculosis, involves the parietal and visceral peritoneum, omentum, intestinal tract, liver, spleen, or female genital tract. The symptoms and signs of peritoneal tuberculosis are nonspecific, therefore early diagnosis is difficult.

A 17-year-old girl presented with abdominal pain, anemia, nausea, vomiting, and weight loss of 6 kilograms within one month. Other than bilateral pale conjunctivae, her physical examination was normal. Initial laboratory studies revealed Hb of 9.1g/dL, MCV 79 FL, albumin 4 g/dL, calcium 11.1mg/dL, normal ALT/AST/ALP, and total bilirubin. Chest X ray did not reveal any infiltrates. Abdominal computed tomography (CT) showed multiloculated ovarian cysts in the left ovary, mild amount of ascites with diffuse thickening of peritoneal surfaces and omentum suggestive of peritoneal carcinomatosis.

Methods

Due to these CT findings and history of recent weight loss, she underwent a work-up for a possible gastrointestinal malignancy. Diagnostic paracentesis revealed WBC of 640, with 96% lymphocytes and serum ascites albumin gradient of 0,8. Cytology was negative for malignancy. No acid-fast bacilli (AFB) were seen by microscopic exam and culture was negative. PCR from the ascitic fluid was sent to an outside laboratory. Purified protein derivative skin test was negative. CA 125 was 539U/mL while other tumour markers were normal. Hepatitis B and C virus antibodies were negative. Esophago-gastro-duodenoscopy and colonoscopy were normal. Since PCR result was reported to be available within 12 days and the patient's symptoms were deteriorating, diagnostic laparoscopy was decided for institution of timely diagnosis.

Results

Laparoscopy revealed diffuse adhesions and numerous white granulomas all over the visceral and parietal peritoneum and omentum, which were typical of peritoneal tuberculosis and biopsied. Frozen section was performed and revealed numerous non-caseating granulomas. Although AFB stain for examination of biopsies was negative which may be due to paucibacillary lesions frequently seen in extrapulmonary tuberculosis, she was started on empirical treatment for Mycobacterium tuberculosis based on clinical, laboratory and intraoperative findings. Her symptoms improved within the first week of the antibiotic therapy. Interestingly, after 7 days of anti-tuberculosis therapy, PCR analysis of ascitic fluid was reported to be negative for M.tuberculosis complex DNA. 42 days after sampling, the "gold standard" test, tuberculosis culture result of omental biopsy was reported as M.tuberculosis positive. She was discharged to continue treatment at home for 6 months with instructions for regular follow-up.

Conclusions

Peritoneal tuberculosis should be considered in differential diagnosis of any patient with abdominal pain, weight loss, nausea, and lymphocytic dominant exudative ascites. The yield of routine laboratory and radiographic studies, smear and culture of peritoneal fluid are low; therefore diagnostic laparoscopy and peritoneal biopsy is helpful and often necessary not only for an early diagnosis and therapy, but also to stop transmission of the disease.

<http://player.vimeo.com/video/221665942?autoplay=1>

SELECTED FOR BEST POSTER PRESENTATION (34)

ES26-0401 - Selected Posters

Comparison of laparoscopy and laparotomy in adnexal torsion in our clinic

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Background

Adnexal torsion is more frequently seen in reproductive age. But adnexal masses in menopausal patients are more likely to be malignant. Our aim was to evaluate the surgical results of patients with diagnosis of adnexal torsion in our clinic.

Methods

Three hundred fifty patients with diagnosis and operated of adnexal torsion in our clinic between January 2005 and December 2016 were included in this retrospective study. Data regarding age, gravidity, parity, size of mass, operation time, and duration of hospitalization were recorded and compared between the patients that had laparoscopy to those who had laparotomy. The pathological results of patients also were recorded.

Results

Two hundred patients were treated laparoscopically while 150 patients had laparotomy. The most frequent presenting symptom was pelvic pain (96%). Laparoscopy group consisted of young patients with low parity, operation and hospital stay time was shorter in laparoscopy group. Velocity loss in Doppler ultrasonography was noted in 82.5% of the patients. Of the laparotomy group 88 postmenopausal patients had hysterectomy and bilateral salpingo-oophorectomy, staging surgery was done for 48 of them. The pathological finding was found to be malignant in 12 and borderline serous tumor in 10 patients.

Conclusions

Laparoscopy should be preferred for young patients who want to preserve their fertility. Because of high risk of malignancy in postmenopausal ovarian masses presenting with torsion; frozen section should be used. If not possible or not conclusive, staging surgery is more appropriate especially if there is suspicion of malignancy.

**ES26-0252 -
Selected Posters**

Total laparoscopic hysterectomy for enlarged uterus with multiple leiomyomas

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Background

Total laparoscopic hysterectomy (TLH) is a minimal invasive surgical approach for benign uterine conditions such as prolapse, symptomatic uterine fibroids, and abnormal uterine bleeding. The aim of this study was to assess the effect of large uterine size on the outcome of TLH.

Methods

A retrospective cohort study was conducted. Files of patients who underwent TLH at the gynecology clinics of a university hospital between January 2011 and December 2016 were reviewed. A total of 234 TLH cases were included into the study. The study group consisted of patients with multiple fibroids and dominant fibroid size greater than 5 cm (n=99). The control group consisted of patients with smaller uterine size and operated due to endometrial pathology, cervical pathology, or adenomyosis (n=135).

Results

There were 99 patients in the study group and 135 patients in the control group. The mean ages of women in the study and control groups were 48.6±5.4 years and 51.8±9.1 years, respectively. The groups were comparable regarding body mass index, comorbidities, and previous abdominal surgery. The mean duration of operation in study and control groups were 91.5±30.3 minutes and 93.0±30.6 minutes, respectively (P=0.716). The mean estimated blood loss was similar between the groups. The mean duration of hospitalization were 3.0±1.8 days and 2.8±1.7 days, respectively (P=0.572). The rates of complications in study and control groups were similar (2% vs. 6.7%, respectively; P=0.124).

Conclusions

Enlarged uterus with multiple fibroids does not seem to affect the outcome of TLH unfavorably.

**ES26-0325 -
Selected Posters**

Operative hysteroscopy prior to assisted reproductive technology cycles may be a possible reason for second trimester pregnancy loss

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Background

Pregnancy loss during the second trimester (i.e., 13 to 27 weeks' gestation) is a rare and serious condition. Among all pregnancies 1 to 5% are lost between 13 to 19 weeks' gestation, and a 0.3% are lost between 20 to 27 weeks' gestation. Cervical preparation of operative hysteroscopy includes excessive cervical dilatation and this procedure may diminish the fibromuscular structure of cervix. The aim of this study was to assess the relationship between operative hysteroscopy before pregnancy and second trimester pregnancy loss.

Methods

A retrospective cohort study was conducted. The charts of all pregnant patients following an assisted reproductive technology (ART) cycle between January 2013 and June 2016 were reviewed. The study group consisted of pregnant patients who underwent operative hysteroscopy before conception. The control group consisted of pregnant patients who didn't undergo hysteroscopy or any type of cervical surgical procedure before conception. The main outcome parameter was second trimester loss between 13 to 27 weeks of gestation.

Results

A total of 342 pregnancies were evaluated. The median ages of the study and control groups were 32 and 29 years, respectively. There were 40 patients in the study group and 302 patients in the control group. The indications for operative hysteroscopy were uterine septum (n=21), T-shaped uterus (n=2), endometrial polyp (n=14), and submucosal fibroid (n=3). The rates of second trimester pregnancy loss were 12.5% (5/40) in the study group and 3.3% (10/302) in the control group (P=0.021). The rates of term delivery were 57.5% (23/40) in the study group and 72.1% (218/302) in the control group (P=0.065).

Conclusions

Operative hysteroscopy prior to ART cycles is significantly associated with second trimester pregnancy loss. Further investigation with larger cohorts are urgently needed to clarify this issue.

**ES26-0128 -
Selected Posters**

Reproductive outcome after operative hysteroscopy, scissors or diathermy is there a difference?

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Background

The aim of the current study is to compare the safety and efficacy of different methods of operative hysteroscopy regarding fertility outcome. Specifically, this study reviewed the literature regarding the pregnancy outcome after using hysteroscopic scissors, versus diathermy (monopolar or bipolar electrode).

Methods

Three main reviewers and one fourth as a coordinator and referee, conducted this systematic review analysis. Neither language, nor year of publication or document format, were considered as limitations for the search strategy used. All retrieved citations from MEDLINE, using PubMed database until the 20th January 2017 and all related articles were merged and searched using specialised software (EndNote X7). After exclusion either by title, by abstract or by reading the manuscript, reviewers were left with 22 papers which described pregnancy outcome after hysteroscopy in subfertile women with endometrial polyps, submucous fibroids, intrauterine adhesions or septate uterus. Only 2 of these studies, held by Emamuldin Mostafa Seyam, 2014 and Ozlem Dural, 2015, focused on the question of the present study, concerning the role of the use of scissors or diathermy, and its significance in the pregnancy outcome. Three different outcomes were studied and measured one year after the procedure took place.

Results

In Seyam's paper 200 women were randomized in 2 groups, half of them as a control group and the other half for office microhysteroscopic intervention with scissors, or coaxial bipolar electrode, or grasping forceps. In order to clarify which cases were operated with scissors, an email was sent to the authors, asking for more specific details about the method used for each case. The problem encountered in this article was solved in the 2nd (Dural, 2015), hence the 2 groups determined concerned patients that were treated with scissors on the one hand and monopolar hook cautery on the other. Pregnancy outcome was calculated within one year post surgery in both articles. The Seyam study has demonstrated an almost double percentage on pregnancy outcome regarding the 1st group (28,5%) versus the second one (15%), while the Dural study has demonstrated almost equal results between the 1st and 2nd group, with an indication of a higher pregnancy rate in the group where scissors were used.

Conclusions

A higher pregnancy rate might occur by the use of scissors, taking also into consideration the disadvantages of electrosurgery, which can be regarded as a risk factor for uterine rupture or weakening of myometrial tissue caused by vascular damage, which could very well be avoided if scissors was selected. However the overall rates of live births occurred after use of both hysteroscopic techniques involved have been found similar in both studies. Certainly, additional studies are needed to evaluate the best method for pregnancy outcome.

**ES26-0090 -
Selected Posters**

Evaluation of the efficacy of office hysteroscopy polypectomy in prevention of early recurrence of endometrial polyp

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Background

The main objective is evaluating the efficacy of the technique in the prevention of early recurrence of endometrial polyp, through transvaginal ultrasound and subsequent hysteroscopic second look in case of positivity. The assessment of AUB resolution and safety of procedure are secondary goals.

Methods

Prospective observational study, with enrollment of 173 consecutive patients, in pre- (45.00%) and post-menopausal (55.00%) age with ultrasound diagnosis of polypoid mass with size greater than 10 mm.

The procedure was carried out with a 4.9 mm Bettocchi® operative hysteroscope (with 2.9 mm optic) and 5 Fr bipolar electrode. Efficacy of polypectomy has been evaluated through interviews and transvaginal ultrasounds at 3-6 months after the procedure. Patients with histologic diagnosis (on the removed polyp) of atypical hyperplasia or endometrial carcinoma were excluded from follow-up as they have been directed to surgical radicalization.

Results

In 37.6% of cases the lesion appeared with AUB, in the remaining 62.4% as focal thickening at transvaginal ultrasound. The mean number of polyps was 1.3 ± 0.62 , with mean size of 19.69 mm of larger diameter, but with a wide range of sizes, from 10 to 125 mm; the predominant localization was the fundus (43.4%).

At final histological examination, 90.8% of lesions have been confirmed as endometrial polyps, 2.9% polyps with simple hyperplasia, 1.16% polyps with complex hyperplasia, 1.16% polyps atypical hyperplasia and 1.7% endometrial carcinoma.

At ultrasound follow-up, done on 86.7% of enrolled patients, we pointed out an early recurrence rate of 2.7% which has been confirmed by following hysteroscopic evaluation in 75% of cases. For what concerns AUB control, 84.2% of symptomatic patients had a symptomatic remission, 10.5% an improvement and 5.3% has not observed an improvement in symptoms. Overall, we registered 4 cases (2.3%) of hard pelvic pain (Visual Analog Score = 7-10) and 2 cases (1.2%) of vagal reaction.

Conclusions

The reduced incidence of ultrasound evidence of early recurrence suggests an optimal efficacy of polyp resection with an office hysteroscopy technique, even if operation has to be confined to endometrium, to avoid algic stimulation caused by myometrium involvement. The technique is also effective in the management of organic causes of AUB; in the remaining cases of preserved symptomatology, it is possible to hypothesize a dysfunctional cause for bleeding. Office hysteroscopic polypectomy, in the context of "see & treat", represents a safe and effective alternative to resectoscopic polypectomy, since a minimally invasive approach allows a fast and well-tolerated diagnostic-therapeutic management.

ES26-0223 - Selected Posters

Update of cochrane review of laparoscopic entry techniques

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Background

There is still no consensus on the optimal technique for initial trocar entry into the peritoneal cavity during laparoscopic procedures. This is an update of the Laparoscopic Entry Techniques Cochrane Review which sets out to evaluate the benefits and risks of different laparoscopic entry techniques in gynaecological and non-gynaecological abdominal and pelvic surgery.

Methods

This updated review has drawn on the search strategy developed by the Cochrane Menstrual Disorders and Subfertility Group. MEDLINE, EMBASE, PsycINFO, CRSO and CGFG were searched from January 2014 to November 2016. Two authors independently selected nine new randomised controlled trials (RCTs) in which laparoscopic entry techniques were compared, to be added to the 46 RCTs included in the previous review. Outcome measures included were: mortality, vascular injury, visceral injury, gas embolism, solid organ injury, failed entry, extra-peritoneal insufflation, trocar site bleeding, trocar site infection, incisional hernia, omentum injury and uterine bleeding. The two authors extracted data from each RCT and assessed risk of bias using the Cochrane Risk of Bias Tool.

Results

This updated review includes a total of 55 RCTs including five multi-arm trials (8502 participants) comparing different laparoscopic entry techniques. Of the nine new RCTs, none showed a statistically significant difference in outcome measures between different laparoscopic entry techniques. There was no evidence of advantage using any single technique for preventing major vascular or visceral complications. The previous review found open-entry techniques are associated with a reduction in failed entry when compared to a closed-entry technique, with no evidence of a difference in the incidence of visceral or vascular injury. An advantage of direct trocar entry over Veress needle entry was noted for failed entry and vascular injury. This update adds no changes to these conclusions.

Conclusions

Overall, there remains insufficient evidence to recommend one laparoscopic entry technique over another. In keeping with previous editions of this review, evidence was generally of very low quality; the main limitations were poor reporting of study design and significance values and small sample sizes. Any findings should be interpreted with caution.

**ES26-0073 -
Selected Posters**

Management of endometrial hyperplasia: a 5-year retrospective review of our clinical practice

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Background

Endometrial Hyperplasia is the precursor of endometrial cancer, the commonest gynaecological malignancy in the Western world. So far, management of endometrial hyperplasia between different clinicians has been variable.

The aim of our study was to ascertain the management of endometrial hyperplasia in our unit. We audited our practice against the 2016 Greentop Guideline No. 67 on 'Management of Endometrial Hyperplasia' by the Royal College of Obstetricians and Gynaecologists (RCOG).

Methods

Retrospective review of electronic notes of all patients diagnosed with endometrial hyperplasia in our unit between 2010 and 2015. We used the 2014 WHO classification for endometrial hyperplasia with and without atypia.

Results

311 patients were included in the study. 58% of patients had endometrial hyperplasia without atypia (EH) and 42% had endometrial hyperplasia with atypia (AH). 84% of patients had the initial endometrial sample obtained by an outpatient procedure.

In the group of patients with EH (N=180), 43% were managed with Levonorgestrel Intra-uterine system (IUS) and 28% with oral progestogens. 19% of cases had follow-up with repeat biopsies as suggested by the aforementioned RCOG guideline.

In the group of patients with AH (N=131), 83% were post-menopausal. 82% were managed by hysterectomy. For women that did not have hysterectomy (18%), 44% of those had follow-up as suggested by the aforementioned RCOG guideline.

A total of 106 patients had hysterectomy (17 patients with EH and 89 with AH) and 63% were performed laparoscopically. 42% of patients with AH had endometrial cancer (EC) diagnosed on the hysterectomy specimen. EC was diagnosed in 1 out of 17 cases of EH managed by hysterectomy.

Conclusions

The findings of our study reflect the previous lack of standardized practice in management of endometrial hyperplasia. We hope that the introduction of the aforementioned RCOG guideline on 'Management of endometrial hyperplasia' will serve as a useful tool for clinicians and help standardize clinical practice, particularly follow-up of cases of endometrial hyperplasia without atypia.

**ES26-0134 -
Selected Posters**

Pregnancy rates after laparoscopic treatment of minimal or mild endometriosis - 4,5 years of experience

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Background

Minimal or mild endometriosis is frequently diagnosed in infertile women. It is usually treated by coagulation or excision of the lesions. Some studies establish that this improves fertility rates. We carried out a retrospective analysis of our patients from January 2012 to July 2016 to determine the frequency of endometriosis in infertile women and whether laparoscopic surgery enhanced fecundity in infertile women with minimal or mild endometriosis.

Methods

We studied 647 infertile women 20 to 41 years of age who underwent laparoscopy due to infertility and determined the percentage of existence of minimal or mild endometriosis among these women (according to rASRM classification of endometriosis). During laparoscopy they underwent bipolar coagulation or excision of visible endometriosis. We observed the percentage of pregnancies during 40 weeks after laparoscopy among these women.

Results

During 4.5 years there were 647 laparoscopies due to infertility. In 298 cases (46.05%) we found minimal or mild endometriosis. 220 of them underwent bipolar coagulation and 78 of them excision of endometrial lesions.

Among the 202 women with minimal or mild endometriosis and passable tubes, who had coagulation of endometrial lesions 69 (34.2%) became pregnant during 40 weeks after operation. Among 75 women with minimal or mild endometriosis and passable tubes, who had excision of endometrial lesions 37 (49.3%) became pregnant without ART during 40 weeks after laparoscopy.

There was no control group and the cases accompanied with other pathologies were not excluded (Myomas 24.3%, paratubal cyst of "Morgagni" 51.2%, endocervical and endometrial Polyps 11,5% and 14,4%, mullerian duct

Conclusions

According to this retrospective analysis presence of endometriosis in infertile women reaches 46.05% (298 women with minimal or mild endometriosis from 647 infertile cases. There was not included cases of moderate or severity endometriosis and endometriomas.

Pregnancy rate in infertile patients with minimal or mild endometriosis after laparoscopic coagulation of endometrial lesions during 9-12 month follow-up was 34.2 % (69 pregnancies from 202 women).

In Excision group Pregnancy rates were significantly Higher – 49.3% (37 pregnancies from 75 women).

**ES26-0059 -
Selected Posters**

The study of surgery, prognosis, postoperative fertility, quality of life of radical trachelectomy

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Background

The study is to compare the laparoscopic radical trachelectomy with robotic-assisted laparoscopic radical trachelectomy and also radical trachelectomy with radical hysterectomy in order to analyze the differences of their surgery, prognosis, and quality of life.

Methods

This study includes patients who underwent radical trachelectomy and then match them with patients accepting radical hysterectomy of the same age, clinical stages, pathological type with the ratio of 1:4. Their clinical and follow-up data were collected.

Results

The mean operation time of laparoscopic radical trachelectomy was 288.18 ± 84.54 min. The mean operative time of robotic-assisted laparoscopic radical trachelectomy was 421.17 ± 55.70 min. The difference was of statistical significance ($P = 0.002 < 0.05$). There was no significant difference between the two groups in estimated blood loss, Hb change, parametrial length, hospital stay, fever time, drainage time and indwelling time of catheter. The mean follow-up time of the laparoscopic radical trachelectomy was 35.80 ± 15.40 months. There were 2 (11.76%) recurrences and 1 (5.88%) death. The mean follow-up time of robotic-assisted laparoscopic radical trachelectomy was 15.40 ± 3.85 months. There were 0 case of recurrence or death. The relapse rate and mortality rate between the two groups were of no significant difference. The recurrence rate was significantly higher in the group of patients with tumor size over 2cm. There was no statistically significant difference in the scores of quality of life between the two groups. There was no live birth in the two groups. In the laparoscopic surgery group and the robotic surgery group, the operative time of radical trachelectomy was significantly longer than the radical hysterectomy. The length of the vaginal cuff in the laparoscopic radical trachelectomy was shorter than the laparoscopic radical hysterectomy. There was no significant difference between radical trachelectomy and radical hysterectomy in estimated blood loss, Hb change, parametrial length, hospital stay, fever time, drainage time and indwelling time of catheter. The recurrence rate of the laparoscopic radical trachelectomy in the tumor with size over 2cm was higher than the laparoscopic radical hysterectomy. There was no statistically significant difference in the scores of quality of life between radical trachelectomy and radical hysterectomy.

Conclusions

Compared with radical hysterectomy, radical trachelectomy does not bring more morbidity to patients. There was no significant difference between laparoscopic radical trachelectomy and robotic-assisted laparoscopic radical trachelectomy in morbidity rate. The risk of recurrence is higher in patients with tumor size larger than 2cm who choose to receive laparoscopic radical trachelectomy. The postoperative fertility of radical trachelectomy is poor.

**ES26-0220 -
Selected Posters**

Review of one-year experience of 175 minitouch endometrial ablation cases

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Background

The objective of this abstract is the retrospective review of 175 Minitouch Endometrial Ablation procedures performed by a single physician at three different private hospitals in the United Kingdom.

Methods

Between December 2015 and December 2016, 175 Minitouch procedures were performed under general anaesthesia. Transvaginal ultrasound assessment was done to assess the cavities prior to ablation as per our standard protocols. All patients were subsequently transferred to a recovery area before getting discharged. 120 patients have been followed up 4 months post-procedure to assess their outcomes.

Results

No adverse events have been observed in 175 patients treated till date. Transition from older techniques to the Minitouch procedure was uneventful as no significant learning curve was required. Because of the speed and simplicity of the Minitouch procedure, we are able to perform more treatments per list. The anaesthetists have reported needing less analgesia and anaesthesia, as well as faster patient recovery.

A review of the first 120 Minitouch procedures revealed 85% success, as defined by successful discharge of the patient without requiring further medical or surgical treatment. Amenorrhea/spotting was reported by 45% of these patients.

Conclusions

We report extreme satisfaction with our introduction of Minitouch Endometrial Ablation as a new standard of care. It has proved noticeable improvement in our ablation service from safety and efficacy perspectives. The ability to perform more procedures per session, lowered use of analgesics/anaesthetics, and quicker recovery are important additional benefits in our private hospital setting.

Do barb configurations of the barbed sutures affect adhesion formation and histological features differently? a randomized controlled study in an animal model

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Background

The purpose of this study was to determine whether surface texture differences between barbed sutures produced differences in terms of intraperitoneal adhesion and histological changes. For this, we compared three different sutures (two polyester 3-0 barbed sutures (BS) and one 3-0 smooth suture(SS))

Methods

9 experimental animals were used for each suture. Braided polyglactin 910 was used as a SS. In group 1 BS has 8 relatively wide base and single-angle geometry barbs per centimeter. These barbs are placed spirally around the rope and complete one full turn in 5.08 mm. In group 2 BS has 20 short, rigid and dual-angle geometry barbs per centimeter. These barbs are placed symmetrically around the rope and complete one full turn in 1,52 mm. A 1,5 cm incision was made on the right uterine horn with no:15 scalpel. 3 times unlocked continuous knot was applied to the uterine horn with each suture. After 35 days, second-look laparotomy was made to compare intraperitoneal and surgical field macroscopic adhesions by using Garrard Adhesion Scala in three animal groups. Tissue blocks were prepared for staining with hematoxyline-eosine for inflammatuar cells and Masson's trichrome stains for collajen fibers.

Results

Mean adhesion scores, SD and min-max values for each sutures were; SS: 3 ± 0.81 (2-4), group 1 BS: 2.8 ± 0.89 (2-4), group 2 BS: 2.5 ± 0.97 (1-4), respectively. These values were not significant for each suture groups (χ^2 : 1.136, $p= .56$). There was no significant difference between the three sutures in terms of invasion of polymorphonuclear leukocyte in the incision line (χ^2 : 3.92, $p= .14$). Macrophage/histocyte invasion was significant between the three suture groups (χ^2 : 16.26, $p= .000$). [In SS group and group 1 BS; (2.33 ± 0.51 vs 1.57 ± 0.53 ; $p= .000$, respectively) and SS group and group 2 BS; (2.33 ± 0.51 vs 1.81 ± 0.61 ; $p= .019$, respectively)]. There was no significant difference between the group 1 BS and group 2 BS (1.57 ± 0.53 vs 1.81 ± 0.61 ; $p= .58$; respectively). There was a significant difference between the three sutures in terms of collagen deposits (χ^2 : 6.76, $p= .034$). [In SS group and group 1 BS; (2.11 ± 0.1 vs 1.9 ± 0.3 ; $p= .038$, respectively) and SS group and group 2 BS; (2.11 ± 0.1 vs 1.78 ± 0.61 ; $p= .016$, respectively)]. The relationship between group 1 BS and group 2 BS was not statistically significant (1.9 ± 0.3 vs 1.78 ± 0.61 ; $p= .68$, respectively).

Conclusions

Scar occurs as a result of the injury. The presence and amount of scar tissue (the closest to normal wound healing) is important for wound tension and strength. This is directly propotional to the amount of produced collagen during wound healing. In our study, there was no significant difference between the different barb configured sutures in terms of the amount of the collagen. In addition, intraperitoneal adhesion was not significant between barbed sutures and smooth sutures.

**ES26-0177 -
Selected Posters**

Prolapse recur rate of laparoscopic hysterectomy for benign indications: a retrospective cohort study using health insurance claim

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Background

The aim of this study was to estimate the probability of pelvic organ prolapse repair procedures following after laparoscopic hysterectomy

Methods

This study was a retrospective cohort study using 2004–2014 health insurance claims from an insurance database in the United State. The study cohort consisted of women aged 18–64 who received laparoscopic hysterectomy. Women were included if they had continuous insurance enrollment 12 months before and 3 months after the hysterectomies. Women were excluded if they had prolapse procedure or diagnosis in the 12 months prior to hysterectomy, any concomitant prolapse procedures or diagnoses as well as prolapse procedures or diagnoses in the immediate 3 months following hysterectomy and those with cervical or uterine cancer diagnose. Patients demographics and the length of hospital stay for hysterectomy were obtained from the enrollment member file. Study outcome was the time to prolapse surgery and percentage of patients who need to undergo prolapse repair surgery after hysterectomy. Patients without prolapse surgery were censored at disenrollment, 60 months after hysterectomy, or at the end of study (12/31/2014), whichever was earliest. The Kaplan-Meir method was used to estimate the percentage of subjects who received prolapse repair following laparoscopic hysterectomy.

Results

Twenty-two thousand six hundred and fifty-eight (51%) women aged between 18-44 years old and 21770 (49%) women aged between 45-64 years old who underwent laparoscopic hysterectomy with at least 20.5 months of follow-up after surgery were included in the study. The mean age was 44 years. At year 5 post hysterectomy, 0.68% of these women received pelvic organ prolapse repair. We observed an increase in the likelihood of having a prolapse surgery in older women. However, this increase was not significant. The year that the hysterectomy was performed was not associated with the likelihood of having a prolapse surgery.

Conclusions

After the laparoscopic hysterectomy, the risk of recurrent vaginal prolapse was 0.68% based on a repeat surgery need which was obtained from the enrollment member file. Likelihood of having a prolapse surgery in older women was increased in our observation but this increase was not statistically significant.

Rectovaginal endometriosis - three options of surgical treatment

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Background

Rectovaginal endometriosis is a severe entity, which causes impaired life quality among young women. Management of the disease usually requires resection of nodules, which may be performed by aggressive bowel resections or more conservative shaving technique. We retrospectively analysed medical records of patients who were operated for rectovaginal endometriosis.

Methods

Retrospective analysis was performed among patients who were operated in our ward in years 2003-2014. We analysed such data as: mean operating time, estimated blood loss, length of the hospital stay, rate of complications (i.e. unexpected bowel wall perforation, postoperative bleeding, reoperation rate), the necessity of bowel wall suturing.

Results

Retrospective analysis revealed 160 patients (158 patients operated with the use of shaving technique, only 2 patients underwent partial resection of bowel wall) . The majority of patients were operated laparoscopically – 120 patients (75%). There were 17 patients (10.6%) who underwent removal of the endometrial lesions vaginally and 23 patients (14.4%) with the use of combined approach. There were no significant differences between patients in terms of blood loss or length of the hospital stay. The longest operating time was observed in cases of vagino-laparoscopic operations (95±26,8 min). Vaginal approach was characterized by the shortest operating time (65±28,4 min). The rate of perioperative complications was low in the group of patients who underwent laparoscopic or combined operations (2.5% and 4.3%, respectively). The necessity of bowel wall suturing occurred in 15 cases. This procedure was performed in order to strengthen the bowel wall after performing shaving technique (8 cases) or due to the bowel resection during surgery (2 cases). Unexpected bowel perforation occurred only in 5 cases. It was noticed intraoperatively in 2 patients who underwent laparoscopic surgery and in 2 patients during vaginal operation. A bowel perforation that occurred in postoperative period concerned a patient after extensive laparoscopic nodule shaving.

Conclusions

Vaginal, laparoscopic and combined vagino-laparoscopic operations can be safely performed in cases of deep rectovaginal endometriosis. The use of shaving technique may be a safe way of conservative treatment in case of rectovaginal endometriosis.

Gynecologic ultrasound in the evaluation of deep endometriosis

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Background

Deep endometriosis is characterized by the presence of ectopic endometrial tissue, fibrosis and muscular hyperplasia which penetrates the peritoneum and/or the organs' muscular layer for more than 5mm. It affects 15-30% of women with endometriosis. Pelvic imaging contributes to an accurate diagnosis and helps to define the best therapeutic approach.

Methods

We conducted a PubMed search using the following search terms: '[(Ultrasound Techniques AND (Deep Endometriosis OR Infiltrating Endometriosis) AND (Diagnosis OR Evaluation)]', and a total of 55 articles were selected after analysis of titles and abstracts complemented by manual search of references.

Results

Transvaginal ultrasound (TVS) is considered the first-line imaging technique for the diagnosis of deep infiltrative endometriosis (DIE) with good accuracy and capacity to evaluate all possible locations of DIE. It's accuracy is affected by operator expertise, location and number of lesions and existence of anatomical distortions. Dimensions of the lesions of anterior compartment influence diagnostic accuracy. In the posterior compartment, difficulty in evaluating cranial portion of the sigmoid colon and low precision in the diagnosis of mucosal / submucosal layer infiltration are its main limitations. To improve its performance new techniques, "modified" ultrasound, were proposed. Association of TVS with 'sliding sign' increases accuracy of Pouch of Douglas (PoD) obliteration prediction. Gel sonovaginography (SVGG) sensitivity for the diagnosis of endometriosis of the vagina and recto-vaginal septum seems limited but this technique has a high specificity for all forms of DIE. SVGG performs better and is easier to execute than saline sonovaginography. "Tenderness-guided" TVS seems to better evaluate involvement of the vagina; Studies show that TVS with bowel preparation has a greater capacity to evaluate the rectal and retrocervical lesions namely, number of lesions, degree of infiltration of intestinal wall, and is useful to determine distance of the lesion to the anal margin. Rectal water contrast TVS seems to be more accurate for the diagnosis of rectal involvement, but with worse specificity for the evaluation of other sites. Transrectal ultrasound doesn't show greater accuracy than TVS. Both these techniques may be of interest if there is a strong suspicion of intestinal involvement not confirmed by other techniques. Tri-dimensional TVS, seems to increase diagnostic accuracy for posterior compartment evaluation, but costs may be a limitation.

Conclusions

There is no consensus as to the best ultrasound technique in the evaluation of deep endometriosis. Data from literature are very variable and some conclusions cannot be generalized to the general population. Conventional transvaginal ultrasound, performed by an experienced operator, should continue to be considered the first-line approach. A second-line approach with modified ultrasound techniques should be chosen for the locations that cannot be visualized by conventional ultrasound but more studies are needed to determine their role for the diagnosis of deep endometriosis.

**ES26-0210 -
Selected Posters**

Vaginal repair of cesarean scar pregnancy type II

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Background

To describe our method to treat a scar pregnancy type II and to correct the cesarean section scar defect

Methods

A 23 year-old woman pregnant at 8th weeks, with a past history of one previous cesarean section, referred vaginal bleeding and lower abdominal pain. A diagnosis of cesarean scar pregnancy type II (CSPII) was made by ultrasound examination . The management was systemic methotrexate administration and subsequent uterine artery embolization. The patient was followed-up by monitoring the beta human chorionic gonadotropin level until it reached negative levels. Transvaginal ultrasound showed persistent chorionic residuals located inside isthmic defect. We performed an hysteroscopic removal of the residuals with Bettocchi Hysteroscope and vaginal repair of isthmic defect by one layer suture after dissection of the vesico-uterine peritoneum and removing of margins of isthmocele.

Results

Operation was performed successfully without complication. Intraoperative blood loss was insignificant. The patient was discharged on day 1 after surgery. No immediate complications were noticed. ultrasound and hysteroscopy control demonstrate complete recovery

Conclusions

Cesarean scar pregnancy type II is a rare type of ectopic pregnancy that grow inside the niche of isthmocele. Vaginal approach is feasible in CSP II allowing to remove chorionic residuals and lead to the correction of isthmus cesarean scar defect. This approach is feasible and minimally invasive, allowing shorter operation time and shorter hospitalization

**ES26-0037 -
Selected Posters**

Cost analysis of a new treatment outpatient hysteroscopy service; make your managers happy

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Background

Advances in outpatient hysteroscopy and the development of hysteroscopic morcellators allow treatment of intrauterine lesions such as polyps and small submucosal fibroids to be performed safely in the outpatients under local anaesthetic, as opposed to theatre under general anaesthesia.

This approach has clear benefits for both the patients and hospitals such as avoiding general anaesthesia, multiple hospital visits and waiting time for treatment; hospitals can free precious theatre space to facilitate pressures in the service with waiting times.

Managers and Trusts are often reluctant to commit to the necessary capital investment to develop these clinics when there is no clear cost savings and income gain demonstrated.

The aim of this study was to perform a cost analysis of all patients that underwent outpatient hysteroscopic morcellation of polyp or fibroid during the first year of the treatment outpatient hysteroscopy service in our department and compare it to the cost of the same procedure performed in theatres with bipolar resectoscope.

Methods

Patients that underwent hysteroscopic morcellation of intrauterine lesions in a dedicated outpatient clinic from April 2016 until March 2017 were identified. All lesions were treated with the Myosure device (Hologic). The cost of the outpatient clinic, nursing staff, preassessment clinic, day surgery unit, theatre, anaesthetist and equipment was calculated. The income generated was calculated with the 2016/2017 UK tariff for hysteroscopic excision of intrauterine lesion. Data was collected using hospital records and the service line reporting and costing of the Trust.

Results

84 patients were referred and 78 underwent treatment in the outpatients during the study period. 4 patients were unable to tolerate cervical dilatation and 2 the procedure due to excessive pain. 2 had incomplete resection of large submucosal fibroids. All 8 patients were rescheduled to have another procedure under general anaesthetic. The overall cost of the 84 patients in the outpatients was £32490. The equivalent cost if all 84 patients were operated in theatre would have been £81648. The income generated was £69576 and £74928 respectively.

Conclusions

Within the first year, our new service has generated income of £37086 whereas the traditional treatment modality would have resulted in £6720 deficit. Furthermore, 76 theatre slots were released contributing positively to the on-going pressures for theatre capacity in our department.

This cost analysis demonstrates that investing in modern equipment and changing current practice to allow more treatments in the outpatients is the way forward to overcome the constant pressures that healthcare systems are facing in an era of constant financial restraint. Furthermore, it contributes to a better patient experience and satisfaction.

**ES26-0317 -
Selected Posters**

An objective assessment of quality of life and pain scores in patients with deep infiltrating endometriosis undergoing operative laparoscopy

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Background

A Cochrane review concluded that there were significant benefits of operative laparoscopy of endometriosis at 6 and 12 months after surgery when compared with diagnostic laparoscopy alone and medical treatment. Surgical procedures include excision of peritoneal implants, ablation, drainage or excision of endometriomas, resection of rectovaginal nodules and adhesiolysis. Treating colorectal endometriosis is challenging. Medical management of DIE is not curative and it is widely agreed that symptomatic patients with DIE with colorectal extensions require surgical treatment.

Methods

83 patients who underwent surgery for deep infiltrating endometriosis and their symptoms, overall pain and quality of life scores were looked at over a 3 year period retrospectively from 2013 to 2016. Data was collected at clinic appointment pre and post-surgery and entered in the database. Surgical procedures included excision of pelvic endometriosis, excision of endometriomas, resection of rectovaginal nodules, bladder, ureteric nodule, bowel surgery and adhesiolysis.

Results

The patients' age varied from 20 years to 54 years and the average age was 37.6. The average BMI 29.4 (18-40).

Scores	0 months Mean/ (Std dev)	6 months	12 months
Premenstrual pain	6.72(3.04)	2.42(3.35)	2.12(2.79)
Menstrual pain	7.67 (3.067)	2.84(3.774)	2.95(3.817)
Noncyclical pelvic pain	5.99 (2.470)	2.27 (2.546)	2.12 (2.549)
Deep dyspareunia	5.37(3.190)	1.32(2.170)	1.64(2.555)
Cyclical dychezia	4.58(3.856)	1.87(3.322)	1.61(2.999)
Bladder pain	1.94(2.872)	1.76(2.229)	0.85(1.476)
Quality of life scores (0-100)	48(23.98)	75.28(20.28)	70.23(24.53)
Overall Pain and discomfort scores(1-3)	2.37(0.702)	1.36(0.723)	1.4(0.847)

68 patients underwent laparoscopic excision of deep infiltrating endometriosis ,31 patients underwent total laparoscopic hysterectomy with bilateral salpingo-oophorectomy , 49 patients underwent excision of rectovaginal nodule , 6 patients had excision of bladder nodule and 2 patients had excision of ureteric nodule. The overall hospital stay ranged from 1-7 days and average stay was 2.71 days . There were 9 complications (11.25%) which was comparable to published data . 2 patients had UTI, 1 patient had a pelvic infection , 1 patient there was a bladder injury , 1 patient developed incisional hernia and 2 patients unfortunately had pelvic haematomas which was managed conservatively , 1 patient had superficial skin infection and 1 patient had clot in renal pelvis where the stent was inserted. Only in one patient laparoscopy was converted to laparotomy .

Conclusions

Improvement in QOL scores , symptom control and complication rate was comparable to published data and conversion to laparotomy was uncommon.

Laparoscopic surgery for Cesarean scar pregnancies: a report of three cases

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Background

A cesarean scar pregnancy (CSP) is a serious complication for patients who have had cesarean deliveries. Medical treatment options for CSP include systemic methotrexate (MTX), local injection of MTX or potassium chloride, dilation and curettage (D&C) following uterine artery embolization (UAE), hysteroscopic resection of CSP and laparoscopic excision and repair of the defect. However, there are no specific guidelines available for CSP management. To evaluate the laparoscopic management of cesarean scar pregnancies diagnosed in the first trimester from our experienced cases

Methods

3 women underwent laparoscopic treatment and 4 women underwent transvaginal treatment during 6-9 weeks. Herein we report three cases with past history of previous two cesarean sections who underwent laparoscopic treatment for CSP at 6-9 gestational weeks. In all cases, transvaginal ultrasonography and magnetic resonance imaging showed an empty uterine cavity and cervical canal, a gestational sac embedded in the anterior uterine isthmus, and an absent myometrium between the bladder and sac. We considered the thickness of myometrial wall, the defect of myometrial wall, the size of gestational sac (maximum diameter), serum human chorionic gonadotropin (hCG) levels, surgical bleeding and outcome after surgical treatment. The thickness of myometrial wall was the length between the sac and the bladder by ultrasound or magnetic resonance imaging. The defect of myometrial wall was diagnosed by magnetic resonance imaging.

Results

A gestational sac ranged from 17 to 66 mm. Serum human chorionic gonadotropin (hCG) levels ranged from 90 to 200000 IU/l. In one case, a live fetus within the gestational sac was confirmed on a transvaginal ultrasound examination. In all cases, the myometrial thickness of the anterior wall was within 3mm and there was defect of myometrial wall. All cases successfully underwent laparoscopic excision and repair of the defect with intraoperative blood loss of <100 ml (operation time, 85 to 155 min). They had no blood transfusion or additional treatment. Postoperative course was also uneventful, although further pregnancy after this treatment is not achieved at the time of this study.

Conclusions

In our hospital, three cases had successful laparoscopic management for CSP. Although we recommend laparoscopic excision and repair of the defect for CSP, larger studies will be warranted to assess the efficacy and safety of this treatment option. In particular, potential benefits of excision and repair of scar defect on further pregnancy outcomes will need to be assessed.

**ES26-0218 -
Selected Posters**

A novel endoscopic surgery method: transurethral surgery - natural orifice transluminal endoscopic surgery (TUS-NOTES) for treatment of vesicovaginal fistula

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Background

Vesicovaginal fistula (VVF) formation represents a condition with devastating consequences for the patient and continues to pose a significant challenge to the surgeon. Quick and accurate diagnosis, followed by timely repair is essential to the successful management of these cases. To minimize the morbidity of classical fistula repair, we hereby present a new minimally invasive surgery technique to perform a fistulae repair of inside closing without transcutaneous, laparoscopic or vaginal incision: transurethral surgery- natural orifice transluminal endoscopic surgery (TUS-NOTES) by using a new small fine needle holder and knot pusher.

Methods

Setting: A rigid cystoscope with 30 degree optics is inserted into the patients bladder with CO(2) insufflation. After inspecting the bladder and finding the fistulae orifices the fistulae area is manipulated with an endoscopic hooklet. The bladder segment is excised with electrocautery. First the monocryl 4-0 fibre is put into the needle holder. To fit into the needle is bended. The needle is put loose next to the cystoskope put into the bladder and after touching the wall the fibre is fixed at the end of the needle holder with a clamp. Now by a rotation the whole is at both sides stiched. With a grasp –put through the working channel- the needle is grasped and by loosing the clamp everything can be pulled out. By tying an extracorporeal knot and putting an knot pusher over the fibre, the knot is fixed. This procedure is repeated till the whole is closed. The fibres are cutted.

Equipment needed: Cystoscope with 30 degree optics, CO (2) insufflation, 1mm diameter Needle holder (MRSD-Ney), Monocryl 4-0, 0.5 mm diameter Knot pusher, Cystoscopic grasp, Cystoscopic scissor

Results

The aim of the poster is to present the TUS-NOTES technique and teach the viewer how to apply this novel intervention to close the fistulae inside of bladder at 6 cases. The mean operative time was 55 min (35min-110min), whereas the blood loss was less 10ml. The patients were discharged 3 days after surgery, and the catheter were removed 10 days after surgery.

Conclusions

To reduce morbidity and prolonged recovery of excision of the VVF - TUS-NOTES technique is efficacious and the preferred method of intervention.

ES26-0280 - Selected Posters

From laparotomy to laparoscopy for all: current trends in the surgical management of ectopic pregnancies: prospective analysis of over 1000 cases

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Background

To analyse the changing trends in the demographics and operative management of ectopic pregnancies (EP) over a 14 year period.

Methods

A prospective case series of all women with EP managed surgically in a busy early pregnancy unit in central London between 2003 and 2016.

Results

Over the 14-year period 1004 surgical procedures for EP were undertaken. The average age was 30.8 and the average gestation at presentation was 6.4 weeks and this has remained relatively stable over the 14-years. Pain (86.2%) and bleeding (76.4%) were the most common clinical features with syncope (9.9%) and shoulder tip pain (8.9%) presenting less commonly.

33.8% of all patients had no clear risk factors for an EP. Of those who had identifiable risk factors, the most common were a previous TOP (17.3%) and previous pelvic surgery (16.5%) followed by smoking (14.1%) and a previous ectopic pregnancy (9.9%).

93.9% were tubal EP, more commonly affecting the right side (56%). 3.4% were cornual EP and 2.2% were ovarian EP. Less common were caesarean section scar (0.2%), heterotopic (0.1%), peritoneal (0.1%) and rudimentary horn (0.1%) EP.

In 2003 17.4% of all cases were performed via laparotomy. This was significantly reduced over the 14-year period and in 2016 all cases were performed laparoscopically. A total of 6 cases since 2010 were performed via laparotomy; all were undertaken due to significant haemoperitoneum/patient instability. 50% of these cases were cornual EP.

Of the 1004 patients who underwent surgery 72.1% presented with a haemoperitoneum of <499mls, 11.8% were between 500-999mls, 7.3% were between 1000-1999mls and a 8.8% patients presented with a haemoperitoneum > 2000mls.

Of those who had a tubal ectopic, 87% underwent a salpingectomy with 13% undergoing a salpingotomy. A total of 85 patients (8.5%) had confirmed PID with the presence of peri-hepatic adhesions. The number of cases doubled from 29 in 2003 -2009 to 56 in 2010-2016. The average duration of inpatient stay was 1.52 and this almost halved from 2.2 days to 1.2 days over the 13-year period.

Conclusions

EP remains a significant cause of death as highlighted in the most recent Confidential Enquiry into Maternal Deaths (2016). As highlighted by our study up to one third of patients will have no identifiable risk factors for an EP, however complacency should be avoided and a high index of suspicion is necessary to reduce morbidity and mortality. Of those identifiable risk factors PID is an ever-increasing problem and as highlighted by our study the rates of PID amongst those presenting with an EP have almost doubled. Dedicated training and a focus on laparoscopic surgery can improve laparoscopic surgery rates and improve outcomes for patients with a shorter hospital stay even in cases of significant haemoperitoneum and complex non-tubal EP.

**ES26-0174 -
Selected Posters**

Accuracy comparison between preoperative imaging study and sentinel lymph node biopsy during robotic or laparoscopic surgery in detection of Lymph Node Metastasis in uterine cancer

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Background

To analyze the accuracy of sentinel lymph node mapping (SLNM) with indocyanine green (ICG) and fluorescent imaging compare to preoperative imaging studies like magnetic resonance imaging (MRI) and positron emission tomography /computed tomography (PET/CT) in early cervical and endometrial cancer.

Methods

We reviewed 203 patients with early stage cervical and endometrial cancer who underwent laparoscopic or robotic surgery with SLNM between August 1, 2015 and April 30, 2017. All patients underwent preoperative MRI and PET/CT and lymphadenectomy was performed during surgery. The diagnostic accuracy of MRI, PET/CT, and SLNM was evaluated using McNemar test and logistic regression using generalized estimating equation.

Results

Deposition of ICG into at least one lymph node was observed in 100% of studied cases. Sentinel node detection and frozen biopsy were performed on all 203 subjects. On permanent pathology, 16% (33/203) of studied women had positive lymph node metastasis and 94% (31/33) of them had positive metastasis in SLN frozen biopsy. Most common detected lymph metastasis locations in SLNB were obturator area. There was no significant difference in sensitivity (45.5% vs. 45.5%, $p>0.99$), specificity (91.0% vs. 92.8%, $p>0.99$), accuracy (83.5% vs. 85.0%, $p>0.99$), positive predictive value (PPV) (50.0% vs. 55.6%, $p>0.99$), and negative predictive value (NPV) (89.4% vs. 89.6%, $p>0.99$) between MRI and PET/CT. However, the sensitivity (93.9% vs. 45.5%, $p<0.001$), specificity (99.4% vs. 91.0%, $p<0.001$), accuracy (98.5% vs. 83.5%, $p<0.001$), PPV (96.9% vs. 50.0%, $p<0.001$), and NPV (98.8% vs. 89.4%, $p<0.001$) of SLNM in the detection of lymph node metastasis were significantly higher than MRI (Table 1). The sensitivity (93.9% vs. 45.5%, $p<0.001$), specificity (99.4% vs. 92.8%, $p=0.005$), accuracy (98.5% vs. 85%, $p<0.001$), PPV (96.9% vs. 55.6%, $p<0.001$), and NPV (98.8% vs. 89.6%, $p<0.001$) of SLNM in the detection of lymph node metastasis were significantly higher than PET-CT (Table 1).

Conclusions

Individualized treatment to reduce therapy-associated morbidity is an important consideration in the surgical treatment. SLNM using ICG and fluorescent imaging is the compatible and best way to evaluate lymph node status in early stage cervical and endometrial cancer.

**ES26-0184 -
Selected Posters**

**Comparison of minimally invasive surgery and open surgery for patients with
borderline ovarian tumors**

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Background

The surgical method for borderline ovarian tumors(BOTs) are controversial issue. This study aims to compare the surgical and oncological outcomes between laparoscopic surgery and open surgery in the treatment of patients with borderline ovarian tumors.

Methods

This is a retrospective study conducted at Asan Medical Center, Seoul, Korea between 1990 and 2009 among patients diagnosed with borderline tumors histopathologically. The study was performed on 415 patients who underwent laparoscopic surgery (n = 89) or open surgery (n = 327) due to borderline ovarian tumors.

Results

The tumor marker (initial CA-125) and tumor size were significantly lower in the laparoscopy groups compared with the laparotomy groups (all $p < 0.05$). And the operative time, operative blood loss and hospitalization period were also significantly reduced in the laparoscopy groups compared with the laparotomy groups (all $p < 0.05$). However, there were no significant difference between the laparoscopy groups and laparotomy groups regarding age, BMI and histologic type. The median follow-up period was 64.4 months, and there was significant difference between the laparoscopy groups and laparotomy groups regarding follow-up period. But, there was no significant difference in recurrence-free survival and overall survival rates between the two groups.

Conclusions

Laparoscopic surgery is better than open surgery because of the good postoperative condition of laparoscopic surgery, if the tumor size or the condition of the patient is acceptable for laparoscopic surgery in borderline ovarian tumor patients.

**ES26-0302 -
Selected Posters**

Esr1, fshr, and gstm1, polymorphisms in infertile greek women with advanced endometriosis – a pilot study

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Background

To establish a possible association between a particular genetic profile of women with endometriosis and their clinical characteristics, and also to provide insights on the molecular and cellular mechanisms associated with this disease.

Methods

Twenty consecutive infertile greek women who were operated laparoscopically in our gynecological endoscopy unit for advanced endometriosis and 48 parous women as controls with a history of at least one successful pregnancy, no history of spontaneous abortion, and no known history of endometriosis. Genomic dna was isolated using a genomic dna kit. DNA samples were subjected to pcr amplification to determine the presence of glutathione s-transferase mu-1 (*gstm1*) polymorphisms using specific for the *gstm1* gene primers and real-time pcr for the detection of estrogen receptor 1 (*esr1*) and follicle stimulating hormone receptor (*fshr*) polymorphisms.

Results

In blood samples, the presence of the pvull polymorphism in both alleles was found in only 6.7% of patients with endometriosis, compared with 35.4% of controls ($p=0.033$). The wild type (wt) form of the FSHR was found less commonly in patients with endometriosis compared with controls (13.3 % vs. 37.5%, $p=0.081$). Similarly, detection of this polymorphism in both alleles of the *fshr* was significantly more common in endometriosis (40% vs. 18.8% $p=0.09$). The *gstm1* gene polymorphism was detected in the majority of controls (83.3%). It was interesting to note that certain combinations of haplotypes (*esr1/fshr/gstm1*) were absent from the blood samples of patients with endometriosis.

Conclusions

An establishment of a genetic profile associated with endometriosis may be possible if a larger number of samples is studied, indicating possible mechanisms associated with the pathophysiology of the disease.

ES26-0377 - Selected Posters

Mobile Cystoscopy

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Background

Cystoscopy is the procedure utilized to visualize the lower urinary tract. During the past 2 decades gynecologists have become even more involved in evaluating urgency frequency syndrome and performing pelvic floor reconstruction procedures. Therefore it is recommended cystourethroscopy to be performed for diagnostic and a few operative indications by gynecologists- most importantly for ruling out cystotomy and intravesical or intraurethral suture or mesh placement, and for verifying ureteral patency. Our department has developed a portable cystoscopy setup with the utilization of mobile smartphone iPhone 6s, a specially designed adaptor and a portable light source. The mobile phone is transformed this way into a completely mobile cystoscopic viewing system and the whole setup portable.

Methods

In our study we used 2 different cystoscopic setups. A standard one using a rigid 30 degrees cystoscope coupled with an endoscopic camera, a video system/receiver monitor and a standard high powered xenon light source. The alternate was the same cystoscope coupled via a commercially available adaptor with an iPhone 6s in camera mode. A portable light source has been used to make the system transportable. Our study included 20 patients with benign or malignant gynecologic entities having the indication for diagnostic cystoscopy or pigtail catheter removal. Each one of the patients underwent cystoscopy with both setups and the images were collected and reviewed from 2 independent experts on the field.

Results

When queried about the efficacy of the two setups concerning the performance of cystoscopy, the experts noted that both devices were convenient. The image reviews of the experts revealed no difference in the diagnostic adequacy of the two setups. The operators also stated that they faced no problems on pigtail catheter removal but as for catheter placement there were some difficulties that have to be overcome on how to keep the whole system sterilized. All 40 reviews, regardless of device used for image capture were conclusive for the diagnosis. The cost of the standard setup is 48.000€. On the other hand iPhone 6s costs 699€ and 650€ the adaptor used. Another 250€ is the cost of the portable light source. Finally our new setup has a total cost of 1599€. The total price difference between the two setups is 46.401€.

Conclusions

Urinary tract injury is a major concern for all gynecologists performing pelvic operations. The associated socioeconomic and psychological costs could be reduced if universal cystoscopy could be applied and possible trauma could be identified intraoperatively. The cost of the set up is one of the reasons that cystoscopy is not available in every operating room.

Transvaginal ureteral dissection during high uterosacral ligament suspension procedure may eliminate the need for intraoperative cystoscopy

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Background

As the ureters are at risk during uterosacral ligament suspension, intraoperative cystoscopy is crucial to confirm ureteral patency. When ureteral obstruction is detected, the involved suture must be released. This typically prolongs the surgery and may compromise the surgical success.

Methods

Ureters were identified, dissected and deflected away transvaginally during uterosacral ligament suspension following vaginal hysterectomy or in vault prolapsus patients. Surgical Technique: Peritoneum just under the uterine artery stump is incised using Metzenbaum scissors. With the index finger of the surgeon a retroperitoneal tunnel is dissected longitudinally upwards corresponding to the ureteric course as long as the length of dissecting index finger allowed. Then a right angle Heaney-Simon retractor is inserted through the tunnel to enhance the dissection in all directions. A peritoneal tent is formed with the retractor facilitating both the dissection and retroperitoneal exposure. At this step the ureter may be readily visualized. Most of the time it is found at the lateral side on pelvic side wall. But it may also be found over the interior surface of peritoneum. Spongy retroperitoneal tissue along the ureter is gently pushed away using finger or a blunt instrument, so the ureter is visualized and mobilized, sharp dissection maneuvers are used if needed. This visualization and mobilization is continued cranially and caudally upto the level of crossing point with the uterine vessels. If the ureter is not seen readily it may be located in more anterior position or deeper in the retroperitoneum. Firstly dissection is carried anteriorly, then deeper dissection is performed at the pelvic side wall providing ureteral exposure. After exposure, ureter is mobilized anteriorly and superiorly using sharp and blunt dissection maneuvers. After this step, focus is oriented towards the uterosacral ligament. Peritoneal tent is widened posteriorly with blunt dissection exposing the pararectal space and firm texture of uterosacral ligament is palpated and it is visualized. Then peritoneum is incised cranially if desired. Then suture placement is performed. Sutures can be passed from the tissue with optimum depth and in desired location based on ischial spine according to vaginal length and in desired number. Passing suture bites under direct visualization and strong medial traction of the placed sutures for a trial of kinking essentially precludes the complication.

Results

In 34 patients who underwent high uterosacral ligament suspension, both ureters were dissected transvaginally. Mobilization of the ureters to a more anterior and lateral position helped avoid ureteral injury during placement of uterosacral suspension sutures. Mean duration of the bilateral ureteral dissection and the total operation time were 11.6 ± 6.7 minutes and 119.0 ± 15.9 minutes, respectively. All patients had normal renal pelvicalyceal system on ultrasonography postoperatively.

Conclusions

Ureters can be dissected transvaginally prior to placement of uterosacral ligament suspension sutures without increasing morbidity. This may potentially increase safe and accurate suture placement and eliminate need for routine cystoscopy requirement after the procedure.

Laparoscopic radiofrequency ablation (Lap-RFA) of symptomatic fibroids and laparoscopic myomectomy (LM): long-term outcomes from a randomized trial of uterine-sparing techniques

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Background

This abstract compares the subject-reported outcomes at 48 months post laparoscopic radiofrequency ablation (Lap-RFA) and laparoscopic myomectomy (LM) and determines the relationship between the reduction in fibroid size and subject-reported symptom severity at 48 months post Lap-RFA.

Methods

Randomized, prospective, single-center, longitudinal analysis of outcomes at 48 months of follow-up after Lap-RFA and LM. At baseline, 50 premenopausal women ≥ 18 years old with symptomatic fibroids, who desired uterine conservation and reproductive function and who were indicated for surgical intervention for their fibroid symptoms. Subjects were randomized (1:1) intraoperatively to Lap-RFA and LM after laparoscopic (contact) ultrasound mapping of their fibroids. The setting was a university hospital in Germany. Outcomes analyses included Pearson correlation between the change in the sum of the major fibroid diameters from baseline transvaginal ultrasound measurements to 12 months post Lap-RFA and Lap-RFA subject-reported symptom severity at 48 months of follow-up

Results

Twenty-eight subjects (Lap-RFA: n=12; LM: n=16) had 48-month postoperative evaluations based on validated questionnaires. Mean transformed symptom severity scores improved (decreased) for the Lap-RFA subjects by -44.8% from the mean baseline value to 22.6 ± 21.7 [95% CI: 8.8, 36.4]. Over the same period, mean transformed symptom severity scores improved for the LM subjects by -33.3% to 26.2 ± 25.6 [95% CI: 12.5, 39.8]. At 48 months, health-related quality-of-life (HRQL) scores improved (increased) over baseline for Lap-RFA subjects by 12.8% to 86.8 ± 16.9 [95% CI: 76.0, 97.5] and—for LM subjects—by 18.8% to 84.0 ± 24.0 [95% CI: 71.2, 96.8]. Mean EQ-5D scores improved (increased) from baseline for Lap-RFA subjects by 5.1% to 85.5 ± 11.2 [95% CI: 78.4, 92.6] and for LM subjects by 12.7% to 79.4 ± 16.5 [95% CI: 70.7, 88.2]. For Lap-RFA subjects, who had both ultrasound data at baseline and at 12 months follow-up and reported symptom severity data at baseline and 48 months follow-up (n=10), there was a positive correlation between the 12-month change in the sum of total fibroid diameters and 48-month change in symptom severity scores: $r=0.498$ [p=0.14]. Three Lap-RFA subjects conceived 4 times, culminating in 4 full-term deliveries of healthy infants. Five LM subjects conceived 8 times: 3 pregnancies terminated in spontaneous (n=1) or therapeutic (n=2) abortions, 4 pregnancies resulted in full-term deliveries of healthy infants, and 1 delivery is pending. Lap-RFA (91.7%) and LM (100%) subjects were moderately-to-very satisfied with their treatment.

Conclusions

Long-term data suggest clinical equivalence of Lap-RFA and laparoscopic myomectomy as well as a positive correlation between reduction in fibroid size after Lap-RFA and reduction in symptom severity. Lap-RFA may be an off-label option for women with symptomatic fibroids who desire future childbearing.

**ES26-0414 -
Selected Posters**

Implementing an evidence based pathway for day case discharge following laparoscopic hysterectomy at St. Mary's Hospital, London

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Background

In comparison to abdominal surgery, laparoscopic hysterectomy is associated with less postoperative pain, infections and blood loss. Patient quality of life is improved, with accelerated recovery time and better cosmesis. In 2004, it was estimated that laparoscopic hysterectomy costed £401 more than vaginal hysterectomy and £186 more than abdominal hysterectomy. However, operative time and length of inpatient stay has arguably reduced significantly over the last 10 years. A review of the current literature suggests same day discharge following uncomplicated laparoscopic hysterectomy is safe.

Objective: To develop an evidence based pathway to facilitate day case discharge following uncomplicated Laparoscopic Hysterectomy at St. Mary's Hospital in London

Methods

A literature review of the current evidence for expedited discharge following laparoscopic hysterectomy was performed using PubMed. The day case discharge pathway was designed with multidisciplinary input from the surgical, anaesthetic, nursing and pharmacy teams. A detailed patient information leaflet has also been developed, including a 24 hour point of contact. If same day discharge occurs, patients will be contacted by a member of the team the following day. A patient questionnaire will be provided at the 6 week follow up appointment. This will seek to evaluate patient satisfaction and the requirement for any additional postoperative visits to the General Practitioner, Accident and Emergency Department, or other units. The pathway is currently being piloted and prospective data is expected to be presented in due course.

Results

We will present a review of the current literature, demonstrating same day discharge is safe. Most patients who seek medical advice after discharge have minor complications such as wound concerns, urinary tract infection, nausea or a need for additional oral analgesia. In the absence of intraoperative complications or bleeding, the vast majority of complications will be identified at least 2 days after surgery. Therefore, admission overnight is unlikely to increase their recognition.

Conclusions

We have designed and implemented an evidence based pathway to facilitate day-case discharge following uncomplicated laparoscopic hysterectomy. This allows women to be discharged a minimum of 6 hours postoperatively, as long as the surgical and anaesthetic teams are in agreement. Patient preparation prior to surgery is essential and suitability for expedited discharge will be assessed in the gynaecology clinic, pre-assessment clinic and postoperatively. Strict eligibility criteria including medical and postoperative contraindications will be enforced. If same day discharge occurs, patients will be contacted by the team the following day and given an information leaflet including a 24 hour point of contact. Prospective audit of complications, readmission and patient satisfaction will be ongoing and presented in due course.

Ablation surgeons: why biopsies are always mandatory in laparoscopic eradication of endometriosis? Incidental primary peritoneal serous borderline tumor diagnosis during surgery for chronic pelvic pain

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Background

Chronic pelvic pain (CPP) is a frequent complaint in patients of all age. Diagnosis and treatment of the responsible condition can be challenging. Exploratory laparoscopy can help in the process. Several conditions are described and can be treated during laparoscopy (most commonly endometriosis). In our experience, 98% of the patients undergoing exploratory for CPP will have a definite diagnosis and treatment of the pathology significantly alleviates symptoms in 59% of the patients.

Primary peritoneal serous borderline tumor (PPSBT) is a rare entity also known as serous micropapillomatosis of low malignant potential. It consists in a proliferation of epithelial cells and can trigger suspicion for a primary ovarian tumor with peritoneal implants. It is usually discovered while performing exploratory laparoscopy. On the other hand, endometriosis is a common condition in reproductive age women. Macroscopic aspects of the two conditions can be very similar and confusing.

Methods

We report the case of a 26 years old female patient. She complained of dysmenorrhea with no dyschezia. She was referred to our chronic pelvic pain department because of failure of any medical treatment (hormonal or painkillers). Clinical and imaging examinations including several ultrasounds and magnetic resonance imaging were unremarkable. We decided to perform an exploratory laparoscopy in order to look for undiagnosed endometriosis or any other abnormalities linked to chronic pelvic pain (CPP). During the surgery a few endometriosis-like implants were discovered on the vesical peritoneum. Samples were sent for anatomopathological analyses and the other lesions were vaporized by a Co₂ laser. Recovery was uneventful.

Results

Final analyses were consistent with primary peritoneal serous borderline tumor (PPSBT). The patient was then referred to our gynecologist who performed a second laparoscopy. Multiple random biopsies and omentectomy were performed for new histological lecture. Subsequent analysis revealed no other positive PPSBT implants but found endometriosis and endosalpingiosis. No adjuvant treatment was recommended and the patient is being followed-up.

Conclusions

We report here the case of a rare association of PPSBT and endometriosis found during a surgery for CPP. Although PPSBT is a rare entity, it can be associated with more frequent and benign diseases such as endometriosis. Macroscopic aspects cannot distinguish PPSBT from other benign lesion. Our particular case highlights the fact that tissue should be subjected to pathological analyses in all the cases, regardless the technique used in eradicating endometriosis and the typical macroscopic aspect of the lesion.

Comparison of two surgical techniques for the creation of a new vagina in patients with Mayer-Rokitansky-Küster-Hauser Syndrome

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Background

Retrospective comparison of the anatomical and functional outcomes and the complications of two surgical techniques used for creating a new vagina in patients with Mayer-Rokitansky-Küster-Hauser Syndrome (MRKH): vaginoplasty without interposed tissue and the laparoscopic Davydov's procedure.

Methods

Twenty-four women suffering from congenital vaginal agenesis with MRKH syndrome were retrospectively included in the study covering 14 years, between January 2002 and August 2016. Between January 2002 and December 2010, 10 patients were underwent the vaginoplasty without interposed tissue technique. From July 2010 to August 2016, laparoscopic Davydov's procedure was performed on 14 patients. Due to intra-operative technical difficulties, two of them finally underwent classical vaginoplasty.

Results

The patient's mean age was 18.3 years at the diagnosis and 20.5 years at the surgery. The mean length of vagina before the surgery was measured at 1.6 cm. The operating time of a conventional vaginoplasty varied between 25 and 55 minutes, while Davydov's duration fluctuated between 40 and 148 minutes. Hospital stay was 4 to 6 days for a conventional technique, and 2 to 5 days for Davydov's procedure.

The average vaginal length obtained with conventional vaginoplasty at 6 months was 6 cm, and 6.22 cm with the laparoscopic Davydov's procedure.

According to the latest data, first sexual intercourse was performed 2.3 months after the surgery for patients that had undergone the Davydov's procedure while with the classical vaginoplasty, sexual activities started 5.5 months after surgery.

Conclusions

For the two surgical techniques used for creating a new vagina in patients with Mayer-Rokitansky-Küster-Hauser Syndrome: vaginoplasty without interposed tissue and the laparoscopic Davydov's procedure, the anatomical results are excellent. The most frequent complication after vaginoplasty without tissue interposition was dyspareunia. Although the duration of surgery is longer with Davydov's technique, it seems that the post-operative care and hospitalization length are shorter because it is less painful. In addition, the mean vaginal length is a little higher for laparoscopic procedure.

**ES26-0205 -
Selected Posters**

A review of perioperative and postoperative outcomes following the introduction of laparoscopic hysterectomy: a multi centre, three year experience

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Background

The study objective was to evaluate the surgical technique, safety, complication and conversion rates with varied surgical approaches of laparoscopic hysterectomies. These techniques include laparoscopic assisted vaginal hysterectomy (LAVH), laparoscopic supracervical hysterectomy (LSH) and total laparoscopic hysterectomy (TLH).

Methods

This was a retrospective, observational, multi-centre review of all laparoscopic hysterectomies performed between January 2013 and December 2015. The study was based based in three hospitals within Abertawe Bro Morgannwg University Healthboard, South Wales, UK. All patients undergoing laparoscopic hysterectomies for benign or malignant disease performed by a combination of Gynaecology Oncologists and General Obstetrician-Gynaecologists between 2013 and 2015 were included.

Results

Eighty patients underwent laparoscopic hysterectomies between 2013-2015. A total of 13 consultants performed the varied surgical approaches. Of these patients, 66 had TLH, 9 had LAVH and 5 underwent LSH. Six cases were converted to a laparotomy. Intraoperative complications include bowel injury (one), bladder injury (one), uterine perforation (one), unintended salpingo-oophorectomy (one), blood loss of 500mls or more (two). Post operative complications include umbilical wound infection (five), urinary tract infection (five), urinary retention (two), vault haematoma (one), readmission with per vaginal bleeding (three), re-intervention due to umbilical hernia (one). The mean operating time per case was 146.46 minutes. Mean length of post operative hospital stay was 2.5 days (minimum 1, maximum 7 days).

Conclusions

The different Laparoscopic hysterectomies described in this study are safe and have a high success rate with a low complication rate comparable to existing literature. Limitations include restricted theatre sessions within the National Health Service and longer mean operating time per case which may restrict introducing a new surgical approach.

**ES26-0085 -
Selected Posters**

Laparoscopic pectopexy with DynaMesh to treat pelvic organ prolapse: a tertiary centre's experience

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Background

Laparoscopic pectopexy is a novel technique for apical prolapse repair especially in select groups such as patients with obesity, intra-abdominal adhesions or difficult presacral surgical access. This method utilises the iliopectineal ligaments for mesh fixation. It has been reported to be equally effective compared to sacropexy without the disadvantage of causing *de novo* defecation disorders due to the risk of the damage to the hypogastric nerves and narrowing of the pelvic space in sacropexy. In this case series, we present our unit's experience since we started performing this procedure in September 2017. To our knowledge, this is the first case series of laparoscopic pectopexy performed in the UK.

Methods

We included all patients who had laparoscopic pectopexy up to May 2017 in the Gynaecology department of Ninewells Hospital Dundee in this case series. Data was collected retrospectively from electronic records. Patient characteristics such as age, BMI, parity, and previous gynaecological surgeries were noted. Peri-operative morbidity such as operative complications, blood loss, need for blood transfusion and duration of hospital stay were investigated. Short term outcomes assessed at 6 months follow up were also studied.

Results

A total of 17 patients had laparoscopic pectopexy performed by the same surgeon in the study period. The median age was 58 years (38-75 years). Majority of patients were overweight or obese with a median BMI of 30 (12% had normal BMI, 41% had BMI of 25-30, 47% had BMI of 30-40). Median parity was 2 (para 1-4). 53% had previous Gynaecological procedures such as pelvic floor repair (4/16), subtotal abdominal hysterectomy (2/16), adhesiolysis (1/16) and TVT (1/16).

12 patients had concomitant laparoscopic supracervical hysterectomy and bilateral salpingo-oophorectomy performed at the time of pectopexy. The mean operating time was 132 minutes (range 62-200 minutes). One patient had an incidental finding of a large ovarian cyst with intra-abdominal adhesions. No intraoperative complications were noted. Mean estimated blood loss was 57mL (10-400mL) and no patients required blood transfusion. The mean duration of hospital stay was 1.4 days (range 1-2 days). Of the 5 women who have had their 6 months follow up, all patients reported symptom improvement with no *de novo* urinary or defecation problems. Objective success of improvement in POP-Q staging was noted in all 5 women.

Conclusions

This study concludes that laparoscopic pectopexy can confer the benefits of short hospital stay and low peri-operative morbidity with good short term outcome. However, as long term outcomes on the safety and efficacy of this novel technique are still awaited, this procedure should not be offered routinely. It should only be performed by experienced specialist with special arrangements for clinical governance, consent and audit or research.

Does omission of manipulator use change the perioperative parameters and complications in laparoscopic hysterectomy? Retrospective review of 112 cases

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Background

Manipulator use has been widely used in laparoscopic hysterectomies in order to facilitate the uterine manipulation and to decrease the complications such as ureteric injury and to decrease the operation time as well. However there is no data regarding the comparison of perioperative parameters in patients with and without manipulator use in laparoscopic hysterectomies

Methods

In Akdeniz University Faculty of Medicine, Antalya, Turkey in gynecology Department, 112 laparoscopic hysterectomies performed for benign pathologies (in two groups, group 1 with and group 2 without a manipulator) were included retrospectively between January 2013 and February 2017 with respect to operation time, blood loss, intraoperative, postoperative complications, conversion rates, uterine weight and hospital stay

Results

There were 62 patients in the first group (with manipulator) and 50 in second group (without manipulator). Mean age of total group was 49.4 years (range 38-77), 49.0 (range 37-77) and 48.8 (range 37-68) years for the first and second groups respectively. Mean duration of hospital stay was 3.0 days for group 1 vs 3.3 days in group 2 ($p=0.23$). Total operation time was 117 vs 115 minutes in group 1 and group 2 ($p=0.91$). Uterine weight was comparable in two groups (183 vs 153 gr, in group 1 and group 2 respectively, $p=0.19$). Mean fall in Hematocrit levels were also comparable between groups (5.0 vs 5.1 % fall in group 1 and group 2, $p=0.80$). There were three ureteric injuries (4.8 %) which were all occurred in group 1 ($p=0.14$). Three conversions (4.8 %) also occurred in manipulator group while only one patient required laparotomy in non-manipulator group (2 %) ($p=0.26$). Two patients required transfusion in postoperative period which were all in group 1. With respect to postoperative minor complications requiring re-admission four patients in group 1 (6.4 %) and two patients in group one (4%) experienced minor problems ($p=0.70$).

Conclusions

Omission of manipulator use does not change the intraoperative and postoperative parameters. There was no difference with respect to operation time, blood loss, hospital stay, need for transfusion. Moreover the use of manipulator did not change the complication rates. The use of manipulator can be omitted with respect to surgeons' preferences.

Surgical trends of hysterectomy types in Taiwan: a 15-year nation-wide time-frame comparison study

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Background

With the advance of minimally invasive techniques, laparoscopic approach for hysterectomy has gained its popularity. This study aimed to investigate the time-frame surgical trends of **hysterectomy types** (abdominal, vaginal, laparoscopic, and subtotal) during the 3 time-frame period (1998–2002, 2003–2007, and 2008–2012) under the national health insurance (NHI) system in Taiwan.

Methods

A retrospective analysis of data was conducted from Taiwan's National Health Insurance Research Database. A total of 329,438 women aged 20 years and older who underwent various types of hysterectomy during 1998–2012 were identified. The variables included surgical types, patient age, surgeon age, gender and surgical volume, as well as hospital accreditation, teaching status, geographic location and service volume. The chi squared and trend tests were used to examine the association between the variables studied.

Results

During the period of 1998–2002, laparoscopic hysterectomy (LH) was 34.9%, total abdominal hysterectomy (TAH) was 53.2%, vaginal hysterectomy (VH) was 9.6%, and subtotal abdominal hysterectomy (SAH) was 2.3%, respectively. During 2008–2012, LH increased to 41.4%, TAH decreased to 43.6%, VH increased to 9.1%, and SAH increased 5.9%, which were similar to those during 2003-2007. During 2008-2012, hysterectomies were most commonly performed among patients aged 40–49 years (55.6%), male surgeons (86.1%), those aged ≥ 50 years (35.0%) and with high surgical volume (39.4%); as well as in medical centers (48.2%), and high service volume (36.4%). The predominance of male, high-volume surgeons, as well as high-volume hospitals decreased during 2008-2012, as compared with 1998-2002.

Conclusions

This follow-up study describes the increase in popularity of LH and SAH; and provides evidence of surgical trends and a paradigm shift for hysterectomy. This time-frame shift suggests LH has reached a plateau during periods of 2003-2007 and 2008-2012. Meanwhile, more female surgeons involved in the practice. The generalization of surgical skills and performance extended from high-volume surgeons and hospitals into median and low surgeons and hospitals. This may have a great influence on patients and healthcare providers.

A rare case ovarian hemangioma mimicking ovarian malignancy

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Background

Hemangiomas are extremely rare benign tumor with presence of numerous abnormal vascular channels. First described by Payne in 1869. cavernous are most common. these neoplasms have been reported in different ages ranging from infancy to 81 years. Hemangiomas originate from germ cells as part of a teratoma. Mostly asymptomatic incidental findings; large lesions: vaginal bleeding, adnexal mass, abdominal pain, nausea and vomiting due to torsion can be seen. the tumor is usually unilateral but can be also bilateral. medulla and hilar region are the most common locations of the tumor. CA125 may be normal or elevated. Doppler USG shows a low-resistant vascular flow pattern. ovarian hemangiomas may be present very rarely as an ovarian mass with ascites and CA-125 elevation, mimicking advanced stage ovarian carcinoma. Pseudo-meigs' syndrome, stromal luteinization, stromal hyperplasia and thrombocytopenia as complications of ovarian hemangioma have been reported. Macroscopically, ovarian hemangiomas are usually small (5 mm to 24 cm in the greatest diameter). Grossly, it is an enlarged ovary with a smooth glistening outer surface showing a red or purplish color. On cut surfaces spongy textured and honeycomb appearance due to multiloculated cystic spaces filled with frank blood or serous fluid are observed. While the clinical differential diagnoses of ovarian hemangioma include tubo-ovarian mass, twisted ovarian cyst, and chocolate cyst the main pathologic differential diagnosis are vascular proliferation, lymphangioma and monodermal teratoma with vascular component prominence

Methods

Our patient complained about abnormal uterine bleeding and spasmodic pain during 2 weeks. in gynecologic exam approximately 3 cm unilateral adnexal mass were detected. in pelvic MRI reported as a serous cyst adenoma? or cyst adenocarcinoma? high-resistance vascular flow (RI:0.56) and hyperechoic solid and cystic mass and minimal free liquid were detected and operation accompanied with frozen section were decided in consultation of gynec-onco. macroscopically there were pelvic free fluid (it was sampling), mass was approximately 3 cm, had very tortuous purplish vascularity with solid part. in a pelvic region no other pathologies were detected. mass liked non-epithelial ovarian tumor as a appearance. After cystectomy, frozen resulted as a ovarian hemangioma.

Results

Sometimes, pre-operative and intra-operative finding can be confusing and tumor may be misdiagnosed as malignancy, which may lead to unnecessary radical surgery. Surgical removal of the involved areas is treatment of choice. An ovarian hemangioma can be associated with gynecologic cancer and hemangiomatosis, therefore surgical removal of the involved areas and careful examination of contralateral ovary and endometrium for a possible malignancy and examination of the abdominopelvic for ruling out hemangiomatosis are essential.

Conclusions

Usually asymptomatic. the aetiology is unknown. However some of ovarian hemangioma cases are related with thrombocytopenia, ovarian stromal luteinization, postmenopausal bleeding endometrial hyperplasia, or even endometrial carcinoma only a few of the ovarian hemangiomas have been associated with ascites and serum Ca-125 elevation hence can mimic advanced stage ovarian cancer. It can be misdiagnosed as malignancy with preoperative imaging studies.

**ES26-0004 -
Posters**

Minimally invasive gynecological surgery and emergency: the Palestinian experience

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Background

Minimally invasive procedures are useful as both diagnostic and therapeutic procedures in many acute diseases with the advantages of a shorter hospitalization and faster recovery.

In the last six years 274 patients underwent Minimally Invasive Gynecological Surgery (MIGS) for abdominal emergencies with acute pelvic pain.

Findings at laparoscopic exploration are herein reported

Methods

In the last six years 274 patients underwent Minimally Invasive Gynecological Surgery (MIGS) for abdominal emergencies with acute pelvic pain.

Findings at laparoscopic exploration are herein reported.

One hundred and twenty-seven ectopic pregnancies were found (ampullary: 91; isthmic: 27; interstitial/cornual: 8; and ovarian:1).

Except for 2 women with tubal abortion of ampullary pregnancy, all other patients had rupture at the pregnancy site.

Thirity-two patients who demonstrated more than 500 cc of intraabdominal bleeding were classified as having massive hemoperitoneum and retrospectively analyzed. Sites of pregnancy in these patients were 18 ampullary; 8 isthmic; 6 interstitial/corneal.

Out of one hundred and seven patients with ovarian pathology, 35 were dermoid cysts, and 17 of these were associated with adnexal torsion. Thirteen patients had ruptured lutein cysts with ovarian bleeding. Torsion of the tube with paraovarian cyst, torsion of normal ovary, and serous cystadenoma were noted in four patient each. Adnexal torsion mostly occurs in the child-bearing age group, but is not uncommon in premenarchal girls or postmenopausal women.

Results

Even in women with massive hemoperitoneum, laparoscopic surgery was safely conducted. All of patient were treated by laparoscopy (salpingostomy 88, salpingectomy 39) When adnexal torsion is suspected, urgent surgical intervention is indicated, and was usually performed by laparoscopy and in 53 patient with partial torsion of an ovarian cyst, laparoscopic detorsion was performed. After having waited and checked the persistence of good blood supply, the cystectomy was carried on. In ten cases ovariectomy was necessary Finally in forty patients acute appendicitis, three with perforated appendix, were diagnosed and in all of them laparoscopic appendectomy was performed

Conclusions

The chief symptom in each of these patients was lower acute abdominal pain with nonspecific symptoms, clinical features confusing especially in emergency cases due to varied underlying diseases. In all patients MIGS allowed to ascertain with any certainly the diagnosis and successfully perform the needed procedures.

It is important to underlying that even in emerging countries with just basic endoscopic equipment, dealing with gynecological emergencies by laparoscopy has now become a reality.

**ES26-0327 -
Posters**

Hysteroscopic resection of large fibroids in patients with menorrhagia

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Background

Fibroids can cause menorrhagia and anemia. most studies indicate that removing these fibroids cures the heavy bleeding. hysteroscopic myomectomy is a minimally invasive surgery which is very feasible and established for small fibroids but still has limitation with large fibroids.

Methods

Retrospective study. eight patients with uterine submucosal fibroids larger than 6 cm in diameter (range, 7-10 cm) with menorrhagia

Results

Improvement in symptoms and safety of the operation were the main outcomes. we also considered complications. all 8 patients had menorrhagia (100%). three patients (37.5%) had associated dysmenorrhoea. seven patients had type 0 fibroids and one case had type 1 fibroid. mean operating time was 1hour (range , 30 -80 minutes). one –step excision was achieved in 5 patients (62.5%). the remaining 3 patients needed a second operation. three patients had bleeding and blood transfusion. there were no cases of perforation. mean follow up was 5 months (range 2-8 months). six patients (75%) were asymptomatic. two patients with associated dysmenorrhoea (25%) were not satisfied and requested hysterectomy

Conclusions

Hysteroscopic resection of large symptomatic uterine fibroids can be feasible, safe and effective. the possibility of bleeding and the need for second operation are potential backdraws

Longitudinal vaginal septum resection using harmonic scalpel: report of two cases

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Background

Müllerian anomalies are uncommon with a prevalence of 5%–6%. Nonobstructive müllerian abnormalities such as longitudinal vaginal septum (VS) are usually asymptomatic, and may be discovered during routine gynecologic examination, by ultrasound, or evaluation for infertility. The VS is vascular and resection using the traditional method can lead to significant blood loss. Therefore less invasive procedures such as hysteroscopy and ligasure have been used. We conducted a pub med search for 'vaginal septum resection using harmonic' and this resulted in only one case which was reported by Rose and Peterson. We aim to report two cases of concomitant vaginal and uterine septum in which the VS was resected using, Harmonic scalpel, a relatively new technique.

Methods

Two patients one presenting with infertility and the other with menorrhagia were diagnosed to have vaginal septum on vaginal examination. The uterine septum was diagnosed by 3 D ultrasound and MRI. Both patients underwent surgery. The uterine septum was resected by hysteroscopy. The vaginal septum was grasped with long artery forceps anteriorly and posteriorly ensuring that the urethra and bladder were away and keeping away from the rectum posteriorly. The septum was resected with the harmonic scalpel between the artery forceps. Finally, the cut edges of the vaginal septum anteriorly and posteriorly were sutured using 2.0 vicryl in a continuous locking fashion. No vaginal packing was required and blood loss was minimal.

Results

Both patients had an uneventful recovery and on postoperative follow up showed good healing of the VS resection site.

Conclusions

Use of harmonic scalpel to resect longitudinal VS is simple, safe, fast and results in good healing. In addition, this technique ensures minimal blood loss.

**ES26-0409 -
Posters**

Interstitial pregnancy successful laparoscopic treatment

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Background

Case presentation

Methods

CASE HISTORY

34yr old patient attended emergency gynaecology with the complaint of intermittent right iliac fossa pain and pv bleeding for the last 2 weeks.

she was G3P2 with previous 2 normal deliveries. used subcutaneous implant as contraceptive ,which was removed 3 months prior to presentation. she was 9weeks amenorrhoea at presentation.

USS : empty uterus with oval mixed echogenic mass with doppler flow 6*3.2*3cm adjacent to right lateral wall of uterus. Small echo free area 1*0.7*0.1 within it. Hb 128mg BHCG 1025 miu/litre - INTRA OP:RT cornual pregnancy 6cm. Left tube and ovary were normal. Cornual excision +salpingectomy with ligasure done and sutured with vicryl in two layers. MBL 300ml. post op BHCG 245miu/litre

Results

its a case discussion

Conclusions

Interstitial pregnancy — The interstitial portion of the fallopian tube is the proximal segment that is embedded within the muscular wall of the uterus. A pregnancy implanted at this site is called an interstitial pregnancy; the term cornual pregnancy is also widely used to describe a pregnancy at this location. Originally, the term cornual pregnancy referred only to pregnancies implanted in either the horn of a bicornuate uterus, a rudimentary horn of a unicornuate uterus, or in one side of a septated or partially septated uterus

An interstitial pregnancy can be difficult to distinguish on ultrasound from an IUP that is eccentrically positioned. Ultrasound evaluation for interstitial pregnancy is discussed in detail separately.

Grossly, an interstitial pregnancy appears as a gestational swelling lateral to the insertion of the round ligament. The unique anatomic location of an interstitial pregnancy often leads to a delay in diagnosis, although an average delay of only four days in comparison with tubal pregnancies was reported in a large series.

Interstitial pregnancy presents with rupture in approximately 20 to 50 percent of cases. A series of cases of interstitial pregnancy reported to a surgical registry included 14 patients with tubal rupture, all of which were before 12 weeks [60]. This is in contrast to previous reports that rupture of interstitial pregnancy occurred late in pregnancy. Other clinical manifestations are the same as for all ectopic gestations (pelvic or abdominal pain, vaginal bleeding).

Although the maternal mortality rate associated with tubal pregnancy is decreasing, the rate for interstitial pregnancies remains at 2 to 2.5 percent because of misdiagnosis of these gestations as IUPs.

Spontaneous uterine rupture in early pregnancy: a rare but life-threatening emergency: a report of 2 cases and literature review

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Background

Spontaneous uterine rupture during first and second trimester is a rare and severe situation. It frequently results in life-threatening maternal hemorrhage. Uterine rupture during gestation is mainly found in women whose past history includes scarred uterus; mainly cesarean delivery. Spontaneous uterine rupture of unknown cause and unscarred uterus during the early pregnancy is extremely rare, and may vary in presentation and course of events, which make the clinical diagnosis challenging. These may be masked by changes in physiology and anatomy during pregnancy. The lack of high index of suspicion diverts attention to search for other non-gynecological problems. The objective of this review is to highlight the importance of prompt diagnosis and timely management of such rare cases.

Methods

We report our experience in the management of rare 2 cases with spontaneous uterine rupture in early pregnancy (at 6 weeks and 13 weeks gestation) in the last 3 years in a tertiary care center in UAE

Results

Spontaneous uterine rupture in early pregnancy is a rare condition. Few cases reported for spontaneous rupture in first trimester. It is evident that the single most important factor in determining the risk of uterine rupture is whether the uterus has a previous scar or not. The past injuries such as Cesarean delivery, hysteroscopy resection of uterine septum, myomectomy, and corneal resection are considered to be the causes of uterine rupture. It is reported that spontaneous rupture of unscarred uterus occurs in 1 in 15,000 deliveries. Some other risk factors can be contributed to uterine rupture such as, advanced maternal age, abnormal placentation, adenomyosis, and abortion with instrumentation. However, spontaneous uterine rupture during the first and early second trimester is extremely rare and poses a diagnostic dilemma, especially in the presence of normal intrauterine pregnancy on ultrasound scans. This usually leads to delay in the diagnosis till patient is hemodynamically unstable then need for more aggressive surgical interventions. The exact etiology for spontaneous uterine rupture in such cases is unclear but the possibility of trophoblastic invasion at the site of previous uterine wall thinning as a result of surgical evacuation, or unrecognized perforation cannot be excluded.

Conclusions

Uterine rupture; though it is rare, should be first ruled out in all pregnant women presented with acute abdominal pain regardless of their gestational age. Search for non-gynecological causes in such clinical presentations can delay crucial obstetric surgical intervention that can lead to high morbidity and mortality. Access to Laparoscopic facility is an essential role in early definitive diagnosis and prompt management in such cases and significantly reduces its high morbidity and mortality.

Comparison of total laparoscopic hysterectomy and abdominal hysterectomy; one surgeon's experience

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Background

The aim of this prospective study to evaluate and compare to the outcomes of total laparoscopic hysterectomy (TLH) and total abdominal hysterectomy (TAH) who performed by one surgeon in our clinic.

Methods

We performed hysterectomy for benign gynecological conditions between January 2013 and December 2016. Two hundred patients who underwent TLH (Group 1) compared to 200 patients who underwent TAH (Group 2). The mean age of the cases, body mass index (BMI), duration of operation, the amount of blood loss, rates of complications and post operative hospital stay were compared for two groups.

Results

There were no statistically significant differences between the two groups regarding age, body mass index (BMI), specimen weight, pre-operative hemoglobin (Hb) value and rates of the complications. The mean post-operative Hb value was significantly higher in group 1 than group 2 (11.4 ± 1.2 gr/dl vs. 10.7 ± 1.4 , $P= 0.01$). The mean time of operation was significantly longer in group 1 than in group 2 (75.8 ± 25.3 minutes vs. 65.4 ± 18.5 , $P<0.001$). The mean duration of hospital stay was statistically shorter in group 1 compared to the group 2 (1.8 ± 0.4 days vs. 4.3 ± 1.4 , $P<0.001$).

Conclusions

Total laparoscopic hysterectomy is safe and feasible method for gynecological diseases. TLH may offer specific benefits for properly selected patients. Its advantages are lower peri-operative morbidity, improvement of quality of life, shorter hospital stay and faster return to activity.

SLC40A1 sensitized human ovarian cancer cells to cisplatin by blocking autophagy

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Background

This study aimed to investigate the role of the iron export related gene, solute carrier family 40 member 1 (SLC40A1), in cisplatin resistance of epithelial ovarian cancer (EOC) and to explore the underlying mechanism.

Methods

Expression of SLC40A1 in normal epithelial ovarian tissue and EOC tissue was examined by western blot and Real-time PCR. Two pairs of cisplatin-sensitive (A2780 and COC1) and cisplatin-resistant (A2780cp and COC1/DDP) ovarian cancer cells were used to detect the expression of SLC40A1. Cell viability was determined by cell counting kit-8 and apoptosis ratio was determined with the Annexin- V/PI staining by flow cytometry. Transmission electron microscopy examination was used to detect autophagosome.

Results

SLC40A1 was overexpressed in normal epithelial ovarian tissue, while relatively lower in low-grade serous ovarian cancer, and the lowest in high-grade serous ovarian cancer. Both chemo-sensitive ovarian cancer cell line A2780 and COC1 showed relatively higher level of SLC40A1 and lower intracellular iron compared with their corresponding chemo-resistant counterparts. Along with knockdown of SLC40A1 in A2780 and COC1, the intracellular iron increased, while cell viability and apoptosis rate decreased significantly. Along with SLC40A1 overexpression in A2780cp and COC1/DDP, the intracellular iron decreased, while cell viability and apoptosis rate increased significantly. Further, we examined the autophagy gene expression both in SLC40A1 knockdown and upregulated cells. Interestingly, autophagy-related gene Beclin 1 and Atg3 increased along with SLC40A1 knockdown and decreased along with SLC40A1 upregulated both at mRNA and protein level. Moreover, the transmission electron microscopy examination showed that the autophagosome was blocked along with SLC40A1 overexpression.

Conclusions

This is the first study suggesting that the SLC40A1-mediated iron metabolism contribute to cisplatin resistance through blocking autophagy in EOC.

Laparoscopy prior to assisted reproductive technology improves outcome in patients with unilateral mid-distal/distal tubal blockage

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Background

Tubal disease is responsible for more than 20% of female infertility. Tubal pathology may involve the proximal, distal or entire fallopian tube. Mid-distal or distal tubal blockage usually result from adhesions due to endometriosis, infections or previous pelvic surgery. Mid-distal and distal tubal blockage is known to have poorer prognosis when compared to proximal tubal blockage. The aim of the present study was to assess the effect of laparoscopy prior on assisted reproductive technology (ART) outcome in patients with unilateral mid-distal/distal tubal blockage.

Methods

A retrospective cohort study was conducted. All infertile patients diagnosed with unilateral mid-distal/distal tubal blockage by hysterosalpingography and treated by intracytoplasmic sperm injection (ICSI) between January 2008 and December 2015 were evaluated (n=44). The study group consisted of patients who underwent laparoscopy prior to ICSI (n=15). The control group consisted of patients to whom laparoscopy was not performed before ICSI cycle (n=29). The patients in the study group underwent 32 ICSI cycles following laparoscopy. The patients in the control group underwent 80 ICSI cycles. The demographic variables and cycle outcomes were compared. Continuous variables were analysed independently by Student's t-test and categorical variables were compared by using Fisher's exact test. Controlled ovarian hyperstimulation was performed by GnRH antagonist protocol in 94 (83.9%) cycles.

Results

There were no statistically significant differences between the study and control groups regarding age, body mass index, duration of infertility, additional male factor infertility rate, and baseline hormonal status except day 3 LH levels. Day 3 LH levels were significantly lower in the study group than the control group (4.1±1.4 IU/ml vs. 6.6±4.3 IU/ml, respectively; P=0.002). Nine pathologies (60%) were detected out of 15 patients with unilateral mid-distal/distal tubal blockage who underwent laparoscopy. Six patients were operated for endometriosis in which three endometriotic cysts were extirpated. Two patients underwent salpingectomy due to hydrosalpinx and one of them had also pelvic adhesions. The remaining one patient were operated for a simple cyst. There were no significant differences between the cycle parameters of study and control groups regarding numbers of oocytes retrieved, MII, embryos transferred, total dose of gonadotropins administered, and duration of cycle. The clinical pregnancy rate was significantly higher in the study group than the control group (31.3% vs. 12.5%, respectively; P=0.028). Similarly, the live birth rate was significantly higher in the study group than the control group (31.3% vs. 10%, respectively; P=0.010).

Conclusions

Diagnostic laparoscopy and possible operative interventions prior to ART treatment improves the cycles outcome in patients with unilateral mid-distal/distal tubal blockage.

**ES26-0245 -
Posters**

The risk factors associated with significant hemoglobin drop after laparoscopic myomectomy

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Background

The aim of the present study was to assess possible risk factors for hemoglobin drop following laparoscopic myomectomy in patients without surgical complication.

Methods

A retrospective cohort study was conducted. All data of patients who underwent laparoscopic myomectomy at the gynecology clinics of a university hospital between January 2012 and March 2017 were reviewed. A total of 152 laparoscopic myomectomy cases were included. Patients were grouped according to the level of hemoglobin drop after surgery. The study group consisted of patients with hemoglobin drop more than 2 g/dl after surgery. The control group consisted of patients with hemoglobin drop less than 2 g/dl after surgery. The assessed risk factors were total size of leiomyomas, size of dominant leiomyoma, total number of leiomyomas, parity, body mass index, and previous abdominal surgery.

Results

There were 38 (25%) patients in the study group and 114 patients in the control group. The groups were comparable regarding demographics such as age, body mass index, and parity. The total size of leiomyomas was significantly higher in the study group than the control group (P=0.001). The mean size of the dominant leiomyoma was significantly higher in the study group than the control group (6.8±3.2 cm vs. 5.6±2.5 cm, respectively; P=0.017). The mean number of leiomyomas removed were significantly higher in the study group when compared to the control group (2.3±3.2 vs. 1.5±1.2, respectively; P=0.020). The other risk factors showed no significant difference between the groups in univariate analyses. According to the logistic regression analyses, having multiple leiomyoma increased the odds of significant hemoglobin drop by 3.57 times (95% CI: 1.59-8.00; P=0.002) and the size of dominant leiomyoma increased the odds of significant hemoglobin drop by 1.31 times (95% CI: 1.01-1.32; P=0.033).

Conclusions

Removal of multiple leiomyomas and large size of dominant leiomyoma are associated with significant blood loss during laparoscopic myomectomy. However, body mass index and previous abdominal surgery do not have unfavorable effects on blood loss during laparoscopic myomectomy.

ES26-0246 -

Posters

Previous abdominal surgery does not affect unfavorably the outcome of laparoscopic myomectomy

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Background

The aim of this study was to investigate the effect of previous abdominal surgery on the intra-operative and post-operative outcomes of laparoscopic myomectomy.

Methods

A retrospective cohort study was conducted. All data of patients who underwent laparoscopic myomectomy at the gynecology clinics of a university hospital between January 2012 and March 2017 were reviewed. A total of 152 laparoscopic myomectomy cases were included. Patients were grouped according to previous abdominal surgery. The study group consisted of patients who had at least one previous abdominal surgery and the control group consisted of patients with no previous abdominal surgery. The main outcome parameters were duration of hospital stay and major complication rate.

Results

A total of 152 patients were included in analysis. The study (n=34) and control (n=118) groups were compared in terms of demographic parameters such as age, body mass index, parity, preoperative hemoglobin value, dominant leiomyoma size. Among the study group, 9 patients had previous cesarean section, 5 had laparotomic myomectomy, 3 had laparoscopic myomectomy, 7 had ovarian cyst excision, 4 had cholecystectomy, 4 had appendectomy, and 2 had bilateral tubal ligation surgery. The mean duration of hospital stays and major complication rates were similar between the patients with and without previous abdominal surgery (P=0.372 and P=0.099, respectively). Also, there were no statistically significant differences between the groups regarding duration of operation and blood transfusion requirement (P=0.870 and P=0.732, respectively). The laparotomy conversion rates in study and control groups were 2.9% and 4.2% (P=0.732).

Conclusions

Although the total size and number of leiomyomas were significantly higher in our study group, having a previous abdominal surgery does not seem to affect unfavorably the outcome of laparoscopic myomectomy.

ES26-0251 -

Posters

The risk factors associated with significant hemoglobin drop after total laparoscopic hysterectomy

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Background

Laparoscopic approach has many advantages over open surgery and has been preferred frequently for most benign gynecologic diseases. Intraoperative bleeding and low hemoglobin values can be detrimental during the postoperative recovery period. The aim of this study was to assess possible risk factors for hemoglobin drop following total laparoscopic hysterectomy (TLH).

Methods

A retrospective cohort study was conducted. All data of patients who underwent TLH at the gynecology clinics of a university hospital between January 2011 and December 2016 were reviewed. A total of 234 TLH cases were included. Patients were grouped according to the level of hemoglobin drop after surgery. The study group consisted of patients with hemoglobin drop more than 2 g/dl after surgery. The control group consisted of patients with hemoglobin drop less than 2 g/dl after surgery. The assessed risk factors were body mass index, presence of comorbidities, additional surgical intervention, uterine size, previous abdominal surgery, and intraoperative complications. Enlarged uterus was defined as presence of multiple fibroids with the dominant fibroid size greater than 5 cm.

Results

There were 70 (29.9%) patients in the study group and 164 patients in the control group. The groups were comparable regarding demographics such as age, body mass index, comorbidities, and previous abdominal surgery. The mean operation time, the rate of additional surgical interventions during TLH, and the mean duration of hospitalization were similar between the groups. The rate of enlarged uterus was significantly higher in the study group when compared to the control group (38.6% vs. 28.7%, respectively; $P=0.024$). The rate of intraoperative and postoperative complications were similar between the study and control groups (8.6% vs. 3%, respectively; $P=0.136$).

Conclusions

Presence of an enlarged uterus due to large and multiple leiomyomas is associated with significant blood loss during TLH.

Does minimally invasive gynecologic surgery decrease postoperative infections?

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Background

Postoperative infections can cause significant surgical morbidity and mortality. Before Joseph Lister explained antiseptic principles, percentage of death for postoperative infections was very high. After using principle of antiseptic and antibiotics, postoperative infectious morbidity and mortality decreased but it is still observed 2-5% of all surgery and %2 of hysterectomies. We aimed to determine there is a difference between the hysterectomy techniques in postoperative infections.

Methods

This study was a retrospective case control study. Hysterectomy techniques included abdominal, vaginal, multi-port laparoscopic and single-port laparoscopic. All patients received antibiotics within 60 minutes of incision (according to patient's weight) and postoperative three days. Postoperative infections were defined as within 30 days postoperatively.

Results

We performed total 86 hysterectomies; abdominal (n=20, %23.3), vaginal (n=20, %23.3), multi-port laparoscopic (n=27, %31.3) and single-port laparoscopic (n=19, %22.1). All patients in four groups were similar in age, parity, uterine size, duration of hospitalization (p:0,024) and operation time is higher in laparoscopic and single port laparoscopic technique. Postoperative infections were observed in 5 patients (3 of abdominal technique, 2 of vaginal technique) (%5,8) . One perirectal abscess and two surgical site infections were observed in abdominal technique and one urinary tract infection and vaginal cuff cellulitis were observed in vaginal technique. There were no surgical infections in multi-port laparoscopic and single-port laparoscopic technique. These patients treated with antibiotics and complete recovery was obtained.

Conclusions

Postoperative infections were decreased with minimally invasive surgical techniques. So if minimally invasive technique for hysterectomy is feasible, we must use these techniques.

Ovarian ectopic pregnancy with contralateral dermoid cyst: case report

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Background

Implantation of fertilized ovum outside the endometrial cavity is called ectopic pregnancy. The most frequent sites of involvement is fallopian tube and ampuller segment of tuba. Primary ovarian pregnancy is a rare condition and preoperative diagnosis is extremely hard. 1 ovarian pregnancy per 2300 – 7000 spontaneous pregnancies occur and that establishes %3 of all ectopic pregnancies. These are; tubal fimbrias are intact and easily distinguished from ovary; gestational sac located at ovary which lies at it's normal location; sac is bound to uterus by utero-ovarian ligament and ovarian tissue found on the sac wall. Primary ectopic pregnancies establishes %1-3 of all ectopic pregnancies. Currently the incidence has been increased due to reproductive techniques and intrauterine devices. Oophorectomy has been accepted as the primary surgical approach, but currently wedge resection and cystectomy are primary approaches. Another option is methotrexate treatment with available patients. An ectopic pregnancy case managed at our clinic has been reported at that report.

Methods

29 years old (G2P1) patient admitted to our clinic with lower abdominal pain and 40 days of menstrual delay. Abdominal examination revealed a discomfort on right adnexial area without any acute abdomen sign. Cervical tenderness without any vaginal bleeding was observed on cervicovaginal examination.

Results

Ultrasonographic examination has showed an antevert uterus and endometrium with a thickness of 17 mms. At the lower tip of adnexial area 19*14 mm echogenic material which was consisting a 5 mm fetal pole with fetal heart beat. 47*28 mms of dermoid cyst was also existing on right ovary. Left ovary seemed to be normal. Beta-hcg valuse was 5109. A laparoscopy section has been planned with a diagnosis of ovarian ectopic pregnancy. Laparoscopic observation revealed normal sized uterus, bilateral tubas and left ovary in normal nature. 3cms of ectopic pregnancy material was spotted on right ovary. Also the 4 cms of dermoid cyst was observed on left ovary as determined by ultrasonography (Figure1). Ectopic pregnancy material was excised from the ovary and cyst capsule was existed on the contralateral ovary. Pathologic investigation was also consistent with ectopic pregnancy. After the departure at third postoperative day, patient was directed to policlinics for routine Hcg follow-up.

Conclusions

Ovarian ectopic pregnancies may be managed with early intervention, preoperative and even intraoperative diagnosis is challenging. Diagnosis is mostly done by pathologists after the surgery. Hallat and friends diagnosed ovarian ectopic pregnancies with a %28 accuracy at 25 patients. The other patients were diagnosed by pathologists. In conclusion, with reproductive treatments ectopic pregnancies has an increasing incidence. Recently, despite modern diagnostic techniques many patients are admitting with signs of hemorrhagic shock. With the high susceptibility of ovarian ectopic pregnancy, earlier interventions may provide possibility of ovary sparing surgery.

**ES26-0300 -
Posters**

Laparoscopic surgery for ectopic pregnancy in the stump of a previous salpingectomy site-tubal stump pregnancy

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Background

Ectopic pregnancy remains to be a significant cause of maternal morbidity, mortality and reproductive failure in the whole world. The incidence of ectopic pregnancy is approximately 1.3~2% of all pregnancies; and more than 90% of ectopic pregnancies are detected in the ampulla of the fallopian tube. Ipsilateral ectopic pregnancy occurs rarely and can be difficult to diagnose. Few cases have been reported in the literature. The frequency of tubal stump pregnancy is approximately 0.4% of all pregnancies.

Methods

A 32-year-old woman gravida 3, para 0, with a history of secondary infertility was on follow-up at our IVF clinic with unexplained infertility diagnosis. The patient had the embryo transferred on 21 September 2015. On the routine control after the transfer, her serum β HCG was detected as 3031IU/L but no gestational sac was detected in the uterus by transvaginal sonography. Therefore the patient was referred to our clinic on suspicion of ectopic pregnancy. The patient had a medical history of gastric band surgery in 2003 due to obesity and laparoscopic surgery for right tubal pregnancy in 2012. The patient had no remarkable family history. Transvaginal ultrasonography determined a right adnexal mass measuring 13 x 11mm, consistent with a right ectopic pregnancy .

Results

Based on these test results, the patient was suggested to undergo laparoscopic surgery, and elective laparoscopy was performed to confirm the diagnosis. The operative findings showed a mass in the right tubal stump where tubectomy had already been performed, and we diagnosed it as tubal stump pregnancy. The ectopic part was removed laparoscopically with an advanced bipolar sealing device LigaSure (Covidien, Manhattan). After the surgery, the condition of the patient improved well and she was discharged from the hospital three days after the surgery.

Conclusions

Tubal stump pregnancy is difficult to diagnose since ectopic pregnancy commonly occurs in the fallopian tube. The incidence of tubal stump pregnancy is not known but had been reported approximately 1.16% of all ectopic pregnancies with mortality 10–15 times higher than the other forms of ectopic pregnancies. This is why the patients at whom ectopic pregnancy is suspected should be examined in detail. Clinicians should be aware that previous ectopic is a risk factor for future ectopics and that salpingectomy does not exclude ipsilateral ectopic pregnancy. Laparoscopic surgery is one of the options for tubal stump

pregnancy, if diagnosed early and if the condition of the patient is stable.



Laparoscopic management of bilateral tubo – ovarian abscess - a case report

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Background

Typically TOA (tubo-ovarian abscess) represents the final result of an acute Pelvic Inflammatory Disease (PID). One third to half of patients diagnosed with TOA present a remote history of PID (1). Other risk factors include multiple sex partners, age between 15 and 25 years, HIV infection and a long-term use of IUD (intra-uterine device) . (2, 3). Pathogens follow an ascending route from cervix to the Fallopian tube causing endothelial damage and edema of the infundibulum. Eventually distinction between the ovary and fallopian tube is lost. Untreated TOAs may lead to life-threatening peritonitis.

Methods

A 46 years old woman self referred to the Gynecological Emergency Department with lower abdominal pain and fever up to 38oC. Clinical examination revealed distended abdomen, discomfort in the deep palpation of the abdomen, cervical excitation and mucopurulent cervical discharge (vaginal culture resulted positive for E. Coli). Pregnancy test negative. She had a history of PID, treated with antibiotics three years ago. Transvaginal ultrasound demonstrated a bilateral tubo – ovarian abscess, and diagnosis was confirmed by a CT – scan.

The patient was treated immediately with intravenous antibiotics (2nd generation Cefalosporine and Metronidazole). Because of the clinical deterioration, she was transferred to theatre for an operative laparoscopy 48 hours later. Intraoperatively, bilateral tubo – ovarian abscesses were recognized with presence of cohesive inflammatory adhesions between bowel loops, the uterus and the abscesses. Symphysiolysis was performed and secondly resection of the tubo – ovarian abscess en bloc on the left, and resection of the abscess conserving the ovary on the right side. A drainage tube was placed in the pouch of Douglas. Postoperative course was uneventful.

Results

The most common clinical manifestations of surgically confirmed TOAs are abdominal or pelvic pain (>90%), fever (50%), vaginal discharge (28%), nausea (26%), and abnormal vaginal bleeding (21%). Complications include chronic pelvic pain, infertility and if not treated life-threatening peritonitis, sepsis and death. Transvaginal ultrasound and pelvic Computerized Tomography are the most common imaging modalities to detect TOA, with sensitivity 75 to 82% vs 78 to 100%, and specificity 92 vs 100% respectively (3,4). Broad-spectrum intravenous antibiotic therapy is indispensable for treating TOAs. When antibiotic treatment fails to respond within 48 to 72 hours, drainage or removal of the abscess is needed or lysis of adhesions must be performed, laparoscopy represents the first treatment option (5). The operative procedure involves lysis and dissection of adhesions, drainage of the abscess cavity, aspiration of purulent fluid from the pelvis, removal of necrosis, and irrigation of the peritoneal cavity. A drainage tube should be set in the Douglas space, because of the contaminated environment.

Conclusions

Laparoscopic approach decreases hospital stay, presents a lower percentage of wound infection, decreases postoperative pain and has an optimal aesthetic result (6).

A rare case of leiomyosarcoma diagnosed during removal of a submucosal fibroid by monopolar resectoscopic hysteroscopy

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Background

Leiomyomas or fibromyomas are the most common uterine tumours of smooth muscle origin. About 20% of women above the age of 30 years harbor uterine myomas of varying size (1,2). Vast majority of them are benign and cause no symptoms and only 0.5% develop into leiomyosarcoma (3). According to their location in the uterus are classified into intramural or interstitial (within the myometrium), subserosal and submucosal.

Methods

In this case report, a 45 year old woman attended to a gynaecological private practice complaining about heavy menstrual bleeding, accompanied by dysmenorrhea. The patient had an ultrasonographic examination which revealed a highly vascularized fibromyoma of 2,5 x 3 cm in size which was located in the submucosal surface of the uterus. Her personal history indicated that she had undergone a diagnostic dilatation and curettage 6 months ago due to the same symptoms. However, the histologic examination of the tissue that was obtained during the procedure was negative for malignancy. Following the diagnosis of fibromyoma, the patient had an operative hysteroscopy and the biopsy was positive for leiomyosarcoma.

Results

Medical researches and evidence based medicine have established that leiomyosarcomas are quite rare (1,2,3). The tumour have poor response to chemotherapy and radiation while surgery is the first and most effective choice of treatment (3,4). For these reasons, early diagnosis is the most life-saving factor in each case.

Conclusions

Careful consideration should be put on the Doppler ultrasound examination as well as in the clinical picture of each patient by gynaecologists and sonographic specialists (5,6).

Vaginal removal of prolapsed pedunculated submucous myoma - presentation of rare case report

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Background

Fibroids are benign tumors located in the uterine wall. Submucosal fibroids are located under the endometrium, inside the uterine cavity. Rarely they can grow in size and project even from the cervical os to the vagina (pedunculated myoma). Heavy menstrual bleeding is the most common symptom.

Methods

A 45-year-old woman presented as an emergency for gynecological examination due to heavy vaginal bleeding. She had a history of two vaginal births and no gynecological follow up for the last ten years. Vaginal examination was with no pathological findings apart from the presence of bleeding originating from the cervical os. Transvaginal and transabdominal ultrasound revealed a pedunculated intrauterine fibrous matrix, covering the entire uterine cavity. She was admitted to the gynecological ward and was transfused with two units of blood cells because of severe anemia.

The next day the patient was transferred to the operating theatre. Office hysteroscopy was not possible to be performed as a large smooth mass protruding from internal os was covering the entire uterine cavity. Dilatation of the cervix was performed up to size 10 Heggar. Two strong tooth graspers were used to hold the fibroid and to slowly remove it by rotational movements. Vaginal removal was accomplished, after 15 minutes, with no further bleeding. A fibroid of 8x7 cm size was confirmed by histological examination. The recovery of the patient was uneventful.

Results

Pedunculated submucosal myomas is a particular and rare class of fibroid that requires rapid and effective treatment due to the large bleeding it can cause to the patient. Vaginal removal of this is not always feasible but it is a good alternative to transabdominal hysterectomy.

Conclusions

Hysteroscopy is not always feasible in cases of large neglected masses.

**ES26-0290 -
Posters**

Multiple nodule removal by disc excision and segmental resection in multifocal colorectal endometriosis

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Background

Objective.

To report postoperative outcomes after dual digestive resection for deep endometriosis infiltrating the rectum and the colon.

Methods

Design.

Retrospective study using data prospectively recorded in the CIRENDO database.

Setting.

University tertiary referral center.

Patients.

Twenty-one patients managed for multiple colorectal deep endometriosis infiltrating nodules.

Interventions

Main outcome measures.

Assessment of postoperative outcomes.

Results

Rectal nodules were managed by disc excision and by segmental resection in 20 patients and 1 patient respectively. Sigmoid colon nodules were removed by short segmental resection and disc excision in 15 and 6 patients respectively. Rectal nodule diameter was between 1-3 cm and over 3 cm in 33% and 67% of patients respectively. Associated vaginal infiltration requiring vaginal excision was recorded in 76.2 % of patients. The mean diameter of rectal disc removed averaged 4.6 cm and the mean height of rectal suture was 5.8 cm. The length of the sigmoid colon specimen and height of the anastomosis were respectively 7.3 cm and 18.5 cm. Mean operative time was 290 minutes and mean postoperative follow-up averaged 30 months. Clavien Dindo 3 complications occurred in 28% of patients, including four with rectal fistulae (19%). The pregnancy rate was 67% among patients with pregnancy intention.

Conclusions

Our data suggest that combining disc excision and segmental resection to remove multiple deep endometriosis nodules infiltrating the rectum and the sigmoid colon can preserve the healthy bowel located between two consecutive nodules. However, the rate of postoperative complication is high, particularly in patients with large low rectal nodules.

**ES26-0291 -
Posters**

**Surgery for deep endometriosis without involvement of digestive or urinary tract:
don't worry the patients!**

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Background

Objective: To report postoperative outcomes following surgery for deep endometriosis without involvement digestive or urinary tract.

Methods

Design: Retrospective study using data prospectively recorded in the CIRENDO database.

Setting: University tertiary referral center.

Patients: 130 consecutive patients whose follow-up ranged from 1 to 6 years.

Interventions: Laparoscopic excision of deep endometriosis nodules.

Main outcome measures: Postoperative complications were recorded in CIRENDO database and medical charts. Postoperative digestive function was assessed using standardized gastro-intestinal questionnaires: the Gastrointestinal Quality of Life Index (GIQLI) and the Knowles-Eccersley-Scott-Symptom Questionnaire (KESS).

Results

Deep endometriosis nodules involved uterosacral ligaments, rectovaginal space, vagina, and always spared the bowel, the bladder and the ureters. Nodules sizes varied from <1 cm, 1 to 3 cm, and >3 cm in diameter, in 20.8, 64.6 and 14.6 % of cases, respectively. Clavien-Dindo 1, 2 and 3b complications occurred in 0.8, 4.6, 5.4 % of cases, respectively. Among ClavienDindo 3b complications, a majority was pelvic hematoma with rapid favorable outcomes. Gastrointestinal scores revealed non significant improvement in digestive function and defecation pain at 1 and 3 years after surgery. Pregnancy rate was respectively 44.2 % and 28 % at one and 3 years postoperatively, among which 63% and 64.7%were spontaneous conceptions.

Conclusions

Our data suggest that surgery for deep endometriosis without involvement of digestive or urinary tract provides low rate of postoperative complications and satisfactory fertility outcomes. However, excision of deep endometriosis nodules sparing the digestive tract is not followed by overall improvement ofpreoperative digestive complaints.

Bladder atony following surgery for rectovaginal endometriosis

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Background

OBJECTIVE: To compare the rate of postoperative bladder atony in patients with deep endometriosis with extensive vaginal infiltration by combined vaginal and laparoscopic procedures or by laparoscopy alone.

Methods

MATERIAL AND METHOD: A cohort study was conducted with prospective data collection, including all patients with deep endometriosis with a Douglas cul-de-sac nodule with vaginal infiltration greater than 3 cm At the CHU of Rouen between July 2009 and June 2015. We studied the rate of occurrence of bladder atony in immediate postoperative and distant surgery, the rate and the average duration of self-sounding and the rate of occurrence of postoperative complications .

Results

124 women were included in our study, 53 of which were combined and 71 were performed by laparoscopy alone. In the immediate postoperative period, the mean post-voiding residual (MMP) was 67 ml in the combined-pathway group and 81 ml in the laparoscopic group alone. 7 patients in the combined-route group (13.5%) had an RPM greater than 100 ml compared to 17 in the laparoscopic group alone (24.3%). Five of these 7 patients and 15 of these 17 patients were self-. In the combined-route group, the average duration of self-sampling was 10 weeks compared with 17 weeks for the laparoscopic group. At a distance, 1 patient in the combined pathway group and 6 patients in the laparoscopic group had pathological RPM. 1.9% of the patients in the combined pathway and 8.5% of the laparoscopic patients alone had a definitive bladder atony. The other complications are comparable with the combined laparoscopy group and the laparoscopic group alone: 5.8 and 5.6% of recto-vaginal fistulas; 13.5 and 8.5% pelvic abscesses, 3.8 and 1.4% adnexal abscesses and 3.8% and 5.6% of acute anemia requiring transfusion.

Conclusions

The results of our study are encouraging because they suggest a tendency to reduce the risk of urinary morbidity in favor of the technique of the combined pathway either in terms of occurrence of bladder atony in the short or long term with A reduction in the average duration of self-sampling. This could be explained by the first phase of vaginal dissection developed in the combined route technique associated with the properties of Plasma Jet. On the other hand, there is also a tendency to increase the risk of occurrence of superinfected hematoma of the cul-de-sac of Douglas to be related to a longer vaginal opening time in the combined route. Given these encouraging findings, it seems legitimate to continue this study and include new patients to improve the statistical power of the comparative study

**ES26-0005 -
Posters**

Intrauterine adhesions after hysteroscopic myomectomy: a systematic review

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Background

To review the incidence of intrauterine adhesions (IUA) after hysteroscopic resection of uterine fibroids.

Methods

A systematic review of the published literature was undertaken. The PubMed database was queried regarding studies involving intrauterine adhesions and hysteroscopic myomectomy. Studies in English that were published after 1999 and involving at least 20 patients were included.

Results

There were 6 studies that were eligible for inclusion, involving 1015 patients undergoing hysteroscopic myomectomy. Intrauterine adhesions were evaluated an average 13 ± 8.6 weeks postoperatively (range 8-30) with second-look hysteroscopy. The incidence of IUA ranged from 1.5%-78% depending on the number of submucous fibroids involved (treatment of apposing submucous myomata appear to have a significantly greater propensity towards adhesiogenesis than resection of a solitary myoma). Adjuvant therapy with either an intrauterine Foley balloon or auto-crosslinked hyaluronic acid, or the use of bipolar electrosurgery, were associated with reduced adhesiogenesis in some patients. The available literature is confounded by differences in electrosurgical equipment, single vs multiple myomata, presence of other uterine pathology (eg, polyps), use or nonuse of various adjuvant treatments to potentially reduce adhesiogenesis, differences in fibroid numbers and locations, and use of neoadjuvant medication to reduce fibroid volume.

Conclusions

Hysteroscopic myomectomy may be associated with IUA in up to 78% of patients undergoing the procedure. Fibroid interventions that do not significantly disrupt the basalis layer of the endometrium may be less likely to be associated with intrauterine adhesiogenesis. Adhesiogenesis following a specific fibroid intervention, radiofrequency ablation with the Sonata[®] System, is being evaluated in an ongoing multicenter clinical trial (OPEN).

ES26-0226 - Posters

Dear laparotomisers, check your knives!

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Background

Laparoscopic surgery offers the advantages of minimal tissue trauma, better visibility, and a panel of innovative tools and advanced technologies to use to achieve the surgical target. Despite the fact that more and more frontiers are claimed by minimally-invasive surgery (MIS), open approach (laparotomy) is still largely resorted to by many surgeons, the "laparotomisers".

Although laparotomies are still a reasonable option for some cases, MIS should always be considered and sought to benefit from its many privileges. Minimally invasive surgeons are often faced by a situation when they operate on patients who have previously been "laparotomised". In such scenarios, the perils of open surgery are clearly manifested, as tissue adhesions, loss of dissection planes, and missed lesions are faced.

Ugly laparotomy scars, extensive omental and bowel adhesions, missed lesions and incisional hernias are among the minimally-invasive surgeons' worst nightmares.

Methods

We hereby present a variety of post-laparotomy findings as seen on subsequent laparoscopies. Cases were submitted for MIS due to a number of reasons; recurrence of symptoms, development of post-laparotomy complications, appearance of new complaints, or other variable indications. We present the MIS approach to managing these variable complications. We also compare the post-laparotomy findings to those seen after MIS interventions in patients submitted to "second-look laparoscopies".

Results

A wide array of findings, attributed to the previous open surgical approach, are presented. These include incisional hernia, whether overt or occult, extensive omental and bowel adhesions, interfering even with adequate exposure of the underlying pathology, and missed lesions during the previous laparotomic approach, leading to rapid recurrence of the lesions. Such complications are, by far, less encountered following minimally-invasive surgical approach, and, henceforth, highlight the advantages of such approach for managing patients' complaints.

Conclusions

A broad spectrum of post-laparotomy findings are met by the minimally-invasive surgeon, that can complicate the course of the MIS, and even might negatively impact the patients' outcomes. A call for a more widespread adoption of the MIS approach is just rational to spare both the patients and the minimally-invasive surgeons the drawbacks of laparotomies. This is achievable through spreading the culture of MIS, hand in hand with improving training opportunities and educational means for this surgical approach.

Hence, we urge the "laparotomisers" to "check the knives" !

Urinary tract endometriosis, not an uncommon finding

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Background

Endometriosis is essentially the presence of functional endometrium outside the normal endometrial cavity. It is largely encountered in the ovaries or the pelvic peritoneal surfaces, especially overlying the pelvic cul-de-sac. Extra-genital endometriotic deposits are also reported in various locations including the bowel, abdominal peritoneal surfaces or even distant organs like the brain and lungs.

Urinary tract is also a target for the pathological process of endometriosis. This is not infrequently encountered by the gynaecological minimally-invasive surgeons, especially those working in tertiary referral centres for endometriosis.

Methods

We present a case series of urinary tract endometriosis encountered during minimally-invasive surgery (MIS) for various complaints, in a tertiary endometriosis referral centre. Some of the cases presented with urinary tract complaints, while others presented by chronic pelvic pain or infertility.

We hereby present the different findings encountered in these patients, and the MIS approach to managing such condition. The approach to such cases necessitates the collaboration of gynaecological MIS and urologist with special interest in such disorders.

Results

It is note-worthy that in our case series, the chief complaints of most of the patients were not primarily urological. Many of the patients in the case series presented with chronic pelvic pain, whereas others presented with fertility, primary or secondary, and the finding of the urinary tract affection was only incidental. The remainder of the patients, however, presented with urinary tract complaints. These included frequency, sense of urgency, dysuria, or occasionally, menuria.

Endometriotic involvement ranged from superficial peritoneal implants to deep infiltrating lesions reaching deep into the detrusor muscle down to the bladder mucosa. Endometriosis-associated fibrosis was another mechanism of urinary tract involvement, primarily constricting the ureter(s), effecting ureteric and renal back-pressure and consequently leading to hydro-ureter and hydronephrosis, ending up in renal impairment.

Conclusions

Extra-genital involvement is a reported manifestation of endometriosis. Urinary tract endometriosis is not an infrequently met with presentation of the disease. Such cases may present with urinary tract manifestations. However, many of them are incidentally discovered in the course of MIS for chronic pelvic pain or infertility. Gynaecological minimally-invasive surgeons should be familiar with the various presentations of urinary endometriosis, and importantly, should establish teamwork collaboration with urologists subspecialised in such conditions.

**ES26-0232 -
Posters**

Bizarre locations of pelvic Bilharziasis met by the minimally-invasive surgeon

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Background

Bilharzial infestation is still endemic in certain parts of the world. Schistosomal infestation mainly targets either the urinary system or the gastro-intestinal tract. Occasionally, Bilharziasial infestation of the female genital tract is reported. The target sites in such cases may be the endometrium or the Fallopian tubes. Seldomly, the Bilharzial eggs break their way into unusual locations along their migratory pathways. The thin-walled pelvic veins are usually the exit points for those "wandering" eggs. Alternatively, embolisation is another means of non-traditional settlement of the parasite. Bilharzial eggs trigger a strong inflammatory response at the sites of their invasion, usually ending up in the formation of a Bilharziasial granuloma that either manifests with a mass effect, or a loss of function.

Methods

We present 3 case reports of Bilharziasial deposits surprisingly met with during minimally-invasive surgery (MIS) in patients presented with chronic pelvic pain or infertility. These bizarre locations were the pelvic retro-peritoneal space, overlying the iliac vessels, the appendix, and Mullerian duct remnants found in the Cul-de-sac. These masses were incidentally discovered as Bilharziasial infestation upon histopathological examination.

Results

The first case reported, a 42 years old lady, presented with chronic pelvic pain, that upon ultrasound scanning (USS) was suggested to be a 10x12 cm subserous fibroid. She was submitted for MIS for myomectomy. Laparoscopy revealed the aforementioned mass to be a retro-peritoneal one, overlying the iliac vessels. It was dissected, and sent for histopathological examination, thought of as a retro-peritoneal mass for differential diagnosis, possibly benign retro-peritoneal fibrosis. Histopathological results came back with the surprising finding of Bilharzial ova, both living and dead, surrounded by a severe granulomatous reaction.

The second case was a 36 years old lady suffering chronic pelvic pain, with no apparent abnormalities on USS. Apart from an irregular shaped appendix, surrounded by some adhesions, her laparoscopy was unremarkable. Tissue examination of the removed appendix revealed the unexpected finding of granulomatous reaction surrounding Bilharzial ova.

The last case reported was a 26 years old lady, suffering unexplained primary infertility for 3 years. In whom laparoscopy revealed a 3-mm fimbria-like structure overlying the right utero-sacral ligament, that was excised for histopathological examination. The tissue removed was proved to be Mullerian duct remnant, infested by Bilharzial ova, surrounded by granulomatous tissue.

Cystoscopic and sigmoidoscopic examinations, as appropriate, along with serological investigations confirmed Bilharzial infestations in these cases, who were subsequently subjected to anti-Bilharzial treatments.

Conclusions

Although thought to be in regression, pelvic and genital Bilharziasis are still encountered in practice. Minimally-invasive surgeons should always be aware of the possibility of such encounters, especially in areas with endemic infestation of this disease.

These surgeons, along with their teaming histopathologists, should also keep in mind the possibility of meeting with such lesions at bizarre locations, and with unusual presentations.

**ES26-0047 -
Posters**

Defect oriented laparoscopic management of pelvic organ prolapse

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Background

A woman's estimated lifetime risk of Pelvic organ prolapse POP is 30-50 percent, with 2 percent of women becoming symptomatic. In total, women have an estimated 11 percent lifetime incidence of surgery to repair POP or stress incontinence.

Generalised symptoms of prolapse include pelvic heaviness; bulge, lump or protrusion coming down from the vagina; a dragging sensation in the vagina; or backache. Symptoms of bladder, bowel or sexual dysfunction are frequently present. A wide variety of abdominal and vaginal surgical techniques are available for the treatment of prolapse

Methods

Defect oriented therapy is our aim. Whether the defect is in the posterior, anterior or central compartment. Laparoscopic management is possible. We are presenting a variety of techniques to suit the patients' complaints

Results

Longer learning curve but less postoperative pain, less use of MESH and less erosions and infections rates

Conclusions

The native tissue repair is insufficient and a compensatory operation using graft materials (meshes) became a more reasonable option (abdominal or laparoscopic sacral colpopexy or anterior and posterior total vaginal wall mesh replacement or infracoccygeal IVS sling colpopexy). Nonetheless, graft materials, particularly when used by a vaginal approach, may shrink after placement (mesh erosion) or lead to loss of pelvic floor flexibility (dyspareunia) or be site of late infections.

**ES26-0024 -
Posters**

Incidental finding of thickened endometrium in trans-vaginal ultrasound scan is a cause of concern in postmenopausal women

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Background

Most women with endometrial hyperplasia and cancer present with postmenopausal bleeding (PMB), and endometrial thickness (ET) of ≥ 5 mm is considered as a risk factor. The risk is low in postmenopausal women with no PMB, but there is lack of consensus regarding the threshold separating normal from pathologically thickened endometrium. A meta-analysis concluded that women with no PMB and ET >11 mm have a risk of 6.7% for endometrial cancer and should be investigated (Smith-Bindman et al, *Ultrasound Obstet Gynecol* 2004;24:558–565). The aim of this study was to assess the risk of endometrial hyperplasia and cancer in asymptomatic postmenopausal women with incidental finding of thickened endometrium on trans-vaginal ultrasound scanning.

Methods

Prospective consecutive data of women attending the PMB clinic were collected between 1st January 2011 and 31st January 2015. On using ET ≥ 5 mm (n=1101), the number of asymptomatic and symptomatic women was 71 (6.4%) and 1030 (93.6%), respectively. On using ET >11 mm (n=420), the number of asymptomatic and symptomatic women was 35 (8.3%) and 385 (91.7%), respectively. Women were categorised into group one (benign endometrium) and group two (endometrial hyperplasia and cancer). The project was considered as "service evaluation" by the Clinical Effectiveness Department; therefore, ethics approval was not deemed necessary.

Results

On using ET ≥ 5 mm cut off, the number of asymptomatic and symptomatic women in group two was 4 (5.6%) and 182 (17.7%), respectively. On using ET >11 mm cut off, the number of asymptomatic and symptomatic women in group two was 4 (11.4%) and 131 (34%), respectively. The 4 asymptomatic women in group two had ET of >11 mm.

Fisher exact test revealed that the risk of endometrial hyperplasia and cancer is significantly higher in women with PMB at both ET cut off. Compared to asymptomatic women, the OR (95% CI) of women with PMB for having endometrial hyperplasia or cancer at ET ≥ 5 mm and >11 mm was 3.6 (CI:1.3-9.9, p=0.014) and 4 (CI:1.4-11.6, p=0.011), respectively.

Conclusions

Although postmenopausal women with PMB are at significantly higher risk of endometrial hyperplasia and cancer than asymptomatic women with thickened endometrium, the prevalence in the latter group is high enough (11.4%) to mandate endometrial biopsy when ET is >11 mm.

Ulipristal acetate therapy increased ultrasound features of adenomyosis: a good treatment given in an erroneous diagnosis of uterine fibroids

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Background

To describe sonographic findings in patients with adenomyosis erroneously treated with ulipristal acetate (UPA)

Methods

This an observational ultrasound (US) study on premenopausal patients who were treated with UPA for menorrhagia and uterine fibroids. Patients undergoing UPA treatment (5mg/24h of oral UPA for 3 months) usually had a pre treatment scan to diagnose and evaluate uterine fibroid's volume and endometrial status. The US exam is usually repeated at the end of the 3months treatment in order to assess effects on UPA on fibroids and endometrium. Ideally both these ultrasound scans should be performed in the same unit however not always this occurs. On 42 patients treated with UPA and observed in our ultrasound unit, 18 were scheduled only at the end of the treatment. Of these 6 patients did not show typical fibroids at US but an enlarged uterus with typical US features of adenomyosis.

Results

All patients receiving UPA showed after treatment amenorrhea and improvement of symptoms related to their previous anaemia. 36 out of 42 patients with US detected fibroids showed also an improvement of their pain due to their uterine pathology whereas in the 6 patients with adenomyosis pelvic pain was increased and 2 of this patients stopped the UPA treatment within the first 2 months. In 21% (10/42) patients we observed typical endometrial thickening induced by UPA therapy of these 3 had adenomyosis. The adenomyosis features and especially intramyometrial cystic areas seem to be enlarged compared to pre-treatment scan not performed in our unit.

Conclusions

Our observations on patients with adenomyosis who underwent UPA treatment for an erroneously diagnosis of uterine fibroid showed a worsened of the US adenomyotic features and of their pelvic pain, with an improvement of the bleeding. After these observations we should be aware to prescribe UPA therapy in patients with adenomyosis and a correct US diagnose of fibroids in mandatory to start the UPA treatment

Scar endometriosis the fact and the myth: a report of 2 cases and literature review

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Background

Endometriosis is a disease where functional endometrial cells exist outside the uterine cavity. Scar endometriosis is a rare variant of endometriosis; however it is well described in literature. The cause is understood to be the re-implantation or disposition of these active pluripotent cells in the scar site. The debate has always been about whether it is preventable or not. The main risk lies within the delay of diagnosis of such cases given the malignant potential within. The objective of this review is to highlight the importance of prompt diagnosis, prevention and management.

Methods

We report our experience in the management of 2 cases with scar endometriosis over one year in a tertiary care center in UAE.

Results

Scar endometriosis is a rare entity which makes it difficult for researchers to conduct case controlled or prospective studies on modes of prevention. Few studies were done previously to try to understand the process of implantation and hence prevention of endometriosis specifically at the scar sites given its iatrogenic potential. The disposition theory does not explain the inadvertent presence of endometrial cells inside the parenchyma of lungs and gut for instance. Pathologists tend to believe that the cell characters and the genetic potential are the main factors behind this disease existence, supported by the malignant drive on the long term. Surgical techniques to prevent scar endometriosis are not properly investigated and needs more research with multicenter involvement.

Conclusions

Scar endometriosis should be considered as an important differential in reproductive age patients presenting with pain over scar sites. Delay in diagnosis affects the management and the outcome. Proper assessment should be instigated prior to intervention as mesh placement in large endometriomas might be needed. Preventive techniques should be explored extensively in both laboratory and clinical aspects.

Is pain really a limiting concern in “see & treat” office hysteroscopy?

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Background

There are no unified rules on pain management in hysteroscopy and pain is still considered an obstacle to spread operative procedures in outpatient setting, limiting hysteroscopy at diagnosis. The aim of the study is to investigate the pain experienced only in “see & treat” hysteroscopy.

Methods

267 patients underwent office hysteroscopy to treat intrauterine focal pathologies (Jan-May 2017). Procedures were performed by single hysteroscopist with a continuous flow hysteroscope (4.2 mm Bettocchi® or 3.5 mm Versascope™) and 5 Fr instruments; the approach was always vaginoscopic, saline as distension medium, neither anaesthesia nor analgesia. Pain was self-assessed with Numeral Rating Scale (NRS, 0 “null”, 1-3 “mild”, 4-6 “moderate”, 7-9 “strong”, 10 “worst”): we considered expected (NRS[^]), average (NRS[°]), maximum (NRS^{*}) and discharge (NRS["]) pain; anxiety status has been assessed too, with Stay-Trait Anxiety Inventory (STAI-Y).

Results

All procedures were successful: 227 polypectomies, 22 submucosal myomectomies, 10 drainages of intracavitary fluids, 9 adhesiolysis, 2 lost-IUD removals and 1 metroplasty for uterine septum; 21 cervicoplasties were needed to solve stenosis.

Mean NRS[^] was 5.4 ± 2.2 and mean STAI-Y1 was 46.3 ± 11.6 .

Mean NRS[°] was 3.1 ± 2.3 : among patients, 10.5% “null”, 58% “mild”, 21.8% “moderate”, 8.6% “strong”, 1.1% “worst”.

Mean NRS^{*} was 4.4 ± 2.6 : among patients, 2.25% “null”, 41.9% “mild”, 33.7% “moderate”, 19.9% “strong”, 2.25% “worst”.

Pain was mostly defined as cramping or stabbing.

We reported lowest significant NRS[°] and NRS^{*} means in NRS[^] < 4 with STAI-Y < 40 (1.8 ± 1.9 and 2.6 ± 2.0) vs expressed higher NRS[^] and STAI-Y (4.0 ± 2.7 and 5.1 ± 3.0 , $p < 0.01$). Mean NRS["] was 0.8 ± 1.3 : 67.05% “null”, 28.85% “mild”, 4.1% “moderate”; butylscopolamine was administered to 11.6%. Overall, 86.5% of patients would accept the same procedure if necessary, 13.5% would prefer prior anaesthesia or analgesia.

Conclusions

“See & treat” office hysteroscopy is safe and well tolerated. Patients mainly expect moderate pain and are slightly anxious; the discharge occurs mainly with absent or tolerable pain. Intraoperative NRS scores testify that most women experience less pain than expected; who feels higher pain mostly manages to bear it, since procedures tend to last few minutes. Thus, even without any prior medication, pain should not be a limiting frightening obstacle to go beyond diagnostic hysteroscopy where and when possible. We point out the importance to consider the emotional status more than expected pain at admission, as well as connote degrees of “discomfort” and not merely “pain”: in this context, combining expertise in minimally invasive approaches with a comprehensive relationship to put women at best ease, should be a priority to enhance their comfort.

**ES26-0350 -
Posters**

The value of three-dimensional ultrasound in diagnosis of congenital uterine anomalies

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Background

To investigate potential value of three-dimensional ultrasound for the assessment of normal uterine anatomy and the diagnosis of congenital uterine anomalies.

Methods

Study was performed at Reproductive clinic of Zurab Sabakhtarashvili (Tbilisi, Georgia) between May 2016 – May 2017. We studied all the patients with a history of infertility, RPL and suspicious müllerian anomalies. Age of patients ranged between 23-40 years. Patients first underwent two-dimensional transvaginal scanning, in all the suspicious cases three-dimensional ultrasound examination was performed. In cases of unclear picture, repeated scanning was performed in late luteal phase. All the three-dimensional ultrasound volumes were recorded and stored in machine memory. We used ESHRE/ESGE consensus on classification of female genital tract congenital anomalies.

Results

Final evaluation showed congenital uterine anomalies in 75 cases. 56 of them were patients with infertility (74.6%) and 17 with RPL (22.6%). From 75 cases 49 was partial septated uterus – U2a (65.3%), 4 complete septate uterus – U2b (5,3%), 10 – T-shaped uterus – U1a (13.3%), 10 hemi uterus - U4a (13.3%), 1 case of bicorporeal septate uterus - U3c (1,3%) and one patient with two uterus with separated cervixes – U1c (1,3%). Among 17 patients with RPL 12 (70,5 %) had partial septated uterus (U2a) and 5 (29,5%) T-shaped uterus (U1a). From 53 patients with partial and complete septated uterus in 23 cases (43,4%) was performed hysteroscopic metroplasty. In all 23 cases three-dimensional ultrasound diagnosis was confirmed.

Conclusions

It seems, three-dimensional ultrasound has high value for diagnosis of congenital uterine anomalies, which often associate with infertility and RPL problems.

Can stage I intravenous leiomyomatosis preserve uterus and fertility?

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Background

To summarize and analyze clinical characteristics and pathological features of stage I intravenous leiomyomatosis with uterine preservation.

Methods

Clinical observation and follow-up of 9 patients diagnosed of stage I intravenous leiomyomatosis and underwent myomectomy by laparoscopy or laparotomy. Followed up for 98 months in the Obstetrics and Gynecology Hospital affiliated of University.

Results

Patient age was 24 to 46, the average was 31.1 ± 7.3 . Two patients underwent laparoscopic myomectomy, the other 7 underwent laparotomy approach. 4 patients has myoma history, 1 patient has breast cancer history. The largest myoma size ranged from 6 to 17.8 cm in diameter, and most of them located in uterine corpus. All 9 patients respentanted with CD31/CD34 positive (Table) and 7 presented with worm like leisons. Most patients presented with positive ER and PR, but negative or low Ki-67. (Table 1) There were 4 cases (44.4%) relapsed with myoma and within uterine. 5 patients desire fertility after surgery and one of them pregnant after 26 months and had live birth.

N	Age(y ear)	Surgical a pproach	Bloo d loss (ml)	Oper ation time(min)	Fertility desire	Post- oper ative GnR Ha	Foll ow up (mo nth)	Rela pse	Post- operativepr egnancy	Live Birth	Worm Like	CD 31/ CD 34
1	30	Laparotom y	300	65	N	N	98	N	N	N	Y	+
2	29	Laparotom y	200	70	Y	Y	49	Y	N	N	N	+
3	28	Laparotom y	100	182	Y	N	42	Y	N	N	Y	+
4	24	Laparotom y	500	120	Y	N	36	Y	Y	Y	Y	+
5	26	Laparotom y	2000	247	Y	Y	34	N	N	N	Y	+
6	36	Laparotom y	200	130	N	N	22	N	N	N	Y	+

737	Laparoscopy	300	160	N	N	16	Y	N	N	Y	+
846	Laparotomy	500	120	N	N	12	N	N	N	N	+
924	Laparoscopy	800	307	Y	Y	11	N	N	N	Y	+

Conclusions

Stage I intravenous leiomyomatosis, where tumors penetrated the uterine venous wall but were confined to the pelvic cavity may preserve uterus and fertility.

**ES26-0058 -
Posters**

The study of the postoperative fertility and sexual function after LEEP treating cervical precancerous lesions

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Background

LEEP (Loop Electrosurgical Excision Procedure) is the first choice for patients with cervical precancerous lesions who need fertility-sparing treatment. This study was designed to investigate the postoperative fertility and sexual function after LEEP.

Methods

Patients from 11 Obstetrics and Gynecology Hospitals were enrolled in the study from 2013-01-01 to 2015-12-31. The clinical and follow-up data were collected.

Results

Of the 125 patients who had live birth after LEEP, 27 were preterm birth (21.6%). The risk of preterm birth was significantly increased in the conization group (RR 2.634, 95% CI 1.689-4.108). With the increase of the depth and volume of conization, the risk of premature births increased gradually. Two patients (1.6%) had preterm births at 20-28 weeks of gestation, 2 (1.6%) at 28-32 weeks and 23 (18.4%) at 32-36 weeks. The premature births happened mostly at the 32-36 weeks. But the incidence of the premature birth at the 20-28 gestational weeks also increased after LEEP. The risk of cesarean section due to abnormal canal and force of labor (RR 1.667, 95% CI 0.598-4.644) was not increased significantly ($P = 0.220$). The weights of the neonates were significantly lower than that of the control group ($P < 0.001$). With the increase of volume and depth of conization, the risk of newborns with low birth weight increased. Age was the risk factor for spontaneous abortion in the first trimester after LEEP. With the increase of age, the incidence of spontaneous abortion increased. With the increase of the depth and volume of the conization, the pain of postoperative sexual intercourse gradually increased, and the scores of overall quality of sexual life reduced.

Conclusions

LEEP increase the risk of preterm birth and low birth weight infants. LEEP does not increase the risk of postoperative cesarean section. The effect of LEEP on postoperative sexual life mainly focus on the pain of sexual intercourse. The total scores of postoperative quality of sexual life decreases with the increase of depth and volume of conization.

**ES26-0007 -
Posters**

Experience of tubo-ovarian abscess: a retrospective clinical analysis of 318 cases in a single tertiary center in middle turkey

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Background

To identify the clinical and laboratory parameters, ultrasonographic (usg) morphology, and to predict surgical treatment for patients with tubo-ovarian abscess (toa).

Methods

A total of 318 patients diagnosed with toa between january 2015 and december 2016 were retrospectively analyzed at a referral center in turkey. patients requiring surgical treatment were compared with those who did not with respect to demographic characteristics and clinical, usg, and laboratory findings

Results

Ninety-three patients (29.25%) whose medical treatment failed underwent surgical intervention and a minimally invasive drainage procedure. menopausal status, diabetes mellitus, long-term intrauterine device use, fever at admission, bilateral and multicystic toa, and toa size are risk factors for surgical treatment. an abscess size of 6.5 cm was a significant indicator for surgical intervention (or=16.632; 95% ci 8.745-31.632; p<0.05). the area under the curve (auc=0.868) in the receiver operating characteristic (roc) curve analysis was found to be statistically significant for toa size, with a threshold value of 6.5 cm. the recommended cut-off value for erythrocyte sedimentation rate (esr) was 61.0 mm/h, and the cut-off point of the c-reactive protein (crp) level in the roc analysis was found to be 24.5 mg/dl. there were no complications in the usg-guided drainage surgical treatment group.

Table 1. Clinical and laboratory outcomes of the patients and logistic regression analysis of the factors thought to be effective on surgical treatment

	Medical Treatment (n=225) (%)	Medical Treatment + Surgical Treatment (n=93) (%)	Odds Ratio	95% Confidence Interval	p
Duration of IUD use (years)	8.04+1.89	9.33+2.80	1.308	1.162-1.472	<0.001*
Tubo-ovarian abscess diameter (cm)	5.53+2.04	8.92+2.18	1.998	1.709-2.336	<0.001*
Diameter of abscess >6.5 cm	57 (25.3%)	79 (84.9%)	16.632	8.745-31.632	<0.001*
Complex multicyst	58 (25.8%)	52 (55.9%)	3.652	2.204-6.062	<0.001*
Leukocyte count (10 ³) (mcl)	13.87+3.13	16.65+4.23	1.000	0.990-1.010	<0.001*
NLR (%)	7.73+0.84	8.14+0.62	3.552	2.104-6.308	<0.001*
PLR (%)	164.27+67.97	201.32+111.79	1.005	1.002-1.008	0.004
CRP (mg/dL)	18.90+10.80	37.71+19.64	1.082	1.061-1.104	<0.001*
Erythrocyte sedimentation rate (mm/h)	41.39+12.84	92.46+25.11	1.134	1.096-1.172	<0.001*

Table 2. Surgery type undergoing surgical treatment in women with tubo-ovarian abscess

	Laparotomy (n=44) (47.32%)	Laparoscopy (n=26) (27.96%)	USG Guided Drainage (23) (24.73%)	p
Drainage (%)	9 (20.45%)	15 (57.70%)	23 (100.00%)	0.004*

Table 3. Cut-off values of abscess size, leukocyte count, CRP level and ESR in predicting the surgical treatment

	Cut-off	AUC	95% CI	Sensitivity (%)	Specificity (%)	p
Abscess size	6.5 cm	0.868	0.827-0.908	84.9	74.7	<0.001*
Leukocyte count	15.50 (10 ³) (mcl)	0.689	0.619-0.758	66.7	72.7	<0.001*
CRP	24.5 mg/dL	0.811	0.761-0.863	67.7	76.4	<0.001*
ESR	61.0 mm/h	0.946	0.919-0.973	80.6	90.8	<0.001*

Conclusions

toa size, complex multicystic mass image, crp, and esr are useful indicators as to whether surgical treatment is required for the management of toa. usg-guided drainage was less invasive with fewer complications and should be the preferred surgical treatment.

An overview of ectopic pregnancy cases treated between May 2009 and December 2016 in a single tertiary center in middle Turkey

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Background

This study aimed to evaluate the clinical results of ectopic pregnancy (ep) at our clinic.

Methods

In this retrospective study, the original files of 233 patients who were treated for ep between may 2009 and december 2016 were analyzed. The patients were assigned to the following groups based on the applied treatment methods: group 1, expectant management (n=24), group 2, single-dose methotrexate (mtx) (n=144), group 3, multiple-dose mtx (n=25), and group 4, surgical intervention (n=40). the following parameters were recorded and assessed: sociodemographic characteristics, pelvic ultrasonography findings (gestational sac, ectopic mass, positive fetal cardiac activity), serum beta-human chorionic gonadotropin (β -hCG) levels on day 0, day 4, and day 7, and surgical procedures in women that underwent surgical interventions.

Results

The sociodemographic characteristics were similar in all four groups. the percentage of ectopic mass and positive fetal cardiac activity was greater and the diameter of the mass was larger in group 4 than in the other groups. the β -hCG values on day 0, day 4, and day 7 were statistically different between the groups ($p < 0.001$). the cutoff value for the β -hCG change was 18% between day 0 and day 4 (AUC=0.726, $p < 0.001$) and 15% between day 4 and day 7 (AUC=0.874, $p < 0.001$). The probability of the requirement for an additional dose of mtx was 0.78 times lower inpatients who had a >18% decrease in β -hCG levels from day 0 to day 4 in comparison to those who had a >18% increase from day 0 to day 4. the probability of the requirement for an additional dose of mtx was 1.64 times greater in patients whose reduction in β -hCG levels from day 4 to day 7 was <15% in comparison to those who had >15% reduction from day 4 to day 7.

Table 1. The β -hCG levels in all four groups on Day 0, Day 4, and Day 7

β -hCG	(Group=1)(n=24)	(Group=2)(n=144)	(Group=3)(n=25)	(Group=4)(n=40)	p
Day 0	1160.00+289.60 ^{1,2,3}	1667.43+677.19 ^{1,4,5}	2356.20+675.68 ^{2,4} _{,6}	4469.13+1194.00 ³ _{5,6}	<0.001*
Day 4	756.25+177.33 ^{1,2}	1445.16+630.61 ^{1,4}	2024.00+620.56 ^{2,4}	-	<0.001*
Day 7	539.17+134.52 ^{1,2}	1144.84+593.7 ^{1,4}	1626.64+580.35 ^{2,4}	-	<0.001*

(1=group 1 vs group 2), (2= group 1 vs group 3), (3= group 1 vs group 4), (4= group 2 vs group 3), (5= group 2 vs group 4), (6= group 3 vs group 4)

Table 2. Changes in the β -hCG values in all four groups from Day 0 to Day 4 and from Day 4 to Day 7 after MTX administration

β -hCG	(Group=1) (n=24)	(Group=2) (n=144)	(Group=3) (n=25)	p
Day 4-0	403.75+132.28 ^{1,2}	222.27+65.82 ^{1,3}	332.20+76.75 ^{2,3}	<0.001*
Day 7-4	217.08+61.37 ^{1,2}	300.31+72.54 ^{1,3}	397.35+81.04 ^{2,3}	<0.001*
p	<0.001*	<0.001*	0.006*	

*statistically significant

Conclusions

Additional dose requirements for patients with ep may be predicted early in the changes in β -hCG levels between day 0 and day 4. further prospective studies are required to elucidate this issue.

The impact of serum adropin and ischemia modified albumin levels based on BMI in PCOS

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Background

The aim of this study was to evaluate the effects of polycystic ovary syndrome (pcos) and body mass index (bmi) on serum adropin and ischemia modified albumin (ima) levels.

Methods

This prospective cross-sectional study was performed with a total of 120 women [group 1; non-pcos = 60 (bmi <25 = 30, bmi ≥25 = 30) and group 2; pcos = 60 (bmi <25 = 30, bmi ≥25 = 30)]. blood samples were collected between the third and fifth days of the women's menstrual cycles after a night of fasting.

Results

There were no differences between the groups in relation to age, basal follicle stimulating hormone, estradiol, thyroid stimulating hormone, prolactin, high-density lipoprotein cholesterol, total testosterone, dehydroepiandrosterone sulfate levels, systolic and diastolic blood pressures. a significant difference was found in basal luteinizing hormone, fasting glucose, insulin, homeostatic model assessment of insulin resistance, total cholesterol, low-density lipoprotein cholesterol, triglycerides, free testosterone levels, waist-to-hip ratios and the ferriman-gallwey scores between the pcos and non-pcos patients in the lean and overweight groups ($p<0.05$). the serum adropin levels in the lean PCOS group were lower than in the lean non-cos group ($p<0.05$) and were lower in the overweight pcos group than in the overweight non-pcos group ($p<0.05$). there was also a statistically significant difference in serum ima levels in the pcos group than in the non-pcos group in both the lean and overweight groups ($p<0.05$).

Table 1. Demographic and clinical characteristics in patients based on PCO and BMI

Variables	Non-PCOS (n=60)	PCOS (n=60)	p-value ^a
Ferriman-Gallwey score			
*BMI<25 kg/m ²	5.83+1.05	15.90+6.55	<0.001
**BMI>25 kg/m ²	6.361.58	16.63+6.94	<0.001
p-value ^b	0.131	0.676	
Fasting glucose			
*BMI<25 kg/m ²	75.10+12.81	82.971+1.63	0.016
**BMI>25 kg/m ²	79.23+6.01	84.17+9.71	0.021
p-value ^b	0.115	0.611	

HOMA-IR (mg/dL)

*BMI<25 kg/m ²	1.11+1.08	2.70+1.89	<0.001
**BMI>25 kg/m ²	1.39+0.72	3.43+3.19	0.002
<i>p-value</i> ^b	0.361	0.271	

Free testosterone (pg/dl)

*BMI<25 kg/m ²	1.15+0.36	2.33+0.56	<0.001
**BMI>25 kg/m ²	1.35+0.57	2.55+0.62	<0.001
<i>p-value</i> ^b	0.117	0.173	

Table 2. Adropin and IMA levels based on BMI and PCOS

Variables	Non-PCOS	PCOS	<i>p</i> ^a
Adropin levels (ng/mL)			
*BMI<25 kg/m ²	479.47+358.18	282.20+85.22	0.006
**BMI>25 kg/m ²	390.70+259.25	254.67+71.18	0.009
<i>p</i> ^b	0.276	0.180	
IMA levels (ng/mL)			
*BMI<25 kg/m ²	182.03+105.76	294.47+221.21	0.016
**BMI>25 kg/m ²	224.93+101.91	352.60+228.31	0.008
<i>p</i> ^b	0.115	0.321	

BMI: body mass index, IMA: ischemia-modified albumin

*BMI<25kg/m² and Non-PCOS n=30; BMI<25kg/m² and PCOS n=30

** BMI>25kg/m² and Non-PCOS n=30, BMI>25kg/m² and PCOS n=30

a: Comparisons of PCOS and non-PCOS groups. $p < 0.025$ set as statistically significant (Bonferroni adjustment was applied for controlling Type I error). b: Comparisons of BMI groups $p < 0.025$ set as statistically significant.

Conclusions

Although serum adropin levels were significantly decreased in the pcos group, ima levels increased. further studies are needed to determine the effects of adropin and ima in women with pcos and to use a new marker to monitorize treatment outcomes.

**ES26-0278 -
Posters**

How thorough is consent for hysteroscopy and laparoscopy?

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Background

The RCOG have published consent guidance for laparoscopy and hysteroscopy. We have audited how thorough the consent process was in our institution.

Methods

We reviewed 41 consent forms from 10/01/2017 to 08/02/2017 on the day of surgery. Twenty-one women were consented for a laparoscopy and 20 for hysteroscopy. Adherence of consent forms to RCOG complication recommendations was checked.

Results

The RCOG recommends stating overall risk of serious complications from either procedure being approximately two in 1000. Laparoscopy consent includes: damage to bowel/bladder/uterine/major blood vessels, failure to gain entry, hernia at entry site and death. Frequently occurring risks include: wound bruising/gaping/infection and shoulder tip pain. Any extra procedures includes: laparotomy, repair of injury and blood transfusion. 21/21(100%) of our patients were consented for risk of bowel/bladder injury, 20/21(95%) blood vessel injury and 8/21(38%) uterine injury. No (0/21) consent form documented hernia/risk of death.

The RCOG hysteroscopy consent recommendations include: damage to uterus/bowel/bladder/major blood vessels, failure to gain entry into the uterine cavity, infertility and death. Frequent risks include infection and bleeding. Documenting laparoscopy/laparotomy in the event of perforation is recommended. Our findings reveal 19/20(95%) of patients being consented for uterine injury, 7/20(35%) bowel, 8/20(40%) bladder and 4/20(20%) for blood vessel injury. None (0/20) of the hysteroscopy forms mentioned infertility/death. 10%(2/20) did not state the risk of conversion to laparoscopy or laparotomy in the case of uterine perforation.

Conclusions

In summary this data demonstrates that consent forms were often incomplete. Pre-filled consent forms could be developed to minimise omissions in the process.

Hysteroscopic evaluation is justified in recurrent implantation failures

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Background

As the recurrent implantation failure (RIF) still stands as a challenge for the clinician, IVF practitioners concern meticulously with endometrial receptivity and uterine structural abnormalities as well as embryo characteristics. Thus, hysteroscopy may be a valuable tool in the management of RIF. We aimed to share our clinical data of hysteroscopic evaluation in RIF cases.

Methods

This retrospective descriptive study was conducted at a tertiary health care center. All patients with a history of ≥ 2 implantation failures were offered diagnostic hysteroscopy as a part of standard investigation work-up. Medical records of all patients who consent to undergo hysteroscopy pertaining to July 2007 and April 2017 2016 were reviewed. All hysteroscopic procedures were performed by B.I.O.H.® Office hysteroscopy unit (Karl Storz, Germany). Baseline characteristics, and hysteroscopic findings were documented.

Results

Results: RIF was the only indication in 105 hysteroscopy procedures. Baseline characteristics of the study population are as follows (mean \pm SD): patients' age 34,46 \pm 6,70, body mass index 24,99 \pm 4,77. Number of implantation failures were 2,92 \pm 1,05 [two in 50 (47,6%) patients, three in 23 (21,9%) patients and >3 in 32 (30,5%) patients].

Fifty-eight (55.2%) had normal hysteroscopy findings. The remaining 47 women (44.8%) presented uterine/endometrial abnormalities: one patients (0.9%) had intrauterine adhesions, three (2.8%) had polyps, two 2 (1.9%) had submucous myomas and 41 had congenital structural uterine anomalies (39 of arcuate uterus and 2 case of unicornuate uterus). Etiologic reasons of infertility are tabulated below:

	Normal HS findings	Abnormal HS findings
Male factor	7 (6,7%)	4 (3,8%)
Tubal factor	4 (3,8%)	3 (2,8%)
Ovulatory factor	13 (12,4%)	9 (8,6%)
Endometriozis	5 (4,8%)	4 (3,8%)
Unexplained	14 (13,3%)	9 (8,6%)
Mixed	19 (18,1%)	14 (13,3%)

Conclusions

Although embryonic factor mainly due to the chromosomal aberrations is the key factor in implantation failures, structural uterine/endometrial abnormalities also play a role separately or in conjunction with the other etiologies. The balance of the existing literature does not suffice to draw a definite conclusion regarding the routine use of diagnostic hysteroscopy in RIF cases. The present findings of our IVF clinic will certainly provide a contribution to the current knowledge in the literature. The limitations of our study are the retrospective design and small sample size. As the patients with ≥ 2 implantation failures have a high prevalence of uterine cavity abnormalities, offering diagnostic hysteroscopy may contribute to the chance of success for the following IVF trials.

**ES26-0343 -
Posters**

Laparoscopic mesh ileopectopexy

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Background

Pelvic organ prolapse is a very common problem with a prevalence of 41–50 per cent of women over the age of 40 years. There is a lifetime risk of 7 per cent of having an operation for prolapse and a lifetime risk of 11 per cent of having an operation for incontinence or prolapse. Laparoscopic repair by sacrocolpopexy has traditionally been done. Laparoscopic mesh ileopectopexy has recently emerged a winner in prolapse repair with all advantages of laparoscopy –early recovery, short duration of stay, lower analgesia requirement and cost effective method.

Methods

In our advanced laparoscopy tertiary care center there were 17 cases of uterovaginal prolapse from October 2015 to March 2017 treated by mesh ileopectopexy. This surgery was done in 10 cases of hysteropexy in age group of 27 to 36 years {median age 32} and 7 cases of LSH in age group of 42 to 63 years {median age 54}. BMI of these women ranged from 32 to 41. All patients had baseline blood investigations, TVS, ECG, Chest X ray and reported normal cervical PAP smear and endometrial biopsy. Informed consent was taken. Ileopectopexy is applicable for hysteropexy in women desirous of future childbearing. Patients who had completed family and were candidates for hysterectomy were treated by supracervical hysterectomy and mesh ileopectopexy.

A 15cm x 3cm mesh was fixed with 2-0 prolene suture anteriorly to the cervix following LSH (Laparoscopic supracervical hysterectomy) and to isthmus of uterus when uterus was conserved. The ileopectineal ligament is the continuation of Cooper's ligament posteriorly. The ileopectineal ligament was exposed by giving an incision parallel to the round ligament starting at base of round ligament. The mesh was fixed with 2 interrupted sutures bilaterally as tension free sling.

Uterosacral plication was done in all cases to give uniform support to anterior and posterior compartment. Burch Colposuspension as procedure for SUI was done in 3 of LSH group patients. One patient had concomitant para vaginal defect repair.

Results

All patients were discharged within 24-36 hours without complication. During mean follow up of 18 months from October 2015 TO March 2017, There was no recurrence of prolapse and no development of new anterior/lateral compartment defects. 3 patients reported mild lower abdomen stretching ache in first 2-3 weeks which resolved with routine physiotherapy.

Conclusions

Laparoscopic Mesh Ileopectopexy is safe and effective for prolapse repair alone, with LSH or with concomitant surgery for SUI and paravaginal defect repair with all advantages of minimally invasive surgery.

Evaluation of the barbed suture for vaginal cuff dehiscence and bowel obstruction in total laparoscopic hysterectomy and laparoscopic myomectomy cases: a retrospective cohort study

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Background

To evaluate the incidence of bowel obstruction and vaginal cuff dehiscence after the utilization of unidirectional barbed suture in laparoscopic gynecologic surgery.

Methods

A retrospective cohort study from January 2011 to January 2016 was performed using electronic database. Patients who underwent total laparoscopic hysterectomy (TLH) and laparoscopic myomectomy whose used unidirectional barbed suture (V-loc™ 180 unidirectional suture; Covidien, Mansfield, USA) were examined.

Results

Barbed suture was used in a total of 271 women to close the vaginal vault after TLH and 20 women to repair the uterine defect after laparoscopic myomectomy. The mean age of the patients who underwent TLH was $51,8 \pm 9$, the mean parity was $3,2 \pm 1,9$, the mean hospital stay was $2,3 \pm 1,2$ and the mean operation duration was $145,3 \pm 57,7$. The mean age of the patients who underwent laparoscopic myomectomy was $39,7 \pm 5,9$, the mean parity was $1,14 \pm 0,9$, the mean hospital stay was $1,75 \pm 1$ and the mean operation duration was $138,2 \pm 50,6$. The mean diameter of leiomyomas was 6.3 cm (3-11 cm) at the laparoscopic myomectomy operations which used barbed suture. Bowel obstruction and vaginal cuff dehiscence were not found in any patient.

Conclusions

Laparoscopic approach has many clinical benefits, the procedure may cause an increase in VCD risk, which may result with mortality and morbidity compared with abdominal and vaginal procedures. In addition, intra corporeal suturing and knot tying during TLH and laparoscopic myomectomy requires extreme manual skills from surgeons. This procedures are time consuming, particularly when the surgeon is not highly experienced, and thus may increase the cost by lengthening the duration of surgery. The use of knotless barbed sutures can securely re-approximate tissues with less time and cost in cases where knot tying is difficult. We suggest that the barbed suture is an alternative method to close the vaginal vault without any vaginal cuff dehiscence and bowel obstruction and repair the uterine defect after laparoscopic myomectomy.

Comparison of the ratio of vesicovaginal and ureterovaginal fistulas in laparoscopic and abdominal hysterectomy: a retrospective cohort study

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Background

This study aims to evaluate the incidence, clinical presentation and etiological factors of urogenital fistula in total laparoscopic and abdominal hysterectomy cases.

Methods

We retrospectively analyzed the medical records of 1357 cases of laparoscopic and abdominal hysterectomy performed at Bagcilar Training and Research Hospital, Department of Obstetrics and Gynaecology between 1 January 2011 to 1 January 2016. All patients with diagnosis of ureterovaginal or vesicovaginal fistulas were further evaluated. NCSS (Number Cruncher Statistical System) 2007 (Kaysville, Utah, USA) was used for statistical analysis.

Results

Mean age of 973 patients who underwent total abdominal hysterectomy (TAH) was $48,52 \pm 7,79$ (20-87) and mean age of 384 patients underwent total laparoscopic hysterectomy (TLH) was $52,14 \pm 8,90$ (32-89). This was statistically significant ($p=0,001$). Ureter injury (TAH vs TLH; 2 (0.2%) vs 3 (0.8%), $p=0,14$, respectively) and bladder injury (TAH vs TLH; 2 (0,2%) vs 2 (0,5%), $p=0,31$, respectively) were not statistically significant. 7 patients (%0,7) who underwent TAH and 3 patients (%0,8) who underwent TLH suffered from urogenital fistula. 4 of the patients with urogenital fistula after TAH underwent surgery for leiomyomas, 2 patients for endometrioma and 1 patient for CIN 1. 1 of 3 patients with urogenital fistula after TLH underwent surgery for cervix cancer, 1 patient for endometrium cancer and 1 patient for leiomyoma. Although all 3 patients with urogenital fistula after TLH were operated in 2012 and before, the formation of urogenital fistula after TAH has not varied over the years. 3 patients with urogenital fistula after TAH were treated by bladder and double j catheterization, 3 patients underwent ureteroneocystostomy surgery and 1 patient who had isolated vesicovaginal fistula was underwent surgery to repair fistula. 1 of the patients with fistula after TLH had ureteroneocystostomy surgery and nephrostomy was performed to other 2 patients and fistulas were disappeared.

Conclusions

The urinary tract is at risk of injury during pelvic operations, such injuries may lead to urogenital fistula. Historically, regarding the approach for hysterectomy, the risk of ureteral injury appeared to be the greatest during laparoscopic hysterectomy. Recent reports showed that the incidence of ureteral injury during laparoscopic hysterectomy was similar to the cases of abdominal hysterectomy. Although there are several studies for comparison of urinary tract injuries during abdominal and laparoscopic hysterectomy, debate continues regarding the safest approach for hysterectomy. We found no evidence that any choice of hysterectomy approach is superior to or inferior to the other techniques regarding formation of urogenital fistula. Laparoscopic hysterectomy was seen safety about formation of urogenital fistula when performed by expert surgeons who had completed learning curve previously.

**ES26-0356 -
Posters**

A pelvic mass and midtubal occlusion in an infertile patient as a result of autoamputation of the adnex

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Background

The unilateral absence of an ovary and/or fallopian tube is a rare finding which may be congenital or acquired. Acquired absence of an adnex is more frequent than its congenital absence and is considered to be the result of a delay in the diagnosis of adnexal torsion resulting subsequently in autoamputation. Findings of an absent ovary and a free floating pelvic mass are important signs suggestive of autoamputation.

Methods

A 24 year old G0P0 patient presented to the infertility clinic of our hospital with inability to conceive within the last two years. An ultrasound examination revealed a 33x42mm solid appearing right adnexal mass with no vascularization detectable on doppler ultrasonography. The mass was thought to be non-malignant in nature.

Results

On MRI the right ovary could not be visualized. On laparoscopy, a 3x5cm free floating yellow-black mass with a smooth surface resembling an ovary was detected in the the uterovesical space. The right ovary could not be visualized and the right fallopian tube appeared amputated from the middle portion, ending bluntly on its distal side. The left ovary appeared normal. The mass found in the uterovesical space was assumed to be a detached ovary caused as a result of asymptomatic adnexaltorsion and its subsequent amputation. The blunt distal end of the right fallopian tube was cut with scissors in full thickness and tubal passage of methylene blue was observed upon chromopertubation. Partial absence of the tube was thought to support the diagnosis of autoamputation of the right adnex rather than its agenesis. The mass was exteriorized from the pelvis and pathologic examination revealed the presence of calcified necrotic tissue

Conclusions

Ovulation induction, ovarian hyperstimulation syndrome, a past history of adnexal torsion, polycystic ovarian syndrome, a history of tubal ligation and pregnancy are predisposing factors for adnexal torsion. The most commonly encountered adnexalpathologies leading to torsions are cystic teratomas, follicular cysts, hemorrhagic cysts, paraovarian cysts, cystadenomas or hydrosalpinges. However, there is no detectable adnexial pathology in 25-68% of torsions. Symptoms of acute torsion including acute pelvic pain, nausea, vomiting and flank pain usually cause referral of patients to the emergency department. Nevertheless, the majority of patients with autoamputation following adnexal torsion are asymptomatic. In the present case we failed to make a preoperative diagnosis. When questioned retrospectively, the patient denied any history of severe pelvic pain or hospitalization.

Because symptoms of adnexal torsion may at times be vague and the ovaries may appear normal on ultrasonography, especially during the premenarchal period, gynecologists should have a high index of suspicion for adnexal torsion in the differential diagnosis of nonspecific pelvic pain and a decision for a diagnostic laparoscopy should be made more liberally, to prevent loss of an ovary.

<http://player.vimeo.com/video/221625966?autoplay=1>

Factors that affect the conversion from laparoscopy to laparotomy during the training process for laparoscopic gynecological surgery

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Background

Shorter duration of hospitalization, better cosmetic results, less postoperative pain and faster recovery are some of the advantages of laparoscopic surgery which has made it more preferable over open surgery in the recent years.

Laparoscopic surgeons need to have certain skills including the ability to sense depth on two dimensional imaging of the abdomen, good hand-eye cooperation, bimanual coordination, ambidexterity and good camera navigation.

A learning curve is a graphic showing the relationship between the process of learning a new procedure and the duration of operations, complication rates, hospital stay or mortality rates. Determining the number of operations surgeons have to perform before they have adequate surgical skills to do the operations on their own is important to lower rates of complications and morbidity and mortality.

Methods

Laparoscopic gynecological surgeries performed at the gynecology clinic of a tertiary care hospital between 2012 and 2016 were reviewed retrospectively. A cut-off number of 50 was determined as the number of surgeries needed for a gynecology surgeon to gain adequate skill for gynecological laparoscopic surgeries. The learning curves of 15 junior doctors when training to perform benign gynecological procedures were examined. Reasons that led to the conversion from laparoscopy to laparotomy were analysed from the electronic records of patients.

Results

Out of the 1615 benign laparoscopic surgeries performed, 87 (5,38%) resulted in conversion to laparotomy. The majority of patients who underwent conversion to laparotomy suffered from severe endometriosis(37.2%). The help of other surgeons was required in 34.9%. The complication rate was high with a 16.3% rate of internal organ injury, 4.7% rate of vascular injury, and 20.9 % rate of more than 1000ml of bleeding. 20.9% of patients had to undergo further surgery and 29.1% received extra medication to treat the complications. The reasons for conversion from laparoscopy to laparotomy were intraabdominal adhesions in 50%, suspicion of malignancy in 11,6%, dysfunctioning surgical instruments and technical problems in 10,5%, anesthesia related problems in 8,1% uncontrollable bleeding in 7% of difficulty in suturing in 4,7%, inability to enter the abdomen in 3,5%, and inability to exteriorize the excised tissues from the abdomen in 3,5% of patients.

Conclusions

Decreasing the rate of conversion to laparotomy will decrease the morbidity rate in patients undergoing gynecological surgery. Consequently preoperative accurate diagnosis of pathologic conditions and determination of the difficulty level of the necessary surgical procedure is important.

Because endometriosis surgery is technically difficult and requires a certain amount of skill, the rate of conversion to laparotomy may be high in such operations. Having to convert to laparotomy from laparoscopy due to problems in abdominal entrance, tissue exteriorization and suture application indicates that a systematic laparoscopic training program is necessary for junior doctors in our country.

Lesson learnt: Richter's hernia at port site following laparoscopic salpingectomy for ectopic pregnancy

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Background

Richter's hernia is the protrusion and/or strangulation of part of the circumference of the bowel through a small defect in the abdominal wall. This is a rare complication with an incidence of about 0.65-2.8%. It is difficult to diagnose as they rarely present classically with intestinal obstruction but it can be associated with significant postoperative morbidity.

Methods

Case report

A 37 years old lady presented to the early pregnancy unit with a history of 7-week pregnancy and lower abdominal pain. Beta HCG was 7301 iu but increased less than 63% after 48 hours. Transvaginal pelvic ultrasound scan showed a right adnexa mass with an echogenic doughnut-shaped ring, suggestive of an ectopic pregnancy. She was subsequently consented for a laparoscopy salpingectomy. A 10mm trocar was used for left iliac fossa port and 5mm trocar for the right iliac fossa port. Procedure was uneventful and specimen was retrieved in a bag through the 10mm port. The 10mm port's rectus sheath was closed with J needle 0-vicryl. Patient recovered well and discharged on the following day. Unfortunately, she was readmitted on day 2 post-operatively with nausea and vomiting. Her observation and blood tests were within the normal limits. An abdominal x ray was requested and reported to have focal segment of mildly dilated small bowel most likely representing a paralytic ileus. Patient was nil by mouth and a nasogastric tube was inserted. Her vomiting persisted despite antiemetic. A CT abdomen and pelvis was then requested in view of her persistent vomiting and abdominal pain. It revealed a small segment of the small bowel trapped within the parietal peritoneum and the abdominal wall muscle but no ischaemic complication seen. Patient was brought back to emergency theatre for exploratory laparotomy by the general surgeon. During the laparotomy, the loop of bowel was released from the left iliac fossa port site, the peritoneal layer defect was found to be about 2cm in size. However, the rectus sheath suture was still intact. Fortunately, the loop of bowel was still healthy and viable. The defect was closed and patient had a good recovery.

Results

Discussion

In this case, the port site has likely been stretched during the retrieval of the specimen. As a learning point, all port site should be inspected carefully prior to closure. If the post site defect is more than 10mm it should be closed completely including the peritoneal layer abdominally or laparoscopically to prevent herniation of bowel. CT scan is a good adjunct to diagnose and differentiate port site haematoma or hernia.

Conclusions

Port site hernia is a recognised complication of laparoscopic surgery. Prompt investigation and early diagnosis for port site hernia is important to prevent serious complications.

**ES26-0408 -
Posters**

Quantification of complicacy degree for TLH to standardize the procedure

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Background

Regardless of well-known advantages of minimally invasive surgery laparoscopic route often is neglected to remove the uterus on account of its impropriety in special cases. On the other hand standardization could be a way out to implement TLH on routine basis.

Methods

Retrospective study of 500 TLH cases performed by the same surgery team was performed. All cases were video documented. Two main groups of parameters were highlighted to determine the degree of complicacy of the given surgical procedure: patient related – BMI, previous abdominal/ pelvic surgery, and disease related - size of uterus/fibroids and location of the latter. Their influence was estimated by calculation of different indices of operation duration and intra-operative blood loss.

Results

Our results showed the predominance of adhesions over the BMI and location of fibroids over their size for determining the complicacy of TLH. It was reflected in special table where each criteria was marked by corresponding points. Size of the mass as isolated parameter prolongs mainly time from detachment to removal from the cavity rather than from beginning of surgery to complete detachment. Special attention should be paid for the history of cesarean section since it deteriorates retroperitoneal anatomy and collocation of bladder and uterus.

Conclusions

TLH could be safely implemented even in the most difficult cases. Quantification score of complicacy helps to mobilize the attention of the surgery team and follow the standards during the operation

**ES26-0412 -
Posters**

TLH in patients with a history of cesarean section

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Background

As the rate of cesarean section has increased, more women with a history of cesarean section undergo subsequent surgery. Such women may have various adhesions between any of the organs including small intestine, colon, rectum, pelvic peritoneum, omentum, adnexae, and uterus, which often complicate the process during abdominal or pelvic surgery.

Methods

60 patients who underwent total laparoscopic hysterectomy (TLH) were included/ 30 of them had a history of cesarean section and 30 were randomly selected from those with typical surgery represent the control group. Surgery videos and hospital reports were analyzed. Duration of surgery and volume of blood loss were compared.

Results

In the study group duration of surgery was higher due to necessity of adhesions dissection and restoration of proper collocation between uterus and bladder prior to hysterectomy.

Conclusions

Cesarean section in most cases is associated with expressed adhesions in abdominal cavity, fibrosis of retroperitoneum and deterioration of pelvic anterior compartment anatomy

Outpatient polypectomy using MyoSure: a prospective study of safety, efficacy and patient acceptability

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Background

Objectives:

The objectives of this study were to evaluate the safety, efficacy and patient acceptability of outpatient endometrial polypectomy and fibroid removal using myosure device, at Hinchingbrooke Hospital; a district general hospital in the UK. **Methods**

Myosure device was introduced in May 2016, as a treatment for abnormal uterine bleeding associated with uterine polyps and myomas. All patients who had a transvaginal ultrasound scan suggestive of uterine polyps, were counselled for hysteroscopy +/- polypectomy using myosure device, under local anaesthesia. Three consultants did the procedure using a standard miniature rigid hysteroscope, and normal saline as distension medium for diagnostic hysteroscopy. Either the light or classic myosure device was used for hysteroscopic morcellation. Data was prospectively collected on the type and size of uterine pathology. The cutting time, procedure completion rate, complications and patient satisfaction rate were also recorded. The results were analyzed using Microsoft Excel 2011.

Results

48 patients underwent hysteroscopic resection of endometrial polyp/fibroid, in the outpatient setting between 17 May 2016 and 11 April 2017. 85% of patients (41/48) were diagnosed with a single polyp and 15% (7/48) with multiple polyps. The average size of the polyp was 12mm (range 2-50mm). The pain symptoms associated with the procedures were rated as tolerable by 97.9% of patients (47/48). In 89.6% of patients (43/48) the average cutting time was 148 seconds (range 6 – 480). 10.4 % of patients (5/48) had partial resection; one case was abandoned due to equipment failure, one for intolerable pain, another for bleeding, and two due to fibroids where one was considered too large (40mm) and the other was calcified. There were no reported major complications, and the minor complications (3/48) included a case of vasovagal reaction and two cases of minor bleeding, of less than 50mls. 96% of patients (46/48) reported a high satisfaction rate and agreed that they would recommend the treatment to a friend.

Conclusions

Hysteroscopic morcellation of uterine polyps and myomas ≤ 20 mm using Myosure device was successfully completed in 89.6% of patients. Those procedures that were abandoned were subsequently booked for completion under general anaesthesia. The limiting factors for success were mainly fibroids > 20mm, and particularly those with higher density and calcifications. Myosure is a safe and efficient device, and is associated with a high patient satisfaction.

**ES26-0196 -
Posters**

The accuracy of 3D ultrasound as a confirmatory test in hysteroscopic sterilisation, essure

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Background

Introduction:

Hysteroscopic sterilisation was introduced in clinical practice in 2009 as a less invasive, highly effective procedure for irreversible permanent contraception. Hysteroscopic sterilisation requires a confirmation test three months after the primary procedure. Confirmation test can be carried out by hysterosalpingogram (HSG) and, or transvaginal scan (TVUS). In our unit we introduced 3D TVUS as the sole confirmation test and we offer HSG in selected cases.

Objectives:

The primary aim of this study is to correlate the TVUS and HSG findings for correctly sited Essure implant, in women who had hysteroscopic sterilisation in the outpatient setting. As a result of this study we have introduced ultrasound scan as the non-invasive confirmatory test at 3 month's follow-up; HSG is recommended in cases where the USS findings were inconclusive or where there had been a difficult insertion of the Essure device at the primary procedure.

Methods

The sample was identified using electronic database, Ecamis. Women who had the procedure from October 2014 to August 2015 at Hinchingbrooke hospital, Gynaecology department were included in the study. However those cases that were either cancelled or abandoned were excluded.

Results

25 cases had Essure implants inserted and were advised to attend follow-up for both 3D TVUS and HSG. 56% attended for follow up. In 92% of cases, 3D TVUS correctly located the Essure implants and determined tubal blockage indicating a strong positive correlation with HSG. In one patient the ultrasound scan was inconclusive, but the HSG confirmed bilateral tubal occlusion. One patient had only HSG.

Conclusions

The results demonstrated that 3D TVUS is as reliable and a less invasive confirmation test when compared to HSG. We have now implemented 3D TVUS as a standard confirmatory test after hysteroscopic sterilisation. Where the scan is inconclusive or there was difficulty at insertion, HSG is offered.

**ES26-0197 -
Posters**

Re-intervention rates following outpatient Novasure endometrial ablation: an observational study

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Background

Introduction:

Endometrial ablation is an effective treatment for menorrhagia as recommended by NICE guidance. Although hysterectomy remains the most effective treatment for the management of menorrhagia, less invasive procedures such as endometrial ablation, have been widely adopted for their safety and overall clinical effectiveness, particularly when performed under local anaesthetic in the outpatient setting. Varying re-intervention rates and strategies have been reported including GnRH analogues and hysterectomy.

Objectives:

The primary outcome measure of this observational study was to determine the hysterectomy rates following outpatient Novasure endometrial ablation, at the Gynaecology department, Hinchingbrooke hospital, UK.

Methods

All patients who met the criteria for Novasure endometrial ablation were counseled, consented and their procedures were completed as per standard local guidelines. The cohort of patients included in this study was identified from the hospital database using procedure codes. 51 patients had the procedures done from January 2012 to October 2015. Those procedures that were unsuccessful at initial attempt were excluded. All cases were retrospectively reviewed using medical and electronic patient records at ≥ 12 months post procedure.

Results

51 patients had Novasure endometrial ablation procedures under local anaesthesia. There were no major complications reported. 31.6 % of patients (16 of 51) presented to the Gynaecology department with persistent/recurrent abnormal uterine bleeding. 24% of patients (12 of 51) required re-intervention and they opted for hysterectomy.

Conclusions

The surgical re-intervention rate in this study was 24%, which is higher than that of published literature, 2.8-8.2% at 5 years, but this is not exclusively for women having the procedure in the outpatient setting. Those patients who did not return with symptoms were regarded as successful outcomes, 69% (35 of 51); we were unable to determine if any of those have moved out of area or represented to a different hospital, accordingly this can be a limitation of this study. This study shows that there is scope for offering endometrial ablation for the management of menorrhagia in the outpatients setting. It also demonstrates the need for refining our selection criteria to maximize the long-term benefit to patients.

**ES26-0115 -
Posters**

A case report of adnexal torsion with ovarian cancer treated by robotic oophorectomy

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Background

About 3-5% of patients undergoing emergency surgery due to pelvic pain are diagnosed with adnexal torsion. It may be the cause of acute abdomen and correlated symptoms such as vomiting, nausea, or severe pain. To the best of our knowledge a case of torsion with ovarian cancer has not been reported so far. I hereby report a case of torsion with ovarian cancer.

Methods

A 45-year-old woman, nulligravida, visited to our emergency room with left lower quadrant abdominal pain suggestive of adnexal torsion. Therefore, she underwent a sonography and was diagnosed the ovarian tumor with heterogenous echogenecity and blood flows. In order to rule out malignancy, she underwent a pelvis-abdominal CT scan, PET-CT and tumor markers.

Results

The level of tumor marker CA-125 and CA 19-9 was in normal limit. The imaging test indicated adnexal torsion of ovarian malignancy. I performed unilateral robotic single site salpingo-oophorectomy and she was diagnosed as torsion of mucinous ovarian carcinoma Ic. She received further operation such as hysterectomy with right salpingo-oophorectomy, pelvic and paraortic lymph node dissection and omentectomy.

Conclusions

There is possibility that adnexal torsion can be arised from malignancy and we can treat it by robotic surgery.

Laparoscopic drainage and removal of a massive ovarian cyst using Alexis laparoscopic system

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Background

Laparoscopic management of large ovarian cysts pose technical challenges to surgeons. However, the benefits are reduced post-operative recovery, less pain and reduced length of stay in hospital. Removal of masses with increased risk of malignancy should be done with care to avoid spillage of contents into the abdominal cavity.

Methods

A 77-year-old lady was referred to rapid referral clinic with increasing abdominal distention, discomfort and difficulty in breathing. Ultrasound scan showed 229mmX 144mm X 204 mm cystic mass filling the entire abdominal cavity with no other evidence of intra-abdominal disease. The CA 125 level was 10 giving a low risk of malignancy index. Questions for managing this patient were, is laparoscopy feasible considering the size of the cyst; is laparoscopy appropriate or should a midline laparotomy considered to avoid spillage of cyst contents.

Results

Patient was admitted for laparoscopic surgery. Suprapubic 2cm vertical incision was given, cyst was exposed. A small Alexis-O- retractor for retraction and small swabs were applied circumferentially. A purse string with 20 vicryl was applied without rupturing the cyst wall, suction cannula was inserted after incision to cyst wall and the stay suture was tightened around suction cannula to avoid spill of cyst content. 6 and half litres of fluid was drained from the cyst, after completely collapsing the cyst, suction cannula was removed and stay suture tied closing the defect. Alexis –O-retractor was covered with laparoscopic cap which has aperture through which it was used as a port. Pneumoperitoneum was created through this port. The laparoscopic cap attached to the retractor maintains pneumoperitoneum and its entry system enabled it be used as working port. 3 port laparoscopy was then performed to complete laparoscopic bilateral salpingo-oophorectomy. No spillage of contents was noted during this procedure. Patient was discharged on day 1 and the final histology showed benign serous cystadenoma.

Conclusions

Despite technical challenges Large cystic ovarian masses can be removed laparoscopically without spillage of the contents and we present a variant technique using Alexis laparoscopic system.

3 years results of laparoscopic unilateral sacropexy with a reusable tunnelling device (RTD-Ney) using an MRI visible mesh sling for the treatment of POP

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Background

Surgical treatment for pelvic organ prolapse (POP) underwent significant changes in recent years. The traditional vaginal hysterectomy does not address the underlying pathophysiology of poor connective tissue support, which may result in a higher incidence of recurrence. Vaginal meshes that were used extensively were simplified to mesh kits and following the FDA warnings regarding their safety, they have been widely abandoned. A change in practice patterns among urogynecologists has been noted reviving the use of sacropexy [1]. Abdominal sacropexy is considered the “gold standard” in POP surgery. It is associated with high success rates of over 90% with low recurrence rates. The laparoscopic sacropexy seems to achieve similar success rates in addition to having advantages of less blood loss, reduced morbidity, and shorter hospital stay.

Nevertheless, complications such as new onset bowel, voiding, and sexual dysfunction, de-novo stress incontinence, obstructed defecation syndrome and mesh erosion after sacropexy have been reported and may have a negative effect on patient’s satisfaction [2-3].

One of the greatest technical challenges in performing this procedure is creating a sub-peritoneum tunnel for the mesh. Optimizing the procedure in order to obtain better anatomic reconstruction and choosing the material according to its biomechanical characteristics are a challenge that surgeons are faced with in an attempt to minimize mesh-related complications.

Methods

From 02/2014 until 06/2017 we used a novel technique to perform laparoscopic sacropexy for women with POP using a reusable helical tunnelling device and an MRI visible narrow, macroporous monofilament mesh sling with a needle at the end.

Results

98 women were assessed at a mean follow-up of 3.4 (range, 0.2–0.9) years after laparoscopic sacrocolpopexy, 87% (86/98) of whom considered themselves to be cured or improved, and none had required reoperation. On clinical examination, prolapse recurrence in the apical compartment was not diagnosed in any patient. Dyspareunia or chronic pelvic pain was not diagnosed in 1 patient. The tunneling device reduced the total operation time to 65 min (from 100 min without RTD).

Conclusions

At an average follow-up of 3 years, laparoscopic sacrocolpopexy was highly effective for apical support. This novel procedure shows great promise in the treatment of POP. Apart from having the advantages of a minimal invasive surgery this procedure is easy to learn, easy to perform, has shorter operating time, has a minimal mesh area reducing the risk of erosion and is MRI visible. This new technique may be used for young patients wishing to preserve the uterus as well as for older patients following hysterectomy.

**ES26-0400 -
Posters**

Comparison of the Elevation Angle of the Vagina (EAV) after sacrospinal fixation (Amreich-Richter), high medial vaginal sacrospinal fixation, laparoscopic sacrocervicopexy and triplefixation validated by MRI

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Background

Pelvic organ prolapse (POP) is a highly prevalent condition impairing quality of life that affects at least 50% of women during their lifetimes. A change in practice patterns among surgeons has been noted, reviewing the use of sacropexy and abdominal mesh implants. The choice of method has to be made carefully in operation planning.

The aim of the study was to investigate the postoperative effect of the four standard therapies in POP by measurement of the EAV in MRI seen meshes:

- classical vaginal sacrospinal fixation (Amreich-Richter Procedure)
- vaginal high medial sacrospinal fixation with Reusable Tunneling Device - RTD-Ney
- laparoscopic sacrocervicopexy and
- triplefixation (combined modified unilateral sacrocervicopexy and bilateral pectopexy with SlimSling and Tunneling Device – RTD Ney)

Methods

In a retrospective study the EAV of 40 patients (in each arm of the study 10 patients) were postoperative compared after assessment of the MRI-seen meshes by a pelvic MRI.

Results

We identified a variety of the EAV up to 5cm (+1.2/ -2.3cm) in the different procedures. The implantation of the classical Amreich-Richter-Procedure (vaginal sacrospinal fixation 1.5cm next to the spina ischium) was set as 0 in the EAV. By the use of the Reusable Tunneling Device –RSD-Ney the high medial fixation was implanted up to the level of S3/S4. The laparoscopic methods were fixed even higher and therefore resulted in a higher EAV.

Conclusions

The EAV can be seen as a new classification method for postoperative comparison of the different methods. All methods are successful at achieving a permanent fixation of the vaginal vault and a higher EAV than before the operation. MRI-seen meshes are very good interpretable. There is a significant difference in the EAVs seen in MRI. The laparoscopic methods tower above the vaginal methods, whereas the vaginal high medial sacrospinal fixation showed an higher angle than the classic method. By using an additional bilateral sacropexy we got the best results in EAV. Because of the difference in the EAVs we postulate that the indication of the different methods has to be chosen carefully. Especially in young patients with high suffer pressure the triplefixation is worst it because of the highest EAV.

Laparoscopic Sacrocolpopexy (LSC) for relapsed pelvic organ prolapse following Gilliam-Doleris method: Two case reports

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Background

Pelvic organ prolapse was shown to have been the cause of worry of women historically since B.C. , and various methods have been devised about the treatment. One of them, uterine ventrofixation under the laparotomy was performed by Doleris and Gilliam. However, the operation disappeared for high rate of recurrence during a history.

Methods

This report describes two recurrent cases after uterine ventrofixation that were effectively treated by laparoscopic sacrocolpopexy (LSC).

Results

【Case 1】 80-year-old gravida 1 para 1 Japanese woman underwent uterine ventrofixation due to cystocele at the age of 72 year. It relapsed in one year after surgery, she received conservative medical treatment. Because of symptomatic aggravation, she was referred to our hospital. Examination revealed that she had POP-Q stageⅢ vaginal prolapse. She did not complain of any urinary incontinence. Perioperative findings included the adhesion with the abdominal wall and great omentum and the round ligament. After exfoliation, we amputated vaginal upper part and we fixed sacrum using double mesh as usual. Her postoperative course was uneventful and a recurrence and other complications are not detected in half a year after operation.

【Case 2】 51-year-old gravida 1 para 1 Japanese woman underwent uterine ventrofixation due to uterine prolapse at the age of 28 year. It recurred in several years after surgery. Because symptomatic aggravation, she was referred to our hospital after conservative treatment. Examination revealed that she had POP-Q stageⅣ vaginal prolapse with leiomyoma. She complained urinary incontinence. Perioperative findings included the mild degree of adhesion with the abdominal wall and great omentum and the round ligament. After the exfoliation, we amputated vaginal upper part and we fixed sacrum using double mesh as usual. Her postoperative course was uneventful and a recurrence and other complications are not detected in a year after operation.

Conclusions

Uterine ventrofixation is not performed recently because of high rate of recurrence. Both of two cases were recurrent after the abdominal operation for pelvic organ prolapse and intraabdominal state were unknown. It was difficult to predict anatomical status before the operation compared with primary. In the present cases, we chose LSC for the treatment to reduce blind operation. It is suggested that LSC is a possible option for the recurrent cases.

**ES26-0151 -
Posters**

Case of postnatal surgical management of retained placenta accreta

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Background

Placenta accreta is a potentially life-threatening obstetric condition that requires a multidisciplinary approach to management, with a reported maternal mortality up to 7%[i]. It affects 1/533-1/2510 deliveries [ii]. Its increase seems related to increasing caesarean delivery rate [iii]. An alternative approach to standard caesarean hysterectomy is leaving the placenta in situ in order to preserve fertility. Of those patients majority will need further treatment [iv]. We describe a successful hysteroscopic, ultrasound guided surgical removal of retained placental tissue.

Methods

Case study

Results

A successful hysteroscopic complete removal of 4cm placental tissue 2 months post elective caesarean section and conservative management of placenta accreta. Patient was experiencing ongoing heavy bleeding. Fast uncomplicated surgery and short hospital stay, with high patients satisfaction.

Conclusions

Hysteroscopic removal of placenta accreta postnatally is feasible and could be considered for patients who are symptomatic.

**ES26-0334 -
Posters**

Photodynamic therapy, Cryotherapy, and radiofrequency as local therapies in the treatment of superficial endometriosis

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Background

Photodynamic therapy, radiofrequency induced heat and cryoablation are novel treatment options in the field on oncology and despite preliminary studies from the eighties treatment options remain in its infancy. The aim of this study is to highlight possibility and research development in the PDT in endometriosis.

Methods

In three arms 30 female Canaan dogs of mixed ancestor (each arm of 10) were subject to endometrial ablation via PTD, cryoablation or radiofrequency.

PTD was accomplished through a large laser beam of 530nm wavelength after IV administration of 5mg/kg Photofrin II. The light intensity was fixed at 100J/cm².

Cryoablation was accomplished through a sound inserted into the uterine cavity after a mild dilatation. Nitrous oxide gas (100%) at around -70 C⁰ was pumped into the uterus via the sound at a flow rate of 10cc/minute for 6 minutes.

A small plastic sound was inserted into the uterine cavity after mild dilatation and a radiofrequency antenna was after loaded. Heating was accomplished at 100J/minute for 5-8 minutes at 350KHz alternate current.

After 24 hours the animals were sacrificed and studied histopathologically and via immune histochemistry.

Results

All three groups showed major tissue damage and cell death. A molecular biological study showed that cryotherapy and radiofrequency ablation caused only necrosis while PDT showed an increase in apoptosis molecules such as Apaf-1 and caspases meaning that PDT can induce apoptosis in addition to direct cell toxicity.

Unfortunately, all three methods showed mild to severe myometrial (sub endometrial) necrosis at 2-18 mm. Cryotherapy showed least myometrial damage at around 3mm while radiofrequency ablation around 16mm. PDT showed a wider range with a mean of 11mm.

Conclusions

We conclude that neither of these methods are optimal from all aspects to be used routinely for endometriosis ablation within the pelvic and abdominal cavity unless depth of treatment could be controlled within a narrow range. At present, PTD might become a better option as one can find other photosensitizers that are differentially concentrated or activated within the ectopic endometrial tissue. In this way, sparing of the serosa and normal tubal or ovarian tissues might become a reality. Besides, there are novel techniques in oncology, where one can use more targeted treatments including nano materials or antibody linked agents.

Radiofrequency ablation is the most hazardous procedure as it has no selectivity and must be kept for tumoral lesions above 2cm in diameter.

Cryoablation could possibly become a nice option as the depth could be relatively better controlled and based on theoretical and anecdotal experience there is less risk of hemorrhage. A larger study is recommended and in fact underway.

At the end, a clever combination of the three methods can be suggested but seems unlikely to be realized in near future.

**ES26-0335 -
Posters**

Is there any place for laparoscopic treatment of endometriosis in the near and far future?

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Background

Based on clinical staging of endometriosis from mild to very severe, any intervention must be appointed to one of these stages and compared to available or parallel treatments. Besides, treatments must be based on accepted theories about the origins of the disease.

Objective:

The aim of this paper is to explain whether in the two setting of group I (minimal + mild) and group II (moderate + severe) endometriosis the effectiveness and side effects are superior to other parallel treatments.

Methods

Twenty four patients with minimal or mild endometriosis based on symptoms and negative MRI finding were split into two group who were keen to undergo laparoscopy or reluctant to do so. Each group comprised of twelve patients. No other factor were used in the decision.

Equally, twenty four patients with moderate or severe endometriosis were split into two 12 examinee groups based on the same decision criteria. Those who underwent laparoscopy received as much ablation as possible and those who were reluctant received 3 months of GnRH antagonists and 6 months of add back. Patients were allowed to cross over in any case of emergent problems.

The number of relapsed patients and persistent disease in both groups were evaluated.

Results

In group I patients no difference were seen among laparoscopy and non-laparoscopy patients in regard to relapse/progression or symptom free after a follow up of 12 months.

In group II patients, failure to respond was almost the same in both subgroups and cross over was mandatory in 10 patients of each group.

Conclusions

We conclude that although laparoscopy is the style of the art to diagnose endometriosis it is not much effective in group II patients and must be salvaged by systemic treatments. In group I patients, endometriosis is less aggressive and laparoscopic is not necessarily needed. More active treatments based on pathogenesis of the disease is urgently needed.

**ES26-0238 -
Posters**

An experience of surgical treatment for urogenital endometriosis

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Background

Endometriosis is one of the most common gynecological diseases among women mainly of reproductive age. Severe forms of infiltrative endometriosis occurring 5-12%. Urinary system involvement in infiltrative process can be detected in 18-52% of cases. Key symptoms of urogenital endometriosis are constant pain syndrome, dysmenorrhoea, dyspareunia, infertility, inappropriate urination, hematuria.

Laparoscopic and robot-assisted surgery for the treatment of urogenital endometriosis creates conditions for the most careful and adequate removal of involved tissues due to improved visualization, precision in movement and ideal access to the diseased tissues.

Methods

from 2011 to 2017 in the clinic 183 surgeries with different localization of infiltrative endometriosis were performed. The average age of the patients was 33.8 years. Urinary tract involvement were detected in 27 (14,75%) cases: ureter wall was involved in infiltrate in 15 cases (8,2%); bladder wall was affected in 12 cases (6,55%). Most times, urogenital endometriosis goes together with retrocervical and rectovaginal localization of endometriotic infiltrative lesions.

Results

Among 183 procedures laparoscopy were performed in 149 cases, laparotomy in 15 cases. During the last 2 years, 19 patients were underwent surgery with robotic complex DaVinci SI. In 126 cases (68,85%) ureterolysis was performed; in 7 cases (3,82%) the resection and suturing of the bladder were carried out, ureter stenting was conducted in 7 cases (3,82%). Among patients who desired conception after the surgery total conceive rate was 59% (IVF + spontaneously)

Conclusions

robot-assisted surgery for treatment of urogenital endometriosis is an ideal approach (access). Gynecologists are still facing the problem of treatment for urinary tract affected by deep infiltrative endometriosis; it is diagnosed in 14,8 % of cases. Early diagnostics, proper treatment and the effectiveness of surgical procedures are very important for treatment of urogenital endometriosis and show good reproductive outcomes.

**ES26-0372 -
Posters**

Mobile Hysteroscopy

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Background

Hysteroscopic inspection of the uterine cavity is important in the work up towards diagnosis of intrauterine abnormalities. Because of advances in endoscopy that include smaller endoscopes light emitting diodes (LED) displays and camera miniaturization, these procedures have largely moved out of the hospital and into the office. Our Department has developed a portable hysteroscopy setup with the utilization of mobile smartphone iPhone 6s, a specially designed adaptor and a portable light source. The mobile phone is transformed this way into a completely mobile hysteroscopic viewing system and the whole setup portable.

Methods

In our study we used 2 different hysteroscopic setups. A standard one and the alternate was the same hysteroscope coupled via a commercially available adaptor with an iPhone 6s in camera mode. A portable light source has been used to make the system transportable. In our Department we perform diagnostic hysteroscopy with the Vaginoscopic or 'no touch' technique. Initially we perform a bimanual pelvic examination with the patient in the dorsal lithotomy position and the vaginal introitus is prepared with normal saline. Without using a speculum, the rigid, narrow caliber (2,9 mm) hysteroscope is introduced into the vaginal introitus. We infuse normal saline at a pressure of 150 mmHg and we visualize the cervix and direct the hysteroscope through the cervical canal into the uterine cavity. No anesthesia is used this way and there is a significant reduction in operative pain. The study included 55 patients with benign gynecologic entities having the indication for diagnostic hysteroscopy. Each one of the patients underwent hysteroscopy with both setups and the images were collected and reviewed from 2 independent experts on the field. Each image has been rated from the evaluators based on Lickert analog scale (from 1 very poor quality to 5 very good quality) concerning the quality overall, the colors, the brightness and the resolution.

Results

When queried about the efficacy of the two setups concerning the performance of no touch diagnostic hysteroscopy, the experts noted that both devices were convenient. Although no touch requires good image quality in order to perform the vaginoscopy and locate the cervix, operators stated that they faced no problems in this part of the procedure with the new setup.

Conclusions

Mobile adapted endoscopy equipment allows for point of care image capture and video sharing with an ease that has not been previously available. Our hysteroscopic set up is a low-cost video hysteroscopy system with minimal equipment that can capture video of sufficient quality for diagnosis. Systems unprecedented portability can contribute to hysteroscopy expansion in almost every medical office.

**ES26-0373 -
Posters**

Conservative management of ovarian torsion in a pubertal patient

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Background

Ovarian torsion is the partial or complete rotation of the ovarian vascular pedicle causing obstruction to venous or arterial flow. It usually presents with sudden abdominal pain and vomiting, and is commonly associated with benign pathology. Although traditionally managed with oophorectomy, there is evidence that a more conservative approach_ detorsion/untwisting of the ovary_ is an effective strategy regardless of colour or number of twists in the pedicle. Most of reported cases involve women of reproductive age. This case involves a pubertal girl.

Methods

We reviewed existing evidence regarding conservative management of ovarian torsion: *BMJ Best Practice (2015) says 'Laparoscopic surgery with detorsion is the preferred treatment to preserve normal ovarian function and fertility TOG 2012 Damigos et al*Oeslner 1993: 40 patients with black/blue ischaemic adnexa managed by unwinding (26 laparotomy - 14 laparoscopy with fairly equal split between detorsion, detorsion+cystectomy, or aspiration). Cyst sizes 4-20 cm³⁷ at F/U had normal pelvic examination and in 35 a normal sized ovary with follicular function seen on USS. At subsequent unrelated surgery normal adnexa were visualised in 6 of 7.* Karayalcin et al 2011: Case series of 36 patients with adnexal torsion, 63% had no blood flow on colour doppler USS.All had positive flow on USS 6/52 following de-torsion regardless of colour or number of twists of pedicle if symptoms commenced < 44hrs prior to surgery.*Fujishita et al 2015 Case series of 18 women of whom 14 had conservative management with either cyst aspiration/cystectomy or de-torsion at first look laparoscopies. No major post-op complications noted. 6 women had 2nd look laparoscopies and ovary looked normal in all.

Results

A case review of a 13 year old girl presented to the ED with a 2-day history of left-sided abdominal pain, backache and urinary symptoms. She was vitally stable, abdomen was soft, non-tender. Urine dip showed ketones and protein. She was discharged with oral antibiotics to treat suspected UTI. She was referred back to the ED the following day by GP with worsening pain and vomiting. There was left iliac fossa tenderness and left renal angle tenderness, however the abdomen was soft and not peritonitic. Blood tests revealed a marginally raised CRP. A pelvic scan revealed an enlarged left ovary with no blood flow and was highly suggestive of ovarian torsion. By this point she had been symptomatic for over 5 days. A diagnostic laparoscopy revealed an enlarged necrotic left adnexa that had twisted 3 times. The uterus and right adnexa appeared normal. Cyst aspiration and untwisting of the ovary was performed. Her symptoms resolved postoperatively. A follow up scan 3 months later showed a normal-sized ovary with normal blood flow.

Conclusions

Laparoscopic detorsion is an effective conservative approach that aims to preserve future fertility.

**ES26-0427 -
Posters**

**Diagnosis and treatment of a vaginal primary melanoma, an uncommon finding at
vaginocopy**

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Background

We report on the case of a 86-year-old woman referred to our department following an episode of postmenopausal bleeding, in which a rare primary vaginal melanoma was found and treated via office vaginocopy

Methods

The patient had her last menstruation at the age of 50. Her surgical history reported that at 50 years, the patient underwent laparoscopy for the treatment of a benign but unknown pathology. Her medical history was unremarkable without any evidence of cancer among the first and second-degree relatives.

We performed a Transvaginal Sonography (TVS) that revealed a 4.5 cm neoplasm. The lesion was vascularized, with well demarcated margins and was located between vagina and bladder.

The patient underwent office Vaginocopy using a 5 mm continuous flow hysteroscope and miniaturized 5Fr instruments including a grasping forceps.

Results

At the vaginal vault, a hyper-pigmented area was noted, assuming a subtle velvety appearance, without vascular abnormalities. A wide excision of the lesion was done. Upon histological evaluation, the neoplasm revealed to be a malignant intraepithelial melanocytic tumor implanted at the dermal-epidermal junction, consistent with a superficially diffuse vaginal melanoma.

(**Figs. A–B**). . Advancing more deeply into the vaginal canal, a neoplasm is revealed (**Fig.C**), it protrudes into the canal while deforming the left antero-lateral wall. The lesion exhibited a friable appearance with necrotic areas (**Figs.D–E**), readily bleeding on contact.

Conclusions

The histological examination of the biopsy specimen obtained from the lesion identified it as an undifferentiated malignant neoplasm, whose immunohistochemical reactivity led us to the diagnosis of a melanoma (S100 +, Vimentin +, HMB 45+, PNL2 +). The vaginal vault remained free of malignancy (**Fig. F**).



**ES26-0259 -
Posters**

Total laparoscopic hysterectomy due to deep infiltrative endometriosis and uterine fibroid

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Background

Deep Infiltrating Endometriosis (DIE) is a severe invasive form of endometriosis that often locates and extends the uterosacral ligaments, rectum, rectovaginalseptum, vagina, and bladder. It is generally diagnosed in reproductive women. Major symptoms are pelvic pain,, infertility, dysuria, dysmenorrhea, dyspareunia, and gastrointestinal distress, which may include symptoms that present as irritable bowel. Treatment depends localization, extension of the lesions , severity of symptoms, age, desire of women to be come pregnant and infertility. Pharnalological and surgery treatments are the options for improving symptoms and infertility.Surgical therapy attempts to remove lessions to improve symptoms. The approach is genarally laparoscopic and provides to confirm diagnosis.Complete excision of lessions can be obtained ,less blood loss, better cosmetic results and shorter duration in hospital are advantages of laparoscopy. We report a case of total hysterctomy due to deep Infiltrating endometriosis and uterine fibroid.

Methods

A 52 year old primer infertile woman with abdominal pain and menometrorrhagia admitted to our clinic. She had also symptoms of dyspareunia and dysuria. She had no history of surgery. In USG (ultrasonography) examination of abdomen and pelvic region ,42x35 mm intramural uterine fibroid , 40x44 mm right adnexial cyst and 32x33 mm left adnexial cyst that were thought to be endometrioma were observed.Serum CA-125 level was 82 U/mL . The result of endometrial biopsy was reported as prolerative endometrium

Results

Uterus, fallopian tubes and ovaries formed a conglomerate mass.The bladder was elevated and firmly adhering to the uterus due to endometriosis.Bowels and intestines were also adherence to the posterior of uterus.There were endometriotic focuses on sacrouterine ligaments and parietal peritoneum. Adhesions were dissected by blunt and sharp dissection.Then total laparoscopic hysterectomy,bilateral sapingooferectomy, were performed. After this process,the physiological movements of the ureters were checked and the bladder injury was controlled by giving methyleneblue and it was seen that there was no leakage and also It was checked whether there was leakage underwater by giving air from the rectum.Drain was installed on the vaginal cuff

Conclusions

Correct treatment is very important for the best results in patients with endometriosis. Laparoscopic surgery is the most recommended approach especially for DIE. However it should be kept in mind that a large experience in advanced laparoscopic surgery is required even mandatory for deep infiltrating endometriosis.

Natural orifice (vaginal) hysterectomy for huge uteri

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Background

Vaginal hysterectomy should be the preferred route of surgery in non-prolapsed uteri as in prolapsed cases, depending on the experience of surgeon due to its potential advantages such as use of a natural orifice, less incisional complications and hospitalization duration, cosmetic and economic benefits. In the presented case series it was shown that vaginal hysterectomy is a safe and effective method with more favorable outcome at postoperative period in non-prolapsed large uteri as in prolapsed cases.

Methods

Our case series is composed of cases in whom vaginal hysterectomy is performed for non-prolapsus indications (myoma uteri or adenomyosis) and whose uteri weighed 150 gr or more between 2013-2017 at Akdeniz University Medical Faculty Obstetrics and Gynecology Department. 132 cases were retrospectively evaluated whose uterine weight is between 150 gr and 1055 gr. Cases were separated into 3 groups according to uterine weights 150-249 g (Group 1) (n=87), 250-499 g (Group 2) (n=28), 500 g and above (Group 3) (n=12). The three groups were compared with regard to age, body mass index (BMI), status of delivery, previous surgeries, pre-postoperative hemoglobin drop, intraoperative and postoperative complications, duration of hospitalization. All the operations were performed by a single surgeon (Dr. Mehmet Sakinci).

Results

Mean ages of the groups were 47.4±5.3, 46.5±3.9 and 49.4±10.7 respectively (p=0.685). Mean uterine weights were 188±29.1 318.4±61 645.2±148.1 respectively (p<0.001). One of the patients has a uterine weight more than 1 kg measuring 1055 gr. There was no significant difference between gravidity and parity of patients (p=0.659 and p=0.938 respectively). Regarding delivery status 66 of patients in group 1 (75.9%), 19 of patients in group 2 (67.9%), 9 of patients in group 3 (75%) had spontaneous vaginal deliveries and no significant differences were found between the groups (p=0.556). There was no significant differences between the groups regarding mean body mass index (27.9±3.5 overall), mean hospital stay (3.3±1.31 overall), mean hemoglobin drop. Cold-knife morcellation was performed for spesimen removal in all patients in groups 2 and 3 and if needed in group1.

One hematoma formation in Douglas pouch and one ureter injury occurred in group 2.



Conclusions

We compared demographic, intraoperative and postoperative properties of vaginal hysterectomy cases performed for non-prolapsed indications in a university hospital and presented that vaginal hysterectomy was a feasible technique for undescended large uteri. We saw that vaginal hysterectomy could be performed without complications in a nulligravid patient having 24-gestational weeks large, 1055 gr uterus with a previous laparotomic myomectomy history.

In conclusion, vaginal hysterectomy should be the preferred route of surgery in non-prolapsed indications independent of uterine size based on the experience of the surgeon.

Conservative laparoscopic management in cornual pregnancy: a clinical study of 3 cases

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Background

Cornual (interstitial) pregnancy represents around 3% of ectopic pregnancies. Although traditional radical excision management is proposed, laparoscopy offers the possibility of conservative approach of cornuostomy and ovular tissues extraction. We present our recent experience of such cases.

Methods

These are 3 cases from gynecologic services of Iasi- Romania, which were admitted in the last 2 years. The cases were diagnosed by ultrasound and received a first dose of methotrexate. As beta hCG did not decline, conservative management by laparoscopy was proposed and cornuostomy with ovular fragments extraction was realized. The cases were monitored by ultrasound and beta hCG assessment in the next 2 weeks

Results

The patients were respectively: G2P1, G2P0 and G2P1; age 36, 29, 37; gestational age of 7, 6, and 6 weeks of amenorrhea. The initial diagnostic was tubal pregnancy, cornual pregnancy, and ovarian or heterotopic pregnancy respectively. The hCG before surgery was 4700, 20400 and 40000. The surgical treatment consisted of laparoscopic cornuostomy in the first 2 cases, and corneal resection in the 3rd case. The postoperative evolution was favorable, with normal ultrasound aspect and hCG of 100-200 at 10-14 days after surgery.

Conclusions

This study encourages the conservative management of cornual ectopic pregnancy, provided a close biological and ultrasound monitoring is accessible. The methotrexate and tubal sterilization should be considered adjuvant techniques that have to be applied to these cases.

**ES26-0262 -
Posters**

Hysteroscopic approach versus D&C (dilatation and curettage) in the management of suspected interuterine tissue after delivery, miscarriage or termination of pregnancy

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Background

Background: to evaluate the effect of hysteroscopic evaluation and hysteroscopic guided removal of suspected intrauterine tissues in patients after delivery, miscarriage or termination of pregnancy and to compare it with traditional D&C.

Methods

It was a case-control study in a university hospital. The patients who underwent operations from January 2012 to March 2017 with suspected intrauterine tissues in ultrasonography after delivery, miscarriage or termination of pregnancy, have been evaluated. After 2012 our institute has changed the strategy of approaching to the patients mentioned above from only D&C to hysteroscopic evaluation and hysteroscopic resection as well as avoidance of interference with the rest of the endometrial surface. Retrospective review of medical records of these patients was performed and intra- and postoperative outcomes in these 2 groups of patients has been compared.

Results

Analysis of 45 procedures was performed. Twenty one patients had only D&C and 24 patients hysteroscopic guided intervention. In D&C group in 5 patients (23.8%) ultrasonography revealed still a uterine cavity with residual tissues, these patients underwent hysteroscopic operation. In hysteroscopic group no residual tissues have been seen in ultrasonography after the operation. In D&C group one case of perforation (during cervix dilatation) and one case of longer intraoperative bleeding has been reported. The operation time in hysteroscopic group was longer than D&C group but this difference was not statistically significant. Postoperatively, 3 patients (14.2%) in D&C group and 1 (4.1%) patient in hysteroscopic group had abdominal pain.

Conclusions

Hysteroscopic guided intervention and selective removal of tissues seems to be an effective technique for management of suspected placental remnants. Future studies comparing cost-effectiveness and availability of the technique in different countries are needed to change management and approach in every centers.

**ES26-0123 -
Posters**

The management of polyps in female reproductive organs

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Background

Polyps of the lower reproductive tract are found in 7.8e50% of women. It has been hypothesized that cytogenetic modifications on chromosomes 6, 7 and 12 as well as epigenetic factors involving enzyme and metabolic activities may cause polyps to develop.

Methods

Review of the literature in the last 10 years and isolation of the relevant articles.

Results

Cervical polyps found in 25% of cases are of low clinical significance and can cause, although rarely, post coital bleedings. Cervical polyps grow during pregnancy and mucorrhoea. Trans vaginal ultrasound (TVU) provides an excellent diagnostic technique to diagnose the size and the anatomic location of endometrial polyps (EPs). In asymptomatic young woman with small EPs <10mm in size, conservative management can be safely followed by monitoring the polyp growth. EPs located at the fundal and tubocornual regions mechanically affect fertility and disturb normal cellular function due to chronic inflammation. In cases where Eps are a cause of subfertility mechanical hysteroscopic resection is advisable. When the sole reason for infertility is an EP, the patient often becomes spontaneously pregnant shortly after removal. EP Detection in either peri- or post-menopausal age, in symptomatic or asymptomatic patients calls for meticulous hysteroscopic examination and polypectomy is mandatory. Endometrial curettage is also recommended to rule out sub clinical endometrial hyperplasia or cancer. Hysteroscopic surgery for large EPs using bipolar resectoscopes, hysteroscopic morcellators or shavers are considered equally efficient and safe under general anaesthesia. Recurrence rate of EPs after resection is unknown. The recent advances in TVU and hysteroscopy, however, should provide an accurate diagnosis and effective treatment of polyp in the female reproductive tract with minimal recurrence or surgery complications.

Conclusions

The significantly increased incidence of colorectal polyps in cohorts that also had EPs might indicate that patients with EPs should be also referred for colonoscopy. EPs have the lowest incidence of malignant transformation as compared to colon, urinary bladder, oropharyngeal, nasal and laryngeal carcinomas.

**ES26-0124 -
Posters**

The effect of haemostatic method on ovarian reserve following endometrioma excision

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Background

Endometrioma surgery and hemostasis negative affect ovarian reserve. The size of the endometrioma and the surgical technique are the most determining factors preserving ovarian function. Stripping the endometrioma pseudocapsule is detrimental for healthy ovarian tissue, reduces the risk of recurrence, however, not appropriate for infertility patients undergoing ART.

Methods

Review of 10 studies of 518 cases with unilateral endometrioma, 5 studies with 340 bilateral endometrioma and 4 meta-analysis all evaluating the surgical treatment, haemostasis technique and post-operative ovarian reserves was performed.

Results

Four meta analysis and systematic reviews and all PRCTs demonstrated that endometrioma surgery cause damage to ovarian reserves. Stripping of the endometrioma is the most frequent type of surgery since low recurrence rate is expected. Most of the studies demonstrated significant post operative AMH reduction after unilateral as well as bi-lateral endometrioma laparoscopic surgery. Haemostasis using bipolar diathermy found to be detrimental to healthy ovarian tissue, moderate quality of evidence favours sealants and low quality evidence favour suture over bipolar. Fenestration without stripping, CO2 laser and plasma energy vaporization of the endometrioma surface can diminish the healthy ovarian tissue damage.

Conclusions

Fenestration and endometrioma surface vaporization / cauterization with any type of energy seems to minimally destruct the healthy ovarian tissue, offering the best surgical treatment option to infertility patients.

**ES26-0207 -
Posters**

A comparison of mean operating time and route of hysterectomy: a retrospective multi centre two year experience

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Background

The aim of the study was to evaluate the mean operating time of hysterectomy based on differing routes of access. These include Total Laparoscopic Hysterectomy (TLH), Laparoscopic Assisted Vaginal Hysterectomy (LAVH), Laparoscopic Supracervical Hysterectomy (LSH), Total Abdominal Hysterectomy (TAH), Subtotal Abdominal Hysterectomy (SAH), Vaginal Hysterectomy (VH). Laparoscopic hysterectomy is the most recently introduced surgical technique.

Methods

This was a retrospective, observational study between January 2013 and December 2015. Data from all three hospital sites within the University health board were included in the study. All patients undergoing a hysterectomy performed by General Obstetrician-Gynaecologists and Gynaecology Oncologists for the following indications were included : any benign disease, pre-malignant or risk reducing surgery, low or intermediate risk of ovarian malignancy and FIGO Stage 1A Endometrial carcinoma. Some procedures also included salpingo-oophorectomy, pelvic floor repair and sacrospinous fixation which added to the operating time. Operators were a combination of Registrars and Consultants.

Results

A total of 595 patients were included in the study.

66 patients had a TLH. The mean operating time was 152 minutes (range of 68 - 295 minutes). 12 patients had LAVH with a mean operating time of 124 minutes (range of 73 - 215 minutes). 5 patients had a LSH with a mean operating time was 121 minutes (range of 56 - 221 minutes.)

275 patients had a TAH with a mean operating time of 104 minutes (range 37 - 255 minutes). 28 patients had a SAH with a mean operating time of 141 minutes (range 70 - 390 minutes). 209 patients had a VH with a mean operating time of 87 minutes (range 32 - 272 minutes).

Conclusions

The number of vaginal and open abdominal routes of surgery are higher than the laparoscopic approach. The shortest mean operating time was with vaginal hysterectomy. The longest mean operating time was with total laparoscopic hysterectomy. This reflects the learning curve of introducing and developing a new surgical technique.

Laparoscopic management of caesarean scar (niche) defects in symptomatic patients

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Background

Worldwide, rates of caesarean section are rising. The term 'Niche' describes the presence of a hypoechoic area within the myometrium of the lower uterine segment, reflecting a discontinuation of the myometrium at the site of a previous caesarean section. A defect in caesarean section scar is associated with symptoms like abnormal uterine bleeding, infertility and complications in subsequent pregnancy including: scar ectopic, risk of rupture and morbidly adherent placenta. It can also increase rates of complications during gynaecological procedures: IUCD insertion, Evacuation of retained products of conception, hysteroscopy and risk of ectopic pregnancy at scar site.

Our aims of this study were to assess the use of surgical techniques to repair Niche defects in symptomatic patients, with regards to operative complications, symptomatic relief, post op lower segment thickness and fertility.

Methods

Patients were identified between August 2015-March 2017. Inclusion criteria: Patients who had previous caesarean section, symptomatic patients ie abnormal uterine bleeding, dysmenorrhoea, dyspareunia, infertility. Exclusion criteria: Asymptomatic patients, No previous caesarean section.

Results

Between August 2015 and March 2017, 6 patients underwent laparoscopic management of niche defect. 4 patients reported post menstrual bleeding, 1 patient had infertility and 1 had intermenstrual bleeding and dyspareunia. Mean lower segment measurement pre operatively was 2.5mm +/- 1.6mm on ultrasound. Estimated Blood Loss intraoperatively was 130ml (10-180ml). Mean operating time was 90 mins (70-150min). One patient became pregnant after niche repair and delivered by Caesarean Section at 38w. In all 6 cases Transvaginal Ultrasound Scan in 3-5 months after surgery revealed restored lower segment to thickness of 9.2mm +/- 1.8mm (consider as normal in the literature). Symptom resolution was noted in all patients. There were no operative complications.

Conclusions

Laparoscopic repair of niche defects is a safe procedure that leads to symptom resolution in all women in our case study. Anterior uterine wall should be explored in the case of symptomatic patients with previous caesarean section scar. Laparoscopic repair allows restoration of the anatomy of the lower uterine segment when even when residual myometrium is <3mm. Laparoscopic repair allows antefixation in case of retroverted uterus. Consideration of a surgical approach should be determined by the patient's plans for fertility and by niche thickness. For women who do not desire pregnancy and whose niche thickness is >3 mm, a hysteroscopic approach should be considered. Women with symptomatic caesarean scar defects who do not desire fertility may also be candidates for hysterectomy. Patients who desire future fertility, especially those with <3 mm of myometrium at the niche site, should undergo laparoscopic resection.

Clinical evaluation of polyvinylidene fluoride mesh for laparoscopic correction of apical pelvic organ prolapse

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Background

Laparoscopic suspension with mesh has been considered the gold standard with reduced complication rates and recurrence. However, use of mesh is not risk free and the optimal material has yet to be established. Having gathered substantial surgical experience in laparoscopic hysteropexy with polypropylene mesh (since May 2011) we are exploring a new mesh in order to further improve clinical outcomes.

We aimed to evaluate the safety and efficacy of different meshes at laparoscopic hysteropexy. In the past, we came across recurrence of the apical POP (7%) in relation to polypropylene (PP) mesh elongation. Robust literature has already been published for polyvinylidene fluoride mesh (Dynamesh) indicating superiority over the PP mesh. Our study aims to assess if the improved long-lasting mechanical and biological properties Dynamesh has, do translate to better outcomes or not.

Methods

This is a single-centre prospective analysis of outcomes of all patients undergoing laparoscopic POP correction with the use of Dynamesh from December 2015 until May 2017. Medical records were identified via the OPERA electronic database. Medical notes were examined for data extraction regarding symptoms, operative morbidity and therapeutic outcomes. The POP-Q scoring system was employed to objectively assess pre- and postoperative POP. Complications were categorised as early or late. Information was collated in an Excel spreadsheet for further analysis. Clear written information was provided and choice of mesh offered to all women.

Results

55 patients underwent laparoscopic hysteropexy and elected to have DynaMesh graft as a single operation. 4 patients required concomitant posterior colporrhaphy and 3 had concomitant laparoscopic paravaginal repair. Parity ranged from 1 to 5. 84% were primary POP corrections. Median operating time was 100 min (range 70-163 min). Mean hospital stay 1.4 days (1-2). Intraoperative blood loss ranged from 0 to 400ml (mode of 50ml). We did not encounter any complications to date, including de novo bladder or bowel problems. There were no cases of mesh erosion, pelvic infection or haematoma. The mean follow-up was 4 months (range 2 to 8 months). All cases have had objective improvement of the apical POP at routine post operative review (POP Q Stage 0). There have been 3 (5%) cases requiring subsequent surgery for anterior POP within the 17 month post operative period.

Conclusions

Laparoscopic correction of apical prolapse encompasses different mechanical and biological properties of the meshes available on the market. Any new material needs to undergo clinical scrutiny in order to evaluate the proposed benefits. Our case series verifies that Dynamesh could be used in Gynaecological surgery. Increased vigilance is required, as small numbers might underestimate the DynaMesh-related complications. Patient safety and clinical governance remain of paramount importance. Our results show promising evidence of the superiority of new intra-abdominal mesh for the treatment of POP.

**ES26-0359 -
Posters**

Endoscopic management of intrauterine devices with missing strings

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Background

Intrauterine devices (IUDs) are among the most safe and cost-effective contraceptive methods. Uterine perforation and intraperitoneal translocation are rare complications of IUDs which usually present with pelvic pain. A displaced IUD may also be an asymptomatic incidental finding on routine gynecologic examination. Uterine perforations usually occur during insertion of the IUD. Copper IUDs usually cause local peritoneal adhesions. Other reported complications include visceral organ perforations, strangulation, infection and infertility.

We aimed to present the laparoscopic and hysteroscopic management of patients presenting to the family planning unit of our hospital due to incompletely removed IUDs or those with missing strings.

Methods

The medical records of 111 patients who presented with incompletely removed IUDs or IUDs with missing strings between 2012 and 2017 were reviewed retrospectively. Patients whose IUDs were not detectable by transvaginal ultrasonography had undergone abdominopelvic X-ray examinations. Remnants of incompletely removed IUDs were removed with office hysteroscopy and intraabdominal IUDs were removed by laparoscopy.

Results

89 patients were found to have IUDs with missing strings and 22 had incompletely removed IUDs. The IUDs of 70 patients were found to be located inside the uterus by ultrasonography. IUDs of 19 patients were found to be intraabdominally located on abdominopelvic X-rays. All patients had copper IUDs. 70 intrauterine IUDs with missing strings were removed upon patient request. Among 22 patients with incompletely removed IUDs, 3 patients had IUD remnants embedded in the myometrium. IUD remnants in 2 patients could be accessed after lysis of intrauterine adhesions. It was possible to remove all IUDs and their remnants with office hysteroscopy. Out of the 19 intraabdominally located IUDs, 3 were pregnant at the time of presentation. 2 of these patients delivered uneventfully and 1 patient had a missed abortion. 8 patients had developed an abscess in the location of the IUD. Omental adhesions were detected over the bladder and anterior abdominal wall in 2 patients. IUDs of 3 patients were found in the pouch of Douglas. 1 patient had her IUD in the right upper abdominal quadrant embedded within the omentum, 1 over the right inguinal ligament, 1 in the ileocecal area and 1 on the fallopian tube. 2 patients had the body of their IUD embedded in the myometrium. The arms of the IUDs of 2 patients were embedded within the bowel wall, the serosa of which had to be sutured after removal of the IUDs. One patient underwent partial omentectomy to remove her IUD.

Conclusions

Location of IUDs with missing strings can be identified by transvaginal ultrasonography and abdominopelvic X-rays. Intraabdominal IUDs and intrauterine IUDs with missing strings can be successfully removed with hysteroscopy and laparoscopy

Successful laparoscopic management of angular ectopic pregnancy non-responsive to systemic methotrexate treatment

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Background

angular ectopic pregnancy is a rare variant of ectopic pregnancy that could be lethal unless identified and treated aggressively in its early forms. The mortality rates varies between 2-5 %. In angular pregnancy conceptus is located on the tubal orifice of the endometrial cavity and it is difficult to differentiate angular pregnancy from cornual ectopic pregnancy. As the tubal orifice is a relatively thin and well vascularized, the risk of rupture is high particularly in early gestational periods.

Methods

41 year old g4p1 woman with a history of one tubal pregnancy and a cornual ectopic pregnancy presented with 6 weeks of amenorrhea without any complaints. She had a one prior ceserean section. The two previous ectopic pregnancies had been handled with systemic methotrexate. Her hCG levels in the first admission was 8656 IU/L. On ultrasonographic examination a gestational sac with a yolk sac but without fetal pole and cardiac activity located on left side close to the intersitial region was identified.

Results

At first glance gestation was thought to be a cornual ectopic pregnancy. As the patient had no symptoms and had a history of successful management of previous ectopic pregnancies with sytemic MTX, single i.m. dose of 80 mg MTX was administered. The first hCG levels tended to decrease in second day but in the third day hCG rised to 10994 IU/L. With these findings a laparoscopy was performed. On the laparoscopic view there was no visible cornual ectopic gestation. Intraoperative transvaginal ultrasound revealed a far-eccentrically located sac just beneath the tubal region. A suction curettage attemp failed to empty the ectopic gestation. Then just under the direct guidance of transvaginal ultrasonography the exact location of the sac was identified with laparoscopic guidance. Direct uterotomy was performed with bipolar coagulation and scissors just beneath the tubal ostium region. The gestational cavity was entered and the gestational sac was evacuatedd with suction on the simultaneous guidance of transvaginal ultrasonography. Total blood loss was 50 cc. Postoperative recovery was uneventful and she was discharged on the postoperative second day. Transvaginal ultrasound before discharge revealed total shrinkage of the gestational sac. Her hCG levels fell to normal levels on postoperative second week.

Conclusions

Laparoscopic management of unusual ectopic conceptions such as angular ectopic pregnancy is feasible and preserves future fertility.

**ES26-0233 -
Posters**

Bowell herniation after laparoscopic surgery in gynecology: case presentation

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Background

At any surgical accident, the most important goal is to recognise it and try to solve as soon as possible and in the best manner.

The first case of herniation through a laparoscopic port was described by fear in 1968, (1,2) and since then the incidence of herniation is 0.8% to 1.2%. (3,4).

There are different risk factor to induce herniation reported in the literature: size of the port, (5) location of the port (6), obesity, renal failure, infections of the abdominal wall, steroid therapy, bronchitis, smokers, drug addicts etc. (4)

But the most important factor is the diameter of the trocars between 2 to 12 mm. ; encounter the accidents in bigger diameters.(6,7,8) a few cases has been reported in the literature, in diameters below 3-5 mm. (9,10,11) recently it has been described a hernia through a 8 mm. trocar in robotic surgery. (12)

Hernias- rare, but you have to recognize it, more frequent when use trocars between 8 to 12 mm in diameter. the parcial small bowel obstruction is frequent instead of necrosis, but when it happens always finish in resection and anastomosis with acute pain. the location of the necrosis of the hernias is a vital importance, because the absotion mechanism could be affected.

Methods

Clinical chart

In a vaginal ultrasound a 41-year-old woman presented a complex cyst in the right ovary 6 cm. in diameter, left ovary and uterus looks normal. she was submitted to a operate laparoscopy, on 2 may 20th,17 removing completely the right ovary (hystopathological report was papilar serous cystoadeno fibroma).

Results

After 34 hrs post op. she started with a strong mesogastrial pain with the presence of a lump around the umbiliculs in 15 cm. diameter. she was admitted to the emergency room and started with ivs, prophylactic antibiotic (meropenem), analgesic, lab. test and abdominal cat scan, developed a hole , dystasis of the fascia and peritoneum 1.8 cm in diameter at the level of the first umbilical port with the presence of small bowel and mesenterium, approximate 60 cm length trapped in the hernia (yeyuno-ileum).

Second operative laparoscopy was performed in conjunction with general sugery removing the small bowel and the mesenterium with necrosis, performing latero-lateral anastomosis.

Conclusions

every endoscopic procederes must be perform by a qualify sugical team; at any surgical accident, the most important goal is to recognise it and try to solve as soon as possible and in the best manner.

Always be in contact with another endoscopic specialist like, general surgeon, urologist, vascular surgenos, etc.

Ethics play a main role in endoscopy, and the patient and family should know exactly what happening during the procedure and will help you to solve the case.

**ES26-0234 -
Posters**

Epoophoro remanent tumor of the fallopian tube: teratoma - case report

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Background

Benign teratoma of the fallopian tube is very uncommon. Currently only about 50 cases have been reported in the literature until 1998 (1,2).

The majority of benign teratoma of the fallopian tube are founded in a incidental surgery and never it is discovered pre-operatively. The pathogenesis of the teratoma it is not well understood. It is believed that fallopian tube teratomas arise from cells that were migrating from the yolk sac to the primitive gonads, but failed to reach their destination

Walter (3) described that the first case of teratoma of the Fallopian tubes was reported by Eden and Locker in 1965 and there is a close relation with ectopic pregnancy. (1,2,3,4,5)

Methods

A 15 years old female, in a pelvic sonogram revealed the presence of an irregular, predominantly hyperechoic mass measuring 55x41 mm in the left adnexal. The MRI of the pelvis showed in the left ovary , the presence of a irregular neoplastic mass of 6 cm in diameter.

Results

We performed a diagnostic and operative laparoscopy founded a normal right ovary, Fallopian tube and uterus and an abnormal mass of 7 cm. in diameter depending from the firmbria of the left fallopian tube and a normal left ovary.

The teratoma was completely removed from the fallopian tube and the left ovary was normal

Conclusions

Benign teratomas of the ovary are common during the reproductive age. These tumors are rarely found in fallopian tubes. Most the tubal teratomas are diagnosed incidentally by laparoscopy and are commonly located in the ampulla or the isthmus.

It is very important to realize a full medical chart, physical exam, laboratory, image profile (sonogram, CAT , MRI, contrast studies) and endoscopic exams in all female that we suspect some type of tumor (11) (12).

The endoscopic procedure is the goal standard to diagnose and classify the pelvic mass and to solve the disease, including the teratomas from de fallopian tubes, torsion of the tumors, teratomas dependent of the ovaries, follicular cyst, hemorrhagic cyst, ectopic pregnancy, and to statify any kind of malignant tumors depending of the ovaries (9,12).

In the majority of cases constitute an incidental laparoscopic finding and sometimes a discovery of a pelvic mass in an sonography vaginal evaluation during a pubertal development (9).

Less than 10% of the cases correspond to a concordant pre operatively diagnosis, misunderstanding with other type of tumors of the ovary (10).

Finally, we have to ruled out any other diseases of the pelvic organs including acute appendicitis, pelvic inflammatory disease, endometriosis, volvulus, colon and rectal pathology and any bladder disease

**ES26-0378 -
Posters**

Laparoscopic, minilaparoscopic and single-port hysterectomy: perioperative outcomes at rural conditions

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Background

The objective of this study was to assess the possibility of the Laparascopy hysterectomy as the primary and safe route for all the hysterectomies for benign conditions even at rural conditions

Methods

We present a 55-year-old multipara scheduled for hysterectomy on account of abnormal uterine bleeding, who had TLH with bilateral salpingo-oophorectomy in the public hospital of Siirt /kurtalan

Results

H.D. from southeastern Turkey was discharged home on the first post-operative day. She was seen in the gynecology clinic a week later in stable condition and she was highly pleased with the outcome of her surgery

Conclusions

This case is presented to highlight the attainability of operative gynecological laparoscopy, including advanced procedures like TLH in a resource-constrained setting, through the employment of adequate local adaptation and clever improvisation

**ES26-0402 -
Posters**

Hysteroscopic approaches of infertility

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Background

We aimed to discuss the impact of hysteroscopic treatment of intrauterine pathologies on reproductive outcomes with literature review comparing hysteroscopy results of infertile patients and clinical pregnancy live birth and abortion rates of patients who underwent hysteroscopy

Methods

Patients who underwent hysteroscopy due to infertility in Istanbul University Medical Faculty of Cerrahpasa between 2010-2015 was analyzed retrospectively. Age, obstetric history, body mass index, duration and etiology of infertility, ultrasound and saline infusion sonography, hysterosalpingography findings, hysteroscopic findings including pathology, pregnancy type (spontaneous or via assisted procedures) and other demographic information with biochemical results including SMH, hormone profile were recorded. Patients were divided into 2 groups, group of operative hysteroscopy was subdivided into endometrial polyp, submucous myoma, septum, synechia and T-shape uterus group. Indication of hysteroscopic procedure, results, complications and histopathologies were analyzed. Clinical pregnancy, live birth and abortion rates after hysteroscopy were compared among the above mentioned groups.

Results

No difference was identified between operative and diagnostic hysteroscopy groups according to analyzed patient demographic and clinical data and biochemical markers. Significant difference was identified between groups according to preoperative reproductive performance and obstetric history (number of pregnancies $p:0.001$, number of births $p:0.011$, abortion number $p:0.009$, number of induced abortion $p:0.001$). It was identified that 53.9% (115 patients from 213) were pregnant in operative hysteroscopy group and 41.3% (88 patients) of this group achieved to live birth also 55.2% (37 patients from 67) were pregnant in diagnostic hysteroscopy group 41.7% (28 patients) of this group achieved to live birth. Clinical pregnancy and live birth rates found similar between the group of patients who underwent hysteroscopic correction of intrauterine pathology and the patients of diagnostic hysteroscopy group who had normal hysteroscopy findings. The terminal outcomes of pregnancies such as term and preterm delivery, abortion, ectopic pregnancy and ongoing pregnancy were similar between operative and diagnostic groups. The highest clinical pregnancy and live birth rates were found in endometrial polyp and uterine septum group who underwent hysteroscopic treatment of mentioned pathologies. The highest abortion rate was found in uterine septum and submucous myopia group. Clinical pregnancy and live birth rates were similar between patients who had normal uterine cavity during diagnostic hysteroscopy and who underwent hysteroscopic treatment in intrauterine pathology.

Conclusions

In operative hysteroscopy group patients who underwent hysteroscopic correction of intrauterine pathologies clinical pregnancy rate was similar with the group of patients who had normal diagnostic hysteroscopy findings.

Ectopic scar pregnancy managed with hysteroscopy and vacuum curettage

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Background

Cesarean scar pregnancy (CSP) was first reported in 1978. With incidence ratio 1/1800-1/2216, CSP is a very rare form of ectopic pregnancy which foregrounds with the feature of high mortality rate. CSP has significance by reason of being an important gynecologic emergency and increasing cesarean rate actually. CSP occurs as a result of myometrial invasion via the microtubular canal between the cesarean scar and endometrial canal. Mean diagnosis week of gestation is 7.5±2.5 and mean time between last cesarean is 6 months-12 years. Symptoms are mild hemorrhage without pain (39%), accompanying mild or moderate pain (9%) and asymptomatic (37%). First diagnostic tool is transvaginal ultrasound with 86.4% sensitivity. We wait to see an empty endometrial cavity and cervical canal also gestational sac in the anterior isthmic region. Between gestational sac and bladder, myometrium can not be seen or seen as defective. Doppler, 3D USG, MRI, diagnostic hysteroscopy or diagnostic laparoscopy also can be used. Spontaneous abortion and cervicisthmic ectopic pregnancy are differential diagnosis. Aim of treatment is fetus alive before rupture, removal of gestational sac and protection of fertility. With this aim unfortunately no one protocol of treatment because of no sufficient study of CSP except case studies. Although not a consensus protocol of treatment, there are some options intended for treatment.

Methods

In our case patient was 43 years old in her medical history had no speciality except 2 cesarian operations. She complained about abdominal pain and menstrual retardation. In her examination gestational sac was detected at cesarian scar region and b hcg level measured >10.000. All treatment options were explained to patient. Due to stability of patient's clinic and layout of gestational sac diagnostic hysteroscopic approach was found appropriate. After diagnostic hysteroscopic approach vacuum curettage done successfully.

Results

Patient followed up for a while with serial transvaginal ultrasound and b hcg levels. b hcg levels were decrease and were negative during follow up. In patient's examinations who had no complain in following; hematoma was detected at site of intervention. Last examination isthmus like image was detected and hysteroscopically or laparoscopically intervention of isthmus was planned.

Conclusions

CSP is uncommon but very important condition because of uterine rupture risk heavy bleeding possibility and as a result high mortality rate. Due to recently cesarian rates are increasing, significance of CSP is also increasing. Immediately diagnosis is very important. Diagnostic materials have not conflict. However treatment options have not consensus because deficiency of randomized controlled studies. Treatment options are conservative medical treatment with systemic metotrexate, local embryos injection or surgical gestational sac aspiration or uterine curettage (unsuccessful rate is 70% generally vacuum curettage accompanied with ultrasonography is recommended) hysteroscopic evacuation, laparoscopic ekstription, primary laparotomy/hysterectomy (especially in case that high risk of uterine rupture) or follow up (if gestational sac grow up through uterine cavity), combination of some of these. For steady treatment protocol further studies are needed.

**ES26-0049 -
Posters**

Long-term outcomes of the self-cut mesh related modified total pelvic reconstructive surgical repair for pelvic organ prolapse in China: 7-Year prospective cohort study

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Background

The aim of this study was to analyze the long-term outcomes and safety of the modified total pelvic reconstructive surgical repair for pelvic organ prolapse in China.

Methods

Two hundred and eighty-five patients who received prolapse surgery with the new economic surgical method were followed up for 7 years in PUMCH. Assessment included pre- and postoperative Pelvic Organ Prolapse Quantification (POP-Q) stage, the Chinese version of the pelvic floor impact questionnaire short form (PFIQ-7) and pelvic organ prolapse/urinary incontinence sexual questionnaire short form (PISQ-12) questionnaires were used to evaluate the self-perception and sexual function of patient. Mesh-related complications and postoperative pain conformed to the IUGA/ICS joint terminology. The paired-sample T-Test, one-way ANOVA, the Wilcoxon rank sum test and the COX survival analysis were used to analyze data.

Results

The 7-year follow-up assessment showed a 96.8% (240/248) positive outcome rate. Thirty-nine (15.7%) patients presented POP-Q stage II or greater. The reoperation rate was 0.8% (2/248). Surgical repair showed better POP-Q stage improvement for the apical compartments than the anterior ($P < 0.05$), posterior compartment was mostly involved by symptomatic recurrences (50%) and POP-Q stage changes. Vaginal complication was the independent risk factors of degeneration of POP-Q stage (POP-Q stage \geq II) ($P = 0.009$, OR = 3.4, 95% CI 1.4-8.3). Large statistically significant improvements were observed in the symptom scores compared with those at baseline, as recorded by the PFIQ-7 ($P < 0.05$). Only 39.1% (97/248) of the patients were sexually active before the surgery, and the PISQ-12 questionnaire did not show significant improvement at postoperative evaluation ($P \geq 0.05$). 32 patients (12.9%) reported complication, 22 (8.9%) of the complication were vaginal mesh contraction or mesh exposure (C1-C3). Fourteen patient (5.6%) complained of postoperative pain.

Conclusions

The modified total pelvic reconstructive surgical repair for advanced POP had a good long term result and lower complication rate.

**ES26-0322 -
Video in Poster Session**

Percutaneous laparoscopic total hysterectomy

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Background

To demonstrate a percutaneous laparoscopic total hysterectomy

Methods

A 49-year-old lady presented with heavy menstrual bleeding since 2 months. Pelvic examination showed a bulky uterus measuring about 12 weeks. Pelvic ultrasonography showed a 10-cm sized subserous myoma. Hysterectomy with bilateral salpingectomy was recommended. Patient had percutaneous total hysterectomy with bilateral salpingectomy as explained somewhere else. For uterine manipulator we used Rumi II. A 5-mm trocar inserted in the umbilicus and used for Energy instrument, we used Thunderbeat®. Then 2 percutaneous instrument, Percuvance™ Percutaneous Surgical System (PSS) (The Percuvan-ce™ System, Teleflex Inc., USA), inserted in the lower bilateral sides of the abdomen. A 3-mm trocar was inserted in the upper Right side for a 3-mm camera. The vaginal cuff closed by 2/0 V-Lok. The uterus weighed about 365 grams. The uterus extracted from the vagina by vaginal morcellation using scalpel.

Results

Total blood loss was 50 ml. The period of the surgery was 140 minutes. The procedure went uneventful. Patient was discharged on 1st postoperative day.

Conclusions

Percutaneous laparoscopic total hysterectomy is a feasible procedure. Patient will experience less pain and will have a cosmetic appearance of the abdomen.

<http://player.vimeo.com/video/221541355?autoplay=1>

**ES26-0340 -
Video in Poster Session**

Laparoscopic Transabdominal Cervical Cerclage

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Background

To demonstrate step-by-step laparoscopic transabdominal cervical cerclage

Methods

A 30-year-old woman presented with history of spontaneous miscarriage in the 2nd trimester. Patient had also a 5-cm sized subserous myoma. Therefore, laparoscopic myomectomy and transabdominal cervical cerclage was recommended. The procedure first started with myomectomy then followed by transabdominal cervical cerclage. First, the vesicouterine space was opened and the bladder is pushed caudally to expose the uterine isthmus and the uterine vessels. The suture done by a5-mm mersilene tape. After the uterine vessels were identified, the needle was introduced medial and posterior to the right uterine vessels at the level of cervicoisthmic junction. Then the needle was followed anteriorly on the same side with the distal end of the suture in the Pouch of Douglas. After that, the suture material and the needle was passed posteriorly across the lower segment to the left side. In the similar way the needle was placed medial to the left side of the uterine vessels at the level of the cervicoisthmic junction. The ligature was pulled and tightened adequately against the posterior cervical isthmus. Then the ligature ends were tied together anteriorly. The operation went uneventful. The duration of the procedure was 110 minutes. Total blood loss was 100 ml. Patient was discharged on 1st postoperative day.

Results

Patient got pregnant and had cesarean section at 39 weeks.

Conclusions

Laparoscopic transabdominal cervical cerclage has a good pregnancy outcome

<http://player.vimeo.com/video/221593299?autoplay=1>

**ES26-0388 -
Video in Poster Session**

A little complication in laparoscopic surgery

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Background

A 48-year-old patient was operated because of an intracavitary 70 * 66 mm myom

Methods

The patient had Cyst Hydatid operation in the past

Results

During the vaginal cuff cutting, it was discovered that monopolar hook was stuck somewhere in the abdomen. It was seen that the monopolar hook has entered the left psoas muscle, has not harm large vessels. It was observed that large veins has passed near the Lasere field.

Conclusions

The assistants in university hospitals have monthly operating room rotations and every month new and unexperienced crew make the operations, so this increases the likelihood of complications

<http://player.vimeo.com/video/222506420?autoplay=1>

**ES26-0125 -
Video in Poster Session**

Robotics in invasive cervical cancer- type III radical parametrectomy and upper vaginectomy for vaginal recurrence

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Background

To demonstrate the advantage of robotic technology in surgery for difficult dissections.

Methods

A 64 year old (BMI 26) case presented with vaginal recurrence after laparoscopic hysterectomy for minimally invasive cervical cancer. As we suspected that the patient suffered adhesion and fibrosis as a result of her initial surgery we opted for a robotic radical type III parametrectomy with an upper vaginectomy. We decided to perform robotic surgery as it provides precise dissection, important for dissection of the ureter and bladder in these circumstances.

Results

The surgery took 4hrs38mins and estimate blood loss was 220mL. The patient recovered without incident and was able to ambulate and take a regular diet 1 day after surgery. Although many patients who undergo radical hysterectomy suffer from bladder dysfunction, this patient was able to urinate normally and feel a sense of retention 5 days after surgery.

Conclusions

The precise dissection of robotic surgery provided complete resection and avoidance of complications. For recurrence cases, which provide the added challenge of dealing with adhesion and fibrosis, robotic technology can assist in difficult parts of the procedure like the dissection of vital organs such as the bladder and ureter.

<http://player.vimeo.com/video/219371829?autoplay=1>

**ES26-0082 -
Video in Poster Session**

Minilaparoscopic ovarian lateral transposition

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Background

The purpose is to present the demonstration of ovarian lateral transposition with using minilaparoscopic instruments.

Methods

A 28 years old women diagnosed with synovial sarcoma on her left gluteal region and she was scheduled for radiotherapy. Before radiotherapy, she was consulted for preserving ovarian function in the future. Thus, ovarian lateral transposition was decided. Besides, to minimize the invasiveness of the procedure, the use of minilaparoscopic set up was offered. Under general anaesthesia, after establishing a pneumoperitoneum, a 5 mm optic port was inserted through umbilicus for optic system. Two 3 mm trocars were placed in each lower quadrant laterally at the para-median line just below the umbilicus and one 3 mm trocar was placed on the left upper quadrant just above the umbilicus. After removal of the pelvic adhesions especially between the left pelvic sidewall and sigmoid colon, bilateral utero-ovarian ligaments and mesosalpinx were coagulated and transacted. The retroperitoneal dissection was carried out at the level of pelvic brim to identify the ureter. The peritoneum on both sides of IP ligament was then incised parallel to the IP ligament to mobilize the vascular of the ovary. After the ovaries with a long infundibulopelvic ligament were isolated, a peritoneal tunnel was created on the anterolateral wall of the abdomen upper of the iliac crest level. The ovaries were then passed through this tunnel and were fixed securely to the anterolateral abdominal wall with two non-absorbable suture material with torsion and tension-free of the vessels. The optic was then switch to 3 mm optic to use a 5 mm clip applier through the umbilical port. Finally, ovaries were clipped for radiologic marking purpose.

Results

On postoperative day one, after both ovaries were evaluated as normal vascularization with Doppler Ultrasonography, patient was discharged.

Conclusions

Minilaparoscopic approach for ovarian lateral transposition should be kept in mind in appropriate patients.

<http://player.vimeo.com/video/218999114?autoplay=1>

**ES26-0083 -
Video in Poster Session**

Laparoscopic management of complex ovarian cyst

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Background

The purpose is to attract attention to laparoscopic management of giant complex ovarian cyst with aspiration and cystectomy technique for the purpose of preserve fertility.

Methods

Laparoscopic approach to ovarian cyst has to be nearly gold standard in the current gynecology practice. On the other hand, laparoscopic approach to complex, suspicious ovarian cysts are still under debate. A 26-year-old virgin woman, presented with complaint of mild abdominal pain for five months. On abdominal examination, palpable, mobile pelvic mass was noted. Transabdominal ultrasonography revealed a pelvic uniformly bounded, unilocular cyst in 15 cm diameter and normal uterus and right ovary. Besides, there was a 3 cm solid protrusion was noted on the inner side of the cyst wall. Serum levels of CA-125: 55 (normal range < 35) and other tumour marker antigens were in normal range. Overall, the laparoscopic surgery was decided. Under general anaesthesia, after establishing a pneumoperitoneum, a 10-mm optic port was inserted through umbilicus for optic system. Two 5 mm trocars were placed in each lower quadrant laterally at the para-median line just below the umbilicus and one 5 mm trocar was placed on the left upper quadrant just above the umbilicus. After entry into the abdominal cavity, endoscopic visualisation was revealed a completely mobile, giant cystic left ovary with smooth surface and there was no free fluid in the abdominal cavity. Other organs were surely normal. Before cystectomy, a Veress needle connected to aspiration system was inserted into the abdomen on suprapubic area. Then, Veress needle was inserted into the cysted under direct optic view and cyst content was evacuated to minimize the cyst. The ovarian cortex and the cyst was cut and inner surface of the cyst was inspected. After, solid protrusions was observed, it was decided to remove and send them for frozen section. Solid protrusions was cut inside the cyst wall and removed inside the endobag. During the frozen section ovarian incision was closed with laparoscopic suturing to minimize the risk of leakage. Frozen was reported as mature cystic teratoma. The rest of the procedure was completed within usual manner of cyst extirpation.

Results

Pathologic examination confirmed the diagnosis of ovarian dermoid cyst. There were no associated complications and the patient reported complete resolution of abdominal pain after 3 months of follow-up.

Conclusions

Laparoscopic approach for the treatment of ovarian complex cysts should be kept in mind with suitable conditions. Veress needle can be useful for evacuation of the cyst content to facilitate the surgery, and may minimize the risk of leakage.

<http://player.vimeo.com/video/219003000?autoplay=1>

**ES26-0316 -
Video in Poster Session**

Hysteroscopic Polypectomy with Laparoscopic Grasper

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Background

The purpose is to present the demonstration of polyp removal with using laparoscopic grasper after hysteroscopic polypectomy.

Methods

Endometrial polyps are one of the most common etiologies of abnormal vaginal bleeding in women. Hysteroscopic polypectomy is the treatment of choice for most endometrial polyps. Curettage, Randall polyp forceps, micro-scissors, grasping forceps, or electro surgery either with a monopolar probe or a resectoscope are using for endometrial polypectomy extensively. Nevertheless, hysteroscopic polypectomy for large endometrial polyps is exhausting and time consuming procedure. For these enormous polyps, operative instrumentation including electrosurgical resectoscope or hysteroscopic morcellator is required frequently. Conversely micro-scissors are influential on approaches to big stalked endometrial polyps with smaller outer diameter sheaths. But grasping forceps for hysteroscopic channels are feeble for extraction of polyps after stalk is cut by micro-scissors. Whereas, laparoscopic graspers are more potent than hysteroscopic forceps. In addition, laparoscopic graspers have jaw at the distal tip which is more suitable for movements in the endometrial cavity when compared either with Randall polyp forceps or other clamps. According to this, after resection of endometrial polyps with micro-scissors, a laparoscopic grasper could be inserted to the endometrial cavity near by the hysteroscope. Under optic visualization, endometrial polyp is could take out with laparoscopic grasper and hysteroscope.

Results

Removal of polyps is one of the most challenging step in hysteroscopic polypectomy. As polyp size grows these procedures getting more complicated. However, after resection of polyp laparoscopic graspers are suitable for extraction from endometrial cavity.

Conclusions

Using laparoscopic grasper for hysteroscopic polypectomy could be cleverly in appropriate patients.

<http://player.vimeo.com/video/221534734?autoplay=1>

**ES26-0320 -
Video in Poster Session**

How I feel safe during laparoscopic hysterectomy

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Background

The purpose is to present the demonstration of safe steps for laparoscopic hysterectomy especially for beginners.

Methods

First step for laparoscopic hysterectomy is abdominal entrance. After establishing a pneumoperitoneum with veress needle, a 10-mm optic port is inserted through umbilicus for optic system. Two 5-mm trocars are placed in each lower quadrant laterally at the para-median line just below the umbilicus and one 5-mm trocar is placed on the left upper quadrant just above the umbilicus. Second step is abdomino-pelvic optic visualisation to expose the possible injuries related to entry and to evaluate the additional intraabdominal pathologies and adhesions. Patient is then placed in Trendelenburg position. In case of adhesions, before starting the hysterectomy adhesiolysis is important step to improve the pelvic exposure. Third step is performing the retroperitoneal dissection to identify the ureter. Ureterolysis starts at the level of the pelvic brim just medial to the infundibulopelvic ligament (IP) by opening the peritoneum that covers the ureter. However, this is not a mandatory step for the laparoscopic hysterectomy. Fourth step is the transection of the ligaments; after the round ligament is transacted 2-3 cm medial to the pelvic side wall, IP is then grasped and coagulated but not transacted. To provide a safe pedicle, IP is then re-grasped 1-2 mm close to the ovary and coagulated and transacted. By this way, we can provide a safe and healthy the vascular pedicle. Fifth step is identification of the anterior broad ligament and developing the bladder flap. Vesico-vaginal space is identified and dissected to mobilize the bladder off the lower uterine segment. It is important to stay in the loose areolar tissue during the dissection. Sixth step is skeletonizing and transecting of the uterine artery. It is important to take the uterine vessels high and medial to the colpotomy line. By this way, risk of ureteral injury is averted. Seventh step is colpotomy and this step can be performed with ultrasonic instrument or monopolar instrument. In the case of using monopolar instrument it should be used in cutting mode not to cause thermal injury and not to increase the risk of vaginal dehiscence. In case of large uterus, starting from the posterior side will facilities the colpotomy step. Eighth step is cuff closure. After uterus removal, it can be closed with running or interrupted sutures, in single or multi-layer fashion with barbed or other delayed absorbable sutures.

Results

On postoperative day one patient can be discharged.

Conclusions

Following these steps could provide secure on your daily practices.

<http://player.vimeo.com/video/221537456?autoplay=1>

**ES26-0330 -
Video in Poster Session**

Live Ovarian Pregnancy

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Background

Ectopic pregnancy occurs when the developing blastocyst becomes implanted at a site other than the endometrium of the uterine cavity. Ovarian pregnancy occurs in 1/2100 to 1/60,000 pregnancies and accounts for 1 to 3 percent of ectopic pregnancies. The purpose is to present the demonstration of conservative laparoscopic approach to ovarian pregnancy.

Methods

A 29-year-old woman presented to our hospital with; history of secondary amenorrhea, vaginal bleeding and mild intermittent abdominal pain. She has two spontaneous abort in first trimester and she has no another disease. She was hemodynamically stable. On per abdominal examination; there was minimal tenderness and no mass was palpable. Per speculum examination revealed; minimal blood stained discharge through the os. On vaginal examination; there was no mass palpable or cervical motion tenderness. The uterus being of normal size and anteverted. Laboratory investigations showed; serum b-hCG measured 18394 mIU/ml. Her haemogram was normal. Trans vaginal ultrasonography revealed; an empty uterus with a 6 cm right adnexal mass and there was mild free fluid in the cul de sac. The patient was stable and the findings suggested unruptured ectopic pregnancy. Laparoscopy was undertaken after relevant preparation. Under general anesthesia, after establishing a pneumoperitoneum, a 10-mm optic port was inserted through umbilicus for optic system. Two 5-mm trocars were placed in each lower quadrant laterally at the para-median line just below the umbilicus. Endoscopic visualization was revealed fresh and coagulated blood on pouch of Douglas and there was pregnancy tissue about 4-5cm on right ovary. Other organs were surely normal. After removal of the pelvic adhesions especially between right ovary and omentum, ectopic pregnancy tissue enucleated with laparoscopic grasper. Fetal heart rate was found positive in the separated pregnancy material. The conception product was taken into a surgical sterile glove and taken out from 10 mm optic port. Bipolar coagulator was used for coagulation of ovarian tissue. Pathologic examination confirmed the diagnosis of ovarian pregnancy. Dilatation & curettage was performed after laparoscopic procedure.

Results

She was discharged a day after the operation. Post-operative recovery was excellent. Serum β -hCG levels reached undetectable levels in 2 weeks. We have to remember that bleeding related with ectopic pregnancy takes the first place in reason of first trimester maternal mortality and it could be asymptomatic.

Conclusions

Laparoscopic enucleation should be safely performed for treatment of this very rare complication especially for women who wish to preserve their fertility potential.

<http://player.vimeo.com/video/221570922?autoplay=1>

**ES26-0105 -
Video in Poster Session**

A novel technique for uterine prolapse surgery: single port laparoscopic pectouteropexy with tacker fixation

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Background

The aim of this study is to show a new minimal invasive technique of laparoscopic pectouteropexy for uterine prolapse. In this new technique we performed the surgery with single port (OCTO-port®) and the mesh fixation was made by using absorbable Tacker (AbsorbaTack®).

Methods

A step-by-step explanation of the technique using videos (educative video).

Results

Single port laparoscopic pectouteropexy is an alternative method of uterine preservation surgery; especially in young woman with pelvic organ prolapsus. Single port laparoscopic pectouteropexy is a minimal invasive technique with short hospital stay, decreased analgesic requirement and low morbidity. This is a new technique, performed through a umbilical incision with single port equipments and the mesh fixation of lateral iliopectineal ligaments was made by using tacker.

Conclusions

The use of single port laparoscopic surgery is associated with short hospital stay, low morbidity and satisfactory cosmetic results. Tacker fixation of mesh is a preferable method because of decreasing the operation time. Lateral uterine fixation with this approach keeps the uterus anatomical position. Single port laparoscopic pectouteropexy is a safe and effective technique for pelvic organ prolapse in young patients and patients with the cosmetic worry.

<http://player.vimeo.com/video/219271794?autoplay=1>

**ES26-0006 -
Video in Poster Session**

A rare uterine malformation: asymmetric septate uterus

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Background

To demonstrate a step by step surgical hysteroscopy technique in a patient with asymmetric uterine septum and transverse uterine septum that was not previously described in the literature.

Methods

A septate uterus is defined as the uterus in which the uterine cavity is longitudinally divided by the septum. The most common uterine anomaly, septate uterus has a spectrum of configurations ranging from complete septate to incomplete septate uterus. Asymmetric uterine septum was reported only as case reports in the literature and is described as Robert's uterus. This unique malformation is described as a septate uterus with a non-communicating hemicavity, composing a blind uterine horn usually with unilateral hematometra, a contralateral unicornuate uterine cavity. The external uterine shape is normal. The asymmetric septum with transverse uterine septum in the present case has not yet been reported in the literature.

Results

A 29-year-old woman presented to our clinic with primary amenorrhea. Ultrasonography revealed two uterine cavities and hematometra. Both ovaries were in normal view. In view of her examination findings, the patient was scheduled laparoscopy and hysteroscopy. Laparoscopy revealed extensive adhesions on both the pelvis and upper abdomen. Initially, uterus and ovaries were not visualized. Adhesiolysis was performed and normal anatomy was restored. After this step, the operation was continued by laparoscopy and ultrasound-guided hysteroscopy. Under the ultrasound and laparoscopy guidance transverse uterine septum at the level of uterine isthmus was incised and the left endometrial cavity was observed with hysteroscopy. The asymmetric uterine septum was then incised and the right sided endometrial cavity was then accessed. Finally uterine septum was completely incised and the both sided endometrial cavities were merged.

Conclusions

Hysteroscopy and laparoscopy combined with ultrasound is a useful method for the diagnosis and treatment of asymmetric uterine septum. The skill and experience of the laparoscopic surgeon is also another important factor for identify and manage the unusual uterine malformations.

<http://player.vimeo.com/video/208639520?autoplay=1>

**ES26-0165 -
Video in Poster Session**

Laparoscopic removal of a Penrose drain from pelvis

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Background

To demonstrate a case of retained Penrose drain incidentally detected during laparoscopy.

Methods

Unfortunately, postoperative complications are sometimes an unavoidable occurrence. One of the reasons for these complications is the retained foreign bodies (RFB). Although in recent years there have been increasing attempts to develop protocols to ensure that medical errors are kept to a minimum, complications from medical errors can still occur. This increases morbidity and mortality of the patient, cost of treatment, and medicolegal problems. The incidence of RFB is difficult to estimate because of diagnostic difficulties and medicolegal implications related with it. However, the incidence varies between 1/1000 and 1/1500 procedures. The most common retained object are the surgical sponge or towel. However, the retained Penrose drains are rarely reported as RFB.

Results

A 39-year-old woman was referred from preiphery with complicated left ovarian cyst. However, her primary complaint was dysmenorrhea and dyspareunia. She previously had endometriosis surgeries in 2007 (with laparoscopy) and 2009 (with laparotomy), and emergency caesarean section at th 30th week due to ileus in 2011. It was learned that the right ovary was removed during caesarean section. An enlarged, irregular-shaped uterus was discovered on examination. Ultrasound confirmed an enlarged uterus, and a heterogeneous lesion of 6x7 cm in left adnexa. Ultrasound findings were confirmed with abdominal computed tomography scan as well. Since she completed the desire for fertility, we decided to perform definitive surgery with the diagnosis of endometriosis and adenomyosis.

Conclusions

The retained foreign bodies may be a life-threatening problem causing serious results. Differential diagnosis should be kept in mind in patients who had an operation background and in whom intra-abdominal mass was detected. Laparoscopic surgery provides the advantages of smaller incision, less pain, shorter hospitalisation, and reduced haemorrhage and infection ratios compared to open surgery. Laparoscopy can be safely implemented in appropriate cases by experienced surgeons. But it should not be forgotten that prevention is easier than treatment.

<http://player.vimeo.com/video/219484417?autoplay=1>

**ES26-0267 -
Video in Poster Session**

Acute pelvic pain due to the strangulation and entrapment of the left infundibulopelvic ligament and the ovary with the sigmoid colon

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Background

A 28-years old woman on the 20th day of her period presented with acute pelvic pain that lasted for almost 6 hours and refractory to pain killers. Her lower abdomen was tender with a positive rebound sign. The ultrasound revealed a 6 cm hemorrhagic cyst on the left ovary. Her β -hCG was negative.

Methods

Video presentation of a rare and interesting case.

Results

A diagnostic laparoscopy was undertaken. Laparoscopy revealed a strangulated and entrapped left infundibulopelvic ligament, including the ovary and the hemorrhagic cyst with the sigmoid colon. The sigmoid colon surrounding the left infundibulopelvic ligament was released. During this process, the hemorrhagic cyst was drained. The hemorrhagic fluid was aspirated. The length of the left infundibulopelvic ligament and the tube was normal. There were no adhesions between the sigmoid and the left adnexa or the peritoneum. The right ovary and tube were also normal. A cystectomy was performed thereafter. Her pain was resolved after the operation, and she was discharged the next morning without any complication.

Conclusions

Although ovarian torsion is common, entrapment and strangulation of the adnexa with the sigmoid colon is a less pronounced event. Probably, this is the first case of strangulation and entrapment of the infundibulopelvic ligament with the sigmoid colon.

<http://player.vimeo.com/video/221145351?autoplay=1>

**ES26-0364 -
Video in Poster Session**

Laparoscopic hysterectomy of 1200 gr uterus with primary devascularization and chradonnes morcellation

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Background

Big uterus extraction is always a difficult and controversies on morcellation are always an issue, it still remain feasible and safe.

Removal of huge myoma can be required also when big uterus are removed laparotomically.

Methods

Spaces has been developed to mobilize the uterus and to devascularize it at the beginning of the procedure

Results

The medial part of the paravesical fossa has been developed using the umbilical artery as landmark to identify the uterine artery and transect it at its origin. Then the uterus has been removed using a chradonnes scalpel to divide it in small pieces and then removed vaginally. The morcellation was performed avoiding the opening of the uterine cavity

Conclusions

This technique allows a safe and almost blood-less removal of the uterus

<http://player.vimeo.com/video/221631214?autoplay=1>

**ES26-0410 -
Video in Poster Session**

Laparoscopic repair of cesarean scar defect

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Background

Cesarean scar defect is a sequela of cesarean delivery.

Methods

A 38-year old woman presented with prolonged and postmenstrual bleeding. She has had a 2 prior vaginal delivery followed by one cesarean section. Transvaginal ultrasonography revealed a triangular anechoic area in the anterior lower uterine segment at the site of previous cesarean section.

Results

To repair the defect, utero-vesical peritoneal fold was incised and bladder is mobilised. Pouch of isthmocele cavity was identified via a curet inserted into the uterine cavity through cervical canal. The uterine defect was incised. Margins of pouch are then debrided. The edges were sutured with a barbed suture.

Conclusions

Laparoscopic repair of cesarean scar defect is a safe and effective surgical approach for women that present with abnormal uterine bleeding and secondary infertility.

<http://player.vimeo.com/video/221663657?autoplay=1>

**ES26-0385 -
Video in Poster Session**

2-port hysterectomy with opportunistic salpingectomy

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Background

The hysterectomy is one of the most commonly performed surgical procedures. The advantages of laparoscopic hysterectomy (LH) have been firmly established, and include: reduced short-term morbidity (less blood loss, fewer wound infections, and decreased postoperative pain), shorter hospital stay, and faster resumption of normal activities when compared with abdominal hysterectomy.

The majority of total laparoscopic hysterectomies (TLH) with bilateral salpingectomy are performed using 3 or 4 ports. We have developed a 2 Port technique, which confers the benefit of improved aesthetics (fewer scars) and a reduction in port-related complications.

Methods

- Equipment, instruments and trocar configuration:
- 10mm 0 degrees' scope through 12mm umbilical port
- 5 mm infraumbilical midline port, half way between umbilicus and pubis symphysis
- Ultrasonic scalpel (Harmonic Ace+7®)
- Valtchev uterine mobilizer

Results

- The hysterectomy is one of the most commonly performed surgical procedures.
- High-grade serous carcinoma (HGSC) is the most common and aggressive histotype of epithelial ovarian cancer, and growing evidence now supports the fallopian tube epithelia as an etiological site for the development of HGSC.
- Consequently, salpingectomy is emerging as a prophylactic therapeutic option, and it can be done safely during a LH.
- Length of hospitalisation post-hysterectomy and bilateral salpingectomy is not longer than for hysterectomy alone and there is no significant difference in the rates of blood transfusion or hospital readmission among these two groups.
- In our experience 90% of LH patients went home in less than 24 hours.

Conclusions

- We present a 2-port technique to perform a laparoscopic hysterectomy (LH) with opportunistic salpingectomy. Hysterectomy with opportunistic salpingectomy can be safely performed with just 2 ports, resulting in fewer scars and a reduction in potential port-related complications such as haematoma, infection or hernia.

<http://player.vimeo.com/video/222158222?autoplay=1>

**ES26-0375 -
Video in Poster Session**

The removal of fibroid that cause urgency and dyspareunia symptoms in the broad ligament

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Background

The aim of the presentation is to show the importance of mapping in laparoscopic myomectomy. If the location of the fibroid is known before the operation, the fibroid could be removed with minimal dissection of other tissues.

Methods

The standart laparoscopic procedure was applied to the patient. After the umbilical port, two lateral ancillary ports and one suprapubic port was inserted.

Results

Laparoscopic surgery was successful. Although the fibroid was located in the broad ligament, it could be found easily owing to preoperative mapping of the fibroid. After removal of the fibroid, the patient reported resolving of her symptoms.

Conclusions

Mapping of fibroids is a useful and important in laparoscopic myomectomy. The laparoscopic surgeon should determine the localization and number of the fibroids carefully before the operation. It helps the surgeon to find the exact location of fibroids during the operation and guides him/her in deciding on the appropriate location for the uterine incision.

<http://player.vimeo.com/video/221640984?autoplay=1>

**ES26-0030 -
Video in Poster Session**

Laparoscopic myomectomy with termination of pregnancy at 13 weeks about spina bifida

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Background

A 27-year-old patient had the first desired pregnancy. In the period of 8 weeks of pregnancy, for the first time, suberoseous uterine fibroids of giant size, a progressive pregnancy, were detected. It was decided to prolong the pregnancy with scheduled surgical treatment at 16 weeks. In the period of 13 weeks of pregnancy, prenatal echography revealed a congenital malformation of the central nervous system of the fetus: Spina bifida, rachischisis. In this case, complete cleavage of the soft tissues of the fetus, spine and spinal cord is observed.

Methods

The patient was offered interruption of pregnancy with one-stage removal of myoma. Before the operation, a transabdominal fine-needle puncture of the myoma was performed under echographic control, a cytological study of aspirate. Atypical cells are not detected. The operation was performed: Laparoscopic myomectomy, dilatation and vacuum aspiration of the uterine cavity.

Results

Operation - Laparoscopic myomectomy, dilatation and vacuum aspiration of the uterine cavity:

- dilatation and vacuum aspiration of the uterine cavity
- bipolar coagulation of the base of the "Ligasure" node
- suturing of the uterus
- electromechanical morcellation of myoma

The total blood loss was 500 ml. The duration of the operation is 157 minutes. The mass of the removed drug is 2100.0.

Conclusions

Postoperative period - without complications.

<http://player.vimeo.com/video/215426026?autoplay=1>

**ES26-0143 -
Video in Poster Session**

Office hysteroscopy in the treatment of intrauterine adhesions

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Background

A 30-year-old patient with hyperandrogenia and a habitual loss of pregnancy had an oligomenorrhoea, opsomenorrhoea, in an anamnesis.

According to the echography, intrauterine synechia has been identified.

Office hysteroscopy was performed, a moderate stage of intrauterine synechia (7 AFS grades) was revealed.

Methods

Used Trophoscope Campo with an instrumental channel, scissors.

Results

The normal shape and capacity of the uterine cavity has been restored.

The operation was performed without anesthesia.

The duration of the operation is 15 minutes.

Complications after the operation was not.

Histological study of endometrial biopsy: "Endometrial phase of proliferation, fragments of fibrous tissue"

Conclusions

After the operation, a therapy is prescribed: estradiol 2 mg - 30 days, medroxyprogesterone 10 mg during the last 5 days of taking estrogens.

<http://player.vimeo.com/video/219421275?autoplay=1>

**ES26-0148 -
Video in Poster Session**

Laparoscopic extirpation of the rudimentary uterine horn in a patient with secondary infertility

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Background

The patient is 30 years old, with secondary infertility for 3 years. She had a right-sided salpingophotomly about a tubal pregnancy, a hysteroscopic polypectomy for an endometrial polyp in her anamnesis.

Notes menometrorrhagia with menarche, dysmenorrhea

Hysterosalpingography - unicorn uterus

Ultrasonography - uterine myoma

When hysteroscopy revealed an abnormal form of the uterine cavity, the development of the uterus is suspected.

Methods

The operation was performed: Laparoscopy. Extirpation of rudimentary uterine horn. Chromohydrotubation. Diagnostic hysteroscopy.

Results

Standard laparoscopy using 2-10 mm trocar and 1 5 mm

- revision of small pelvis and abdominal cavity
- revision of the rudimentary horn of the uterus
- Chromohydrotubation, right tube - passable
- diagnostic hysteroscopy
- oval shape of the uterus cavity
- the mouth of the right fallopian tube
- zone of the supposed communication with the main cavity
- coagulation of the uterine tube, the round ligament, the ovary's own ligament
- intersection
- mobilization of the vesico-uterine fold
- mobilization of the rudimentary horn of the uterus
- coagulation and clipping of the rudimentary horn
- suture closure
- peritonization

Conclusions

Operation time - 60 minutes/

Postoperative period - without complications/

Histological examination of the uterine horn - diffuse endometriosis.

<http://player.vimeo.com/video/219423710?autoplay=1>

**ES26-0269 -
Video in Poster Session**

Laparoscopic subtotal hysterectomy with bilateral adnexectomy in the treatment of locally advanced breast cancer

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Background

Treatment of locally advanced primary inoperable breast cancer is a complex task. Chemoradiation is used, and hormone-positive cancer is treated with anti-estrogens. However, the condition for using anti-estrogen therapy is the absence of hyperplastic endometrial processes, postmenopause.

Methods

The patient is 51 years old, diagnosed with: Right breast cancer, secondary edematous-infiltrative form 3B st. (T4b N0 M0 G2)

According to the trepanobiopsy of the mammary gland, "Infiltrating carcinoma, g2". Immunohistochemical study: receptors to estrogens - 7 points, receptors to progesterone - 6 points, HER2 / NEU +, KI 67 -81% »

Mammography: "BIRADS-V. R-picture of the secondary edematous-infiltrative form of the right breast cancer, lymphadenopathy of the right axillary lymph node "

Endometrial biopsy: "Endometrial Glandular Hyperplasia"

PAP test is the norm. Extended colposcopy: "Normal colposcopic picture"

7 courses of neoadjuvant chemotherapy (docetaxel + cyclophosphamide), 2 courses of radiotherapy in 2 stages, in a total dose of 100 Gy. It is planned hormone therapy - Tamoxifen 20 mg / day daily

Results

The operation was performed: Laparoscopy. Subtotal hysterectomy with appendages. A standard laparoscopy was performed using three trocars, bipolar coagulation "Ligasure" The duration of the operation is 45 minutes Blood loss - 50 ml Postoperative period - without complications. Postoperative histological examination: "Endometrial glandular hyperplasia. Myoma of the uterus. Ovaries - without pathology "

Conclusions

Laparoscopic subtotal hysterectomy with bilateral adnexectomy is a safe and effective operation. This method of surgical treatment can be used as a stage of complex treatment of locally advanced primary non-operative breast cancer in combination with endometrial hyperplasia. Turning off menstrual function and eliminating the hyperplastic process of the endometrium increases the acceptability and reduces the risks of adjuvant therapy for hormone-positive breast cancer.

<http://player.vimeo.com/video/221155651?autoplay=1>

**ES26-0212 -
Video in Poster Session**

Laparoscopic management of a huge myoma located throughout the posterior uterine wall

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Background

Uterine fibroids are the commonest benign tumor of the female genital tract. We aim to demonstrate the laparoscopic management of a huge wide-pedunculated subserous myoma located throughout the posterior wall of uterus.

Methods

A 36-year-old virgin was admitted to our clinic with a complaint of chronic pelvic pain. Her hemoglobin level of 9.9 g/dL. At abdominal examination, a mass reached supraumbilical level was detected. Pelvic MRI revealed a 12 × 10-cm wide-pedunculated subserous uterine myoma located throughout the posterior wall of the corpus uteri.

Laparoscopic myomectomy was planned because of the patient's desire for fertility preservation. Using Lee-Huang point, the abdomen was entered. In exploration, a huge myoma filling the posterior side of the corpus uteri was detected. A solution containing methylergonovine, oxytocin and adrenaline was injected to the base of the myoma to minimize the bleeding. The pedicle was cut using bipolar forceps and scissor. After myomectomy, myoma was morcellated and anti-adhesive barrier gel was placed on uterine serosa.

Results

The length of the procedure was 200 minutes. The weight of myoma was 550 gr, with no evidence of malignancy on histopathology. Postoperative hemoglobin level was 9.4 g/dL. Patient was discharged one day after surgery.

Conclusions

Laparoscopic management of huge myomas is feasible and safe in experienced hands but surgical time increased compared with the laparotomy.

<http://player.vimeo.com/video/219566417?autoplay=1>

Combined cystoscopic and laparoscopic approach for excision of deep infiltrating endometriosis of bladder

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Background

Endometriosis affects from 10% to 15% of women of child bearing age and 20% of these women have deep infiltrating endometriosis. The study objective was to report the combined cystoscopic and laparoscopic approach in excision of deep infiltrating endometriosis of the bladder.

Methods

Design : Video Setting: University hospital of north midlands. Patient: A 34 year old nulliparous women presented with haematuria and cystitis symptoms and was awaiting IVF. MRI suggested deep infiltrating endometriosis along pelvic sidewalls, a large endometriotic nodule (30 mm) infiltrating the bladder and deep endometriosis of rectum. Intervention: The urological surgeon performed a cystoscopy and ureteric stenting, identified the limits of mucosal involvement and ureteric orifices and incised the muscular layer up to the fat tissues with the resectoscope. The gynaecologist followed the circular delineating incision and completed full thickness resection of the endometriotic nodule on bladder wall. In addition bilateral ureterolysis and excision of endometriosis along pelvic sidewalls was carried out along with shaving of endometriotic nodule on rectum

Results

The patient had a good functional outcome and symptom relief. Bladder integrity was checked with micturating cystogram at 2 weeks post-surgery and she had satisfactory post-operative appearances of the urinary bladder with no evidence of leak. Successful trial without catheter was carried out. She underwent flexible cystoscopy and bilateral ureteric stent removal at 8 weeks. Cystoscopy showed an unremarkable bladder. The biopsies of bladder wall contained islands of endometriosis on histology, thereby confirming the diagnosis. In our experience a complete resection of bladder wall endometriotic nodule without inadvertent removal of healthy bladder muscle is best achieved by combined cystoscopic and laparoscopic approach in resection of deep endometriosis with full thickness infiltration of bladder. It not only averts the risk of excessive removal of healthy bladder muscle, postoperative complications and decreased bladder capacity but also ensures there is no residual endometriotic disease left behind. It also enables a clean resection with well delineated margins away from ureteric orifices

Conclusions

On the basis of our experience, we recommend the combined cystoscopic and laparoscopic approach in surgical treatment of large endometriotic nodules with full thickness infiltration of bladder. The value of multidisciplinary teamwork cannot be overemphasized with appropriate pre and post-operative investigations which improves overall patient outcome and care.

**ES26-0103 -
Video in Poster Session**

Salphingoopherectomy by transvaginal natural orifice transluminal endoscopic surgery (NOTES): Turkish surgeons' initial experience

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Background

Our aim was to evaluate the feasibility, safety and early postoperative outcomes of salphingoopherectomy procedures using the transvaginal natural orifice transluminal endoscopic surgery(NOTES).

Methods

We evaluated the perioperative and early postoperative results of v-NOTES salphingoopherectomy patients at Kocaeli Derince Education and Research Hospital with retrospective analysis. v-NOTES surgery used handmade,self-constructed gloveport system comprised of glove-wound retractor NOTES port.

Results

Between April 2016 and April 2017, 6 patients had salphingoopherectomy with benign indications via v-NOTES surgery and all the surgeries performed by the same surgeon(Dr.Ahmet Kale). No conversion to conventinal laparoscopy or even laparotomy was needed in all procedures. The mean operation time was 40.8 minutes and the mean drop in Hb level was 1.6 g/dl in v-NOTES salphingoopherectomy patients.The mean postoperative VAS pain score at 6 hour was 4.1 and at 24 hours was 0.67. There were no intraoperative complications in all cases.The mean lenght of hospital stay was 1.5 days in salphingoopherectomy patients with v-NOTES surgeries.

Conclusions

v-NOTES surgery overcomes the surgical and tehcnical diffucilities with conventional vaginal surgery by incorporating the advantages of endoscopic surgery.Also v-NOTES surgery using inexpensive,reusable handmade conventional laparoscopic instruments, avoids problems related to abdominal wall incisions and trocar-related complications and results with high patient satisfaction,cosmetic advantages and decreased postoperative pain.

<http://player.vimeo.com/video/219269452?autoplay=1>

**ES26-0078 -
Video in Poster Session**

Robotic-assisted laparoscopic pectouteropexy: an alternative technique of uterine sparing surgery for pelvic organ prolapse

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Background

The aim of this video is to demonstrate the alternative technique of robotic-assisted laparoscopic pectouteropexy for uterine preservation in obese patients with pelvic organ prolapse.

Methods

We present a case report of a 44-year-old patient with apical pelvic organ prolapse. The patient was diagnosed as having a stage III apical prolapse in accordance with the pelvic organ prolapse quantification system of the International Continence Society ([POP-Q]: Aa -1, Ba 0, Bp 0, C+2). We performed this procedure, which was developed as an alternative surgery to sacrocolpopexy or sacrouteropexy, as described previously by Karl Künter Noé. The patient was prepared for surgery and placed in the lithotomy position. A transvaginal probe was inserted to manipulate the uterus and the da Vinci Xi Surgical System (Intuitive Surgical Inc., Sunnyvale, CA, USA) was placed on the exterior side of the left leg to enable transvaginal access by the resident. The arms of the robot were docked from left to right starting with the 1st arm (Maryland bipolar forceps), 2nd arm (camera arm), followed by the 3rd arm (monopolar curved scissors), and 4th arm (ProGrasp forceps). The ends of a non-absorbable monofilament polyester mesh (Parietex™ Lightweight Monofilament Mesh; Medtronic, Dublin, Ireland) were attached to both iliopectineal ligaments using a non-absorbable polypropylene suture (Prolene®; Ethicon, Sommerville, NJ, USA) with two stitches on each side. The uterus was elevated to the intended tension-free position using the transvaginal probe (the level of POP Q 0-1). Fixation was performed on the anterior parts of the cervix using polyester permanent sutures (Ethibond Excel®; Ethicon, Sommerville, NJ, USA) with 4 stitches. Finally, we covered the mesh with peritoneum using a monofilament absorbable suture (Maxon TM ; Medtronic, Dublin, Ireland) in a continuous suturing technique

Results

The surgery lasted 55 minutes. The approximate blood loss was not more than 50 mL. The procedure was completed without any intraoperative complications. The patient was discharged from hospital one day after the surgery.

Conclusions

Pectouteropexy is a new method of prolapse surgery that uses the lateral parts of the iliopectineal ligament for bilateral mesh fixation of the descended structures. We believe that robotic-assisted laparoscopic pectouteropexy is a comfortable alternative approach for uterine preservation owing to its better maneuverability, reduced operating time, and better visualization in obese patients with pelvic organ prolapse.

<http://player.vimeo.com/video/218851316?autoplay=1>

**ES26-0419 -
Video in Poster Session**

Laparoscopic staging and excision of metastatic pelvic lymph nodes in a morbid obese patient with locally advanced stage cervical cancer

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Background

Cervical cancer is the leading malignancy of the female genital tract worldwide. In 30 % of cases the tumor is identified in locally advanced stage (ie, FIGO stage IIB- IVA). The choice of treatment is radical hysterectomy in early stages while concomitant chemoradiotherapy is the goldstandart in locally advanced tumors. Lymphnode staging (extraperitoneal with laparotomy or transperitoneally with laparoscopy) emerges to be a good alternative before initiation of concomitant chemoradiotherapy in locally advanced stage to tailor the radiotherapy field and also to debulk the retroperitoneal disease. There seems to be a survival ebnefit to debulk retroperitoneal metastatic lymph nodes.

Methods

67 years old G2P2 patient with postmenopausal bleeding referred to our unit. She has diabetes mellitus and hypertension in her medical history. In physical examination 6 cm exophytic cervical tumor with infiltraton of parametrial area was revealed. The cervical biopsy was reported as squamous cell cancer of non-keratinizing type. The clinical stage according to FIGO was IIb. A PET CT revealed metastatic lymphnodes on right external iliac artery region and left internal iliac artery-vein region. A laparoscopic staging was planned.

Results

Patient was morbid obese (weight 120 kg and length 161 cm, BMI: 46kg/m2) . In laparoscopic view 5-6 cm cervical tumor extending into both parametria was revealed. Dense adhesions in retroperitoneal area probably due to malignant process and infection was revealed. A metastatic lymph node on right external iliac artery and another metastatic lymph basin close to the left superficial inguinal ring were all excised which was demonstrated as video presentation. Total operation time was 130 minute. Total blood loss was 75 cc. The patient was discharged on post-op third day without any complications. The pathology report revealed 4 metastatic lymph nodes. She received concomitant chemoradiotherapy and on postoperative 2nd month total tumor shrinkage was observed.

Conclusions

Laparoscopic excision of metastatic lymph nodes is a feasaible procedure even in morbid obese patients without any significant blood loss or complications. With laproroscopic approach postoperative recovey period is short without any delay of concomitant chemoradiotherapy.

<http://player.vimeo.com/video/221672902?autoplay=1>

Laparoscopic resection of the retrorectal dermoid cyst is technically feasible and could be considered as a safe and efficient option

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Background

Retrorectal dermoid cysts are a rare clinical phenomenon. Estimating the incidence at 1 per 40000 to 63000 admissions to large referral centers. They are more common in middle-aged women but they may affect individuals of all ages, male female ratio of 3:1. About 50% of these cysts are asymptomatic. It is often discovered accidentally during CT scan or a gynecological examination. The symptoms are decided by the volume of the cyst which attributed to the effects of compression like constipation, anal (or perianal) pain or discomfort, bowel habit change and tenesmus. Complete removal of the cyst wall represents the main objective of treatment.

Methods

We present a video case of retrorectal dermoid cyst in a 42-year-old Chinese woman, who claimed no obvious symptoms. Abdominal computed tomography scan (CT) showed that a mass of the retrorectal region measuring 72mm × 88mm in diameter. Gynecological transvaginal ultrasonic examination detected nothing special. She had no history of defecation difficulty, fistula in anal, or perianal abscess. No family history, and significant personal information was found. Upon admission no abnormalities were found in the laboratory value. By opening the Holy Plane, there was no blood vessels in the presacral space and we could have a clear vision, so it is difficult to injury the nerves, blood vessels and ureter in the surgery. We found the location of the mass after opening the presacral space and separated the boundaries from the top of the mass. Finally, we removed the cyst wall completely.

Results

This video is a good demonstration of the surgery in a laparoscopic way to remove the cyst wall completely. During the surgery, preventing damaging S3 nerve root bilaterally which can cause fecal incontinence and urinary incontinence is of necessity. What should be highly careful is preventing damaging median sacral vessels, the ureter, iliac vessels, and hypogastric nerves when moving instrument.

Conclusions

Retrorectal tumors are difficult for treatment as well as for diagnosis. Laparoscopic resection of the retrorectal tumors is technically feasible and could be considered as a safe and efficient option. Laparoscopy yields to a better exposure of the operative area, enhances anatomical details, minimizes the risk of inadvertent spillage of the tumor, and reduces blood loss and bowel manipulation. We believed that laparoscopic approach brings a real benefit for the dissection of this difficult region.

<http://player.vimeo.com/video/219360609?autoplay=1>

**ES26-0189 -
Video in Poster Session**

Our experience: extraperitoneal laparoscopic para-aortic lymphadenectomy

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Background

The objective of this video is to introduce our experience of extraperitoneal laparoscopic para-aortic lymphadenectomy for cervical cancer.

Methods

A 62-year-old woman with postmenopausal abnormal bleeding for 20 days was examined by electronic colposcopy and cervical biopsy, diagnosed as IB2 cervical squamous carcinoma finally. Preoperative MRI found one bulky left pelvic lymph node, and 18F-FDG PET/CT showed elevated metabolic activity of right external iliac and retroperitoneal lymph nodes. Then, the patient was scheduled to laparoscopic extraperitoneal para-aortic lymphadenectomy. The surgeon stood on the left side of the patient who was placed in a dorsal decubitus position. A 10 mm incision was made 2-3 cm medial to the left anterior iliac spine in the midclavicular line, and the index finger was used to open the retroperitoneal space. Carbon dioxide insufflation was induced with the pressure about 13-14 mm Hg. Another 12-mm trocar with a 5-mm reducer cap was placed in the left flank in the mid-axillary line, and a 5-mm trocar was placed in the cross of the external clavicular line and the left subcostal area. After the identification of the psoas muscles, iliac vessels and ureters, additional development of the retroperitoneal space could be accomplished safely with blunt dissection till the identification of the left renal vessel. The nodal tissues were grasped and dissected from the aortic bifurcation up to the level of the renal veins bilaterally.

Results

The operation was performed successfully with no perioperative complications. The operative time was 100 min. The estimated blood loss was 30ml. 15 para-aortic lymph nodes were removed and one metastasis was detected. Intestinal recovery and dietary intake was started at day 2.

Conclusions

Extraperitoneal laparoscopic para-aortic lymphadenectomy is feasible in patients with IB2 cervical cancer.

<http://player.vimeo.com/video/103954178?autoplay=1>