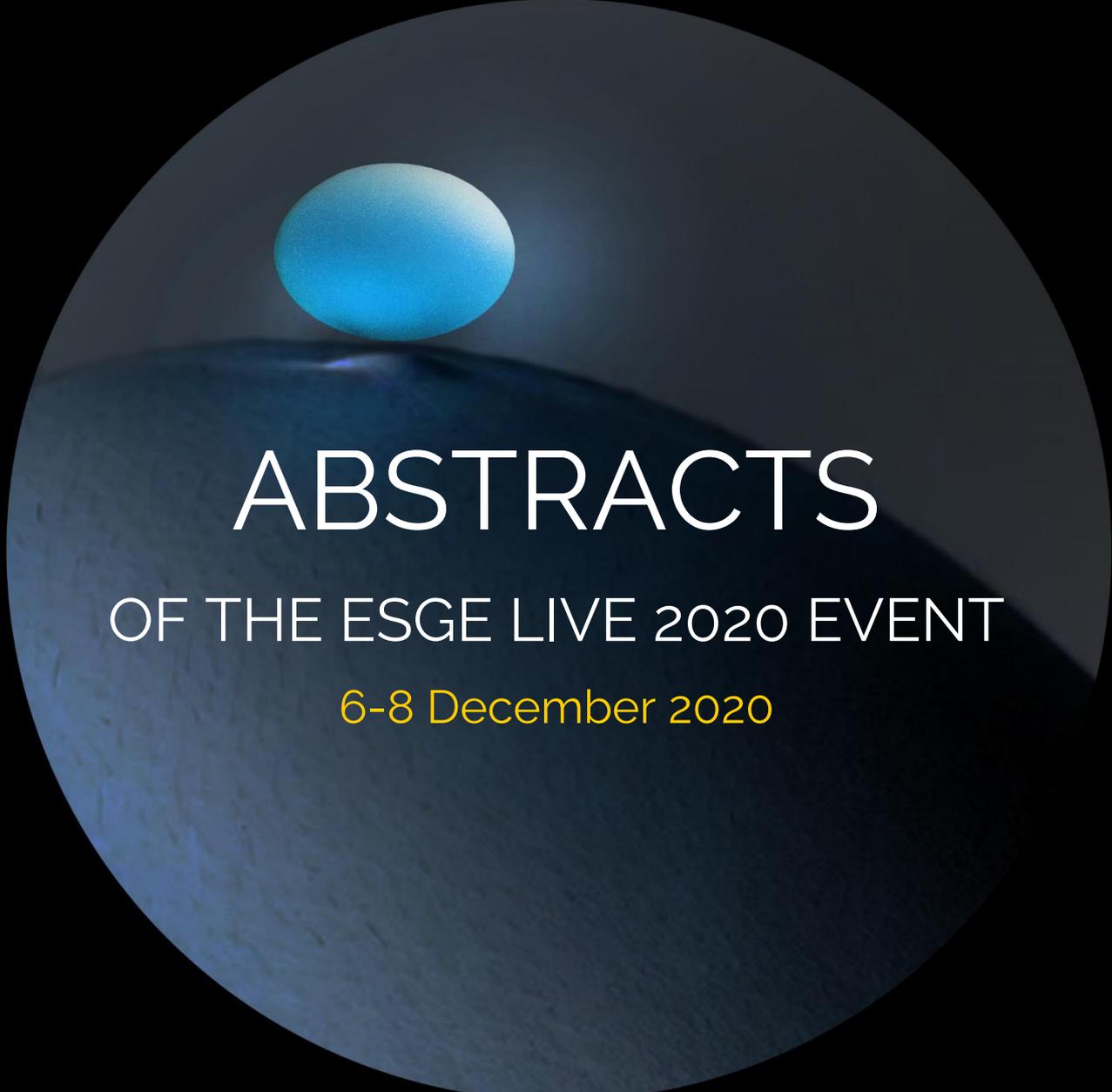


FACTS, VIEWS & VISION

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ABSTRACTS

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BEST SELECTED ORAL ABSTRACTS

ES2020-0138

Best Selected Abstracts

Endometrial cancer staging: laparoscopy vs robotic surgery. A large single-institution retrospective analysis

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Background

Endometrial cancer (EC) is the most common gynecologic malignancy in the United States, with more than 60,000 cases diagnosed annually. In women with a diagnosis of early-stage EC, the total hysterectomy, bilateral salpingo-oophorectomy with the lymph nodal assessment is the gold-standard for both staging and treatment. The minimally invasive surgery (MIS) is widely demonstrated to be the best surgical route to approach the endometrial cancer staging. The laparoscopy (LPS) and the robotic surgery (RS) are the most relevant techniques in MIS world. The aim of this study is to compare these two techniques in endometrial cancer staging in terms of perioperative and oncological outcomes in a large single-institution population.

Methods

In this large single-institution retrospective study we enrolled 1221 consecutive clinical stage I-II-III endometrial cancer patients undergone MIS surgical staging at the Gynecologic Oncology Unit, Fondazione Policlinico Universitario A. Gemelli IRCCS. Study data were collected using REDCap electronic data capture tool and were managed by the Statistics Technology Archiving Research (STAR) Center of our Unit. We compared 766 patients treated by LPS and 455 by RS, on the basis of perioperative and oncological outcomes (DFS and OS). A sub-analysis of the two cohorts was performed by dividing women in risk classes (low, intermediate, high-intermediate and high), with particular attention to the high-risk group.

Results

The two cohorts were homogeneous in terms of perioperative and pathological data. As expected, we identified significant differences in terms of BMI (a median of 26.4 in LPS vs 33.6 in RS, p value <0.0001). Similarly, significant differences were reported in operative time (a median of 160 minutes in LPS vs 180 minutes in RS, p value <0.0001) and lymph node assessment (67% in LPS vs 85.5% in RS, p value <0.0001). We recorded differences in number of relapse/progression (11.7% in LPS vs 7% in RS, p value= 0.008) and in number of deaths (9.8% in LPS vs 4.8% in RS, p value=0.002). In the univariable analysis, the age > 65, the grading, the LVSI status, the risk group were independent predictors of DFS and OS. Differently, in the multivariable analysis the association of the age and grading was significant for both DFS and OS. In the high risk subset analysis, the univariable and the multivariable confirmed a statistically significant influence of the age >65 in DFS and OS, whatever the MIS technique used.

Conclusions

In our large single-institution retrospective analysis, we confirmed that the robotic surgery is superimposable to the standard laparoscopic approach for MIS endometrial cancer staging in terms of oncological outcomes (DFS and OS). Moreover, these conclusions were confirmed also for high risk population.

ES2020-0106
Best Selected Abstracts

Further evidence that endometriosis is related to adnexal cancer: A study of 271,444 inpatient women.

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Background

The association between endometriosis and ovarian cancer is unclear. Some authors suggest an association while others could not find the relationship between them. The aim of our study was to evaluate the association between endometriosis and adnexal cancer in a large, population-based study.

Methods

We used data from the Health Care Cost and Utilization Project – National Inpatient Sample (HCUP-NIS) databases from 2005 to 2014. Using this database, we extracted adnexal cancers and endometriosis diagnosis (overall and subtypes: adenomyosis and pelvic endometriosis) using International Classification of Diseases, ninth edition, Clinical Modification (ICD-9-CM) codes. The prevalence of endometriosis over the study period as well as adnexal cancer in women with or without endometriosis was evaluated. Logistic regression analysis was done to evaluate the association between adnexal cancer and endometriosis. Adjustment was done for age, race, median income level, payment plan, hospital location, and obesity.

Results

Of 38,800,139 women over 18 years who were hospitalized between 2005 and 2014, we identified 271,444 women with adenomyosis and/or pelvic endometriosis. The prevalence in 2005 was 0.70% for adenomyosis and 0.50% for pelvic endometriosis with a significant decrease ($p < 0.01$) over the 10-year period.

The rate of adnexal cancer in women with pelvic endometriosis was twice that in women without endometriosis (0.73% versus 0.35%). The odds ratio (OR) adjusted for age, obesity, race, income and type of insurance was 2.62 [95% confidence interval (CI) 2.42-2.83]; $p < 0.01$. Higher rates of adnexal cancer were also found in women with adenomyosis (0.71% versus 0.35%) with an adjusted OR of 2.25 [95% CI 2.09-2.42]; $p < 0.01$.

Conclusions

Both pelvic endometriosis and adenomyosis are strongly associated with adnexal cancer.

ES2020-0096

Best Selected Abstracts

Limited indications for preoperative ureteral stent in women with posterior deep infiltrating endometriosis and ureteral involvement. Are we correct?

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Background

There is no consensus about indications for preoperative ureteral stent (PUS) in women with posterior deep infiltrating endometriosis (DIE). Although PUS could theoretically facilitate ureteral dissection and prevent urinary injuries, more recent data suggested to limit PUS in these women in order to reduce surgical complications including urinary fistula. The aim of the study was to evaluate the role of PUS placement in terms of peri-operative morbidity, in women who underwent laparoscopic surgery for DIE involving the ureters

Methods

this is a retrospective cohort study performed in a tertiary referral academic center for advanced endometriosis. Data records of consecutive symptomatic patients who underwent ureteral surgery for DIE, between January 2014 and September 2019 were evaluated. Patients were divided in two groups according to PUS placement approach. During study period, according to the literature evidences, we changed our strategy shifting from Systematic PUS (S-PUS, from 2014 to 2016) to Non Systematic PUS (NS-PUS, from 2016 to 2019) placement. In the first approach we placed a PUS in all patients with large DIE nodules (>3 cm) and/or mild hydronephrosis; differently, in the second approach we did not adopt PUS in these conditions. Exclusion criteria were: acquired or congenital superior urinary alterations, trigone involvement and moderate/severe hydronephrosis. Demographic, intraoperative and postoperative data (perioperative complications, length of hospital stay, operative time, need of perioperative ureteral stent, ureteral surgical procedures performed) were collected for each patients and compared between the two study groups. Primary outcome was major surgical complications. Univariate and multivariate regression analyses were performed to identify independent predictors for surgical complications.

Results

one hundred and eighty-four patients submitted to surgery for ureteral involvement by DIE were enrolled. Eighty-eight patients were managed with S-PUS approach, while ninety-six patients NS-PUS approach. In univariate analysis we found a significant association between S-PUS and longer length of hospital stay (LOS) (mean difference +3.3 days, 95% CI 2.1-4.5, $P < 0.001$) and occurrence of lower urinary tract infection (UTI) (OR 0.13, 95% CI 0.03-0.62, $P 0.003$). This latter was confirmed at multivariate analysis (adj. OR 0.20, 95% CI 0.05-0.81, $P 0.024$). No other statistical difference was observed between the two groups regarding the remaining surgical outcomes, including major perioperative complications.

Conclusions

PUS in women with posterior DIE should be limited for its association with a higher LOS and rate of lower UTI. Further prospective studies are needed to confirm our data.

ES2020-0095

Best Selected Abstracts

WAVES Study – Quantitative ultrasound measurement of endometrial waves in adenomyosis

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Background

During the menstrual cycle, the natural contraction pattern of the uterus is known to be affected by changes in oestradiol and progesterone. Abnormal uterine contraction activity possibly influences the outcome of fertility treatment, and may be caused by the presence of (benign) uterine disorders such as adenomyosis or leiomyomas. Until now, we validated a strain wave ultrasound method characterizing uterine contractility in 9 healthy volunteers during the menstrual cycle. Consequently, we conducted measurements in 16 women undergoing IVF/ICSI treatment before, and five to seven days after embryo transfer. So far, strain wave measurement appears to be a useful discriminator between normal and abnormal uterine function and morphology.

Methods

Objectives: Measurement and analysis of uterine contractions through quantitative 2D and 3D transvaginal ultrasound measurements in women with abnormal uteri due to adenomyosis, leiomyomas or uterine anomalies.

Study Design: Prospective observational cohort study

Study Population: 11 women with adenomyosis, to be expanded to a further 60 women with additional benign uterine pathologies (leiomyomas, adenomyosis, uterine anomalies).

Intervention: Uterine contraction characterisation by 2D and 3D transvaginal ultrasound. Uterine motion analysis is implemented by a dedicated speckle tracking algorithm; with frequency, amplitude and velocity -related features extracted from the derived signals to characterise the uterine contractions. Measurements are carried out at different points of the menstrual cycle, and in relation to hormonal therapy and IVF treatment.

Results

11 women with adenomyosis vs. 9 healthy women: Significantly higher contraction frequency was found in the healthy group during the peri-ovulatory phase ($p < 0.05$), but not during menstruation compared to the patients with adenomyosis. Contraction amplitude was significantly higher in the adenomyosis group, suggesting stronger uterine contractility ($p < 0.05$). No significant differences in terms of velocity were found. A further 60 women will be included into this study to further validate our results.

Conclusions

Study outcomes so far have been promising, uterine contractility has been successfully quantitatively described using a 2D and 3D transvaginal ultrasound technique. Results in specific (infertile) populations have also shown a clinically relevant application of this technique and confirm differences in uterine movement in abnormal versus healthy uteri. This could add to the aetiological understanding of clinical symptoms of these conditions (i.e. dysmenorrhoea). Further research in women with benign uterine disorders will hopefully lead to a better understanding of the clinical implications of abnormal uterine contractility in this population.

ES2020-0067

Best Selected Abstracts

Augmented reality in gynecologic endoscopy: trend or revolution?

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Background

We describe the technological phenomenon of augmented reality in laparoscopic and robotic gynecology during the last decade and we highlight on both positive and negative aspects of this technology. The main question is whether we need to invest more time, funds and hopes in this technological innovation.

Methods

Review of literature

Results

Augmented reality has been used in the medical field the last decade. It works by overlaying seemingly real experiences on top of a patient's real environment. During the last decade, attempts have been made to incorporate this technology in minimal invasive gynecology, initially as an experimental learning tool and eventually as a live interactive imaging for assisting laparoscopic and robotic surgeons. "ar" simulators can be a highly effective educational tool allowing trainees to retain the realistic haptic feedback and provide objective assessment of the performance of the trainee (rather just speed). By retaining both important training properties in this simulation system, this could be potent training tool for current training curricula concerning myomectomies, hysterectomies, deep endometriosis, gynecologic malignancies. Pushing the boundaries of imagination even further[EK1], "ar" has been tested in gynecologic endoscopy with a very mobile organ like the uterus. This technology could digitize the organ's internal anatomy in real-time display, intraoperatively, by using selected images of the patient's pre-op scanning (irm, ct). The objective was to see the hidden pathology below the surface of the structures of uterus and to automatically detect the localization and size of the pathology (myomas) during laparoscopy or robotic surgery. this knowledge could also be extended to the localization of the ureters, nodules of deep endometriosis, positive lymph nodes in gynecological malignancies etc. from a more sceptic point of view, all this applications of modern technology and the research that is required are not cost effective, especially when it comes to real-time surgeries, where a numerous unpredictable factors may intervene and alter the pre-operative surgical plan of the surgeon (undetected parallel pathology, technical problems of the software etc.). Skeptics predict that the invasion of "ar" technology in surgery may lead to a cynical exploitation of patients, as the decision of the surgical approach will be based only to solid data and not real life factors such as the desire of the patient, the experience of a surgeon etc. we should also consider the ethical aspect of this phenomenon. The idea of replacing humans with responsible machines in responsible positions of tutors and eventually caregivers remains controversial.

Conclusions

"ar" technology may benefit greatly the gynecologic endoscopy as humans and technology have complementary strengths when combined. The decision to see the boundaries between mindless exploitation of technology in gynecology surgery lies with us, but it is undeniable that the human brain cannot be reproduced.

ES2020-0037

Best Selected Abstracts

Robotic single-port surgery using the da Vinci SP® surgical system for benign gynecologic diseases; preliminary report

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Background

To report our initial experience of robotic single port laparoscopy using the da Vinci SP® surgical system for benign gynecologic diseases.

Methods

This retrospective cohort study was performed at an academic tertiary care hospital From December 2018 to July 2019. One hundred women with benign or malignancy gynecologic diseases underwent robotic single-port surgery performed using the da Vinci® SP surgical system.

Results

During the study period, hysterectomy, myomectomy, adnexectomy, were performed in thirty-six, thirty-two, and twenty women, respectively. In addition, two women diagnosed with endometrial cancer underwent hysterectomy and lymphadenectomy. The mean age and body mass index of patients, respectively, were 42.2 ± 9.5 years and 23.2 ± 3.6 kg/m². In terms of operative outcomes, the mean docking time, operating time, estimated blood loss, and hospitalization time were 2.0 ± 1.4 minutes, 144.8 ± 73.0 minutes, 113.6 ± 121.1 mL, and 4.9 ± 0.9 days. There was no laparoconversion or major complication.

Conclusions

Robotic single-port laparoscopy using the da Vinci SP surgical system might be an alternative surgical technique for various benign gynecologic diseases However, further studies are required to clarify the feasibility and safety of the new robot surgical system.

ES2020-0015
Best Selected Abstracts

Implementing robotic surgery for benign gynaecology, an observational study

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Background

Over the last years, the popularization of robotic-assisted laparoscopic hysterectomy has provided an alternative approach to performing minimally-invasive hysterectomy. Regarding the clinical outcome though, to date, robotically assisted hysterectomy has not evidently been more effective than traditional laparoscopy. Furthermore, robotic-assisted hysterectomy is associated with longer operative time, as well as higher total cost. Henceforth, a need to investigate implementation in a circumstance where costs have been reduced is necessary. In a small regional hospital in Slagelse Denmark, we have traditionally been performing benign hysterectomies abdominally, vaginally or laparoscopically. In the period February 2019 to December 2019 we have had the opportunity to perform robotic surgery on the Si DaVinci system on a leasing agreement.

The objectives of the study are to describe the influence of robotic surgery on our operative activity and patient flow in our department, investigate pre and peri-operative risk factors associated with robotic surgery in comparison to the other methods, examine the learning curves of the robotic surgeons and evaluate our reporting procedure to the national database of hysterectomies.

Methods

The study is a retrospective cohort, where we look at all patients who underwent total hysterectomy (abdominal, vaginal, laparoscopic, robotic) and salpingectomy with or without oophorectomy for benign indication in 2018 and 2019 in the gynaecological department in the hospital of Slagelse, Denmark. Robotic surgery was implemented in our department in 2019 in a leasing agreement. The data was obtained from electronic patient charts. Descriptive analyses was done to evaluate the operative activity, population characteristics, peri- and postoperative variables in our study, in order to describe the influence of robotic surgery in our department and compare it with the other operative methods in use.

Results

In our department 194 hysterectomies were performed for benign indication in 2018. 22 of them were abdominal (2 supravaginal), 21 were vaginal and 149 were laparoscopic. In 2019 there were 186 hysterectomies in total, 7 abdominal, 18 vaginal, 110 laparoscopic and 51 robotic. We saw a marked decrease in the number of abdominal hysterectomies whilst implementing robotic surgery. We also noticed a significant decrease in the intraoperative bleeding in hysterectomies performed with the robot, in comparison to laparoscopy and laparotomy, when operating larger size uteri. We did not see any increase in the intra and post-operative complication rate when operating on the robot, the operating time was though slightly longer.

Conclusions

Implementing robotic surgery in a leasing agreement can provide an alternative method of operating hysterectomies affiliated with reduced abdominal surgery and intraoperative bleeding, while surgeons and nurses are educated in the robotic procedures with significantly reduce total cost.

ES2020-0098
Best Selected Abstracts

Favorable surgical and obstetric outcomes in pre- and post-conceptual laparoscopic abdominal cerclage: A large multicenter cohort study

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Background

To assess surgical and obstetric outcomes after pre- and post-conceptual laparoscopic abdominal cerclage placement.

Methods

A retrospective multicenter cohort study with consecutive inclusion of all eligible patients from 1997 onwards in the Dutch cohort and from 2007 onwards in the Boston cohort was conducted. Eligible patients experienced at least one second or third trimester miscarriage because of cervical incompetence and/or a short or absent cervix after cervical surgery. This includes large loop excision of the transformation zone (LLETZ), conization or trachelectomy. Patients were divided into subgroups: 1) prior failed vaginal cerclage 2) prior cervical surgery 3) prior dilation and curettage (D&C) only. The primary outcome measure was delivery at ≥ 34 weeks of gestation with neonatal survival at hospital discharge. Secondary outcome measures comprised surgical and obstetric outcomes, including pregnancy rates after pre-conceptual surgery. All laparoscopic abdominal cerclages were placed in an elective setting.

Results

A total of 222 patients were included; 202 patients underwent pre-conceptual and 20 patients underwent post-conceptual placement (maximum gestational age of 12 weeks). The subgroup prior failed vaginal cerclage included 121 patients, prior cervical surgery 62 patients and prior D&C only 12 patients.

Both pre- and post-conceptual procedures showed positive surgical outcomes, with 7 (3,2%) minor complications (uterine perforation) during pre-conceptual surgery. One conversion to laparotomy occurred during post-conceptual placement because of hemorrhage and subsequent poor visualization. Blood transfusions were not required. Patients went home the day after surgery in the Dutch cohort and the same day in the Boston cohort.

Pregnancy rate after pre-conceptual surgery was 75,7% (minimal follow-up of 12 months). A total of 125 completed pregnancies were evaluated; 108 following pre-conceptual and 17 following post-conceptual surgery. First trimester miscarriages occurred in 13 patients (10,4%); 12 (11,1%) following pre-conceptual and 1 (5.9%) following post-conceptual surgery.

Of all ongoing pregnancies (excluding first trimester miscarriages) 101 patients (90,2%) delivered at ≥ 34 weeks of gestation; 86 (89,6%) following pre-conceptual and 15 (93,8%) following post-conceptual surgery. The subgroup prior failed vaginal cerclage comprised 50 (84,7%) patients, prior cervical surgery 25 (92,6%) patients and prior D&C only 10 (100%) patients with delivery at ≥ 34 weeks of gestation.

Second trimester miscarriages occurred in 4 patients (3.6%), all in the subgroup prior failed vaginal cerclage of the pre-conceptual cohort.

Fetal survival rate of all ongoing completed pregnancies was 95,5%; 94,8% following pre-conceptual and 100% following post-conceptual surgery. Fetal survival rate in the subgroup prior failed vaginal cerclage was 91,5%, in prior cervical surgery 100% and in prior D&C only 100%.

Conclusions

Pre- and post-conceptual laparoscopic abdominal cerclage placement is a safe procedure with favorable obstetric outcomes in patients with an increased risk of cervical incompetence. Subgroup analysis identifies patients with a prior failed vaginal cerclage with the greatest risk of cervical incompetence. All subgroups show high fetal survival rates.

ES2020-0031

Best Selected Abstracts

A prospective pilot study comparing incidence and characteristics of cesarean scar defects after uterine closure by double-layer barbed or smooth suture

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Background

Late sequelae of a cesarean section related to a uterine scar defects include gynecological symptoms and obstetric complications. The aim of this study was to evaluate the incidence and characteristics of cesarean scar defects after uterine closure by double-layer barbed suture.

Methods

Women who underwent elective cesarean section at ≥ 38 weeks of gestation at our institution were included in this prospective comparative study. Exclusion criteria were a previous cesarean section or uterine surgery. Low transverse hysterotomy was closed either by a double-layer unidirectional barbed suture or by a conventional double-layer smooth suture. The choice of the suture was based on the preference of the surgeon. The first uterine layer was close by continuous unlocked suture, including the endometrial layer; the second uterine layer by continuous unlocked suture imbricating the first. A saline contrast hysterosonography (SCHS) was performed six weeks, 6 and 12 months after cesarean section. A niche was defined as an indentation at the site of a cesarean section scar with a depth of at least 2 mm in accord with the modified Delphi procedure. Niche depth and length, residual myometrial thickness in the uterine sagittal plane were calculated. Postoperative complications were collected.

Results

Among 161 women, 64 underwent uterine closure by barbed suture and 97 patients by smooth suture. Six weeks after cesarean section, at SCHC the residual myometrium thickness (\pm SD) was significantly higher in the barbed suture (4.8 ± 1.3 mm) than in the smooth suture group (4.0 ± 1.3 mm; $p < 0.001$). After 6 months, there was a lower incidence of niche in the barbed suture (18.5%, $n=10/54$) than smooth suture group (33.7%, $n=29/86$; $p = 0.043$). The incidence of complex niche was not different between the two suture groups (7.4%, $n=4/54$ vs 7.0%, $n=6/86$; $p=0.672$). The mean (\pm SD) niche depth was 2.4 ± 1.2 mm in the barbed suture and 3.6 ± 0.5 mm smooth suture group ($p=0.006$); the mean length (\pm SD) was 2.0 ± 1.3 mm and 2.8 ± 1.1 mm, respectively ($p=0.018$). After 12 months, there was a significantly lower incidence of niche in the barbed suture group (16.6%, $n=7/42$ vs 31.9%, $n=22/69$; $p=0.046$). The incidence of postoperative complications was similar between the two groups.

Conclusions

Uterine closure by double-layer barbed suture during cesarean section may be characterized by a low incidence of scar niche formation and reduced size of the niche in women who have developed them.

ES2020-0128
Best Selected Abstracts

Doctor, I have niche - What does it mean?

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Background

A uterine scar defect, niche, is a long-term complication of cesarean delivery. The relationship between various niche features and symptoms has not fully been elucidated. The aim of this study is to evaluate the association between the presence of niche to the presence of symptoms.

Methods

This is a prospective cohort study conducted in a single university affiliated tertiary medical center, including all women that underwent cesarean delivery between January 2011 and December 2018. Women were requested to arrive at the gynecological clinics. During their visit they completed questionnaire regarding symptoms related to the presence of niche (menorrhagia, spotting, pelvic pain and infertility) . A trans-vaginal 2-D ultrasound examination targeted to assess the uterine scar characteristics was performed. Primary outcome was defined as the presence of uterine niche evaluated by length, depth, residual myometrial thickness (RMT) and the proportion between residual to adjacent myometrial thickness (RMT/AMT). Data are presented as median and Interquartile range.

Results

Two hundred twenty-five women were included in the study. 128 (56.88%) and 97 (43.11%) were symptomatic and asymptomatic, respectively. Median time from delivery to follow-up was 16 months for both of the groups. RMT was the only measurement associated with symptoms. RMT < 2.5mm was more prevalent in women reporting new onset infertility (14.8% vs. 2.1%; p=0.001). This finding was consistent in logistic regression analysis that revealed infertility as the only parameter associated with RMT [B= (-0.48), p=0.03]. Niche length [7.6(5.5-9.8) vs. 7.6(5.6-9.3) mm ; p=0.87], depth [4.95(3.4-6.57) vs. 4.4(3.3-6.42)mm; p=0.44], residual myometrial thickness [5.29(3.3-7.00) vs. 5.1 (3.5-7.3)mm; p=0.67] and RMT/AMT [0.43(0.29-0.61) vs. 0.47(0.29-0.57); p=0.58], were all comparable between the symptomatic and asymptomatic groups.

Conclusions

Residual myometrial thickness was found associated with infertility. All other niche measurements were comparable between symptomatic and asymptomatic women. Further investigation is required to strengthen this finding.

ES2020-0009
Best Selected Abstracts

Single or double-layer uterine closure techniques following cesarean: an ongoing debate

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Background

Cesarean deliveries are commonly performed throughout the world. While the uterine closure technique following this procedure may influence how the uterine scar heals, there is insufficient information for choosing the appropriate technique and thus preventing long-term negative consequences. This prospective randomized study examined the effects of single- and double-layer uterine closure techniques on uterine scar healing following caesarean delivery.

Methods

This study assessed a total of 282 women between 18-45 years of age who were in gestational weeks 24-41 of singleton pregnancies and had not previously undergone uterine surgeries. Participants completed their first caesarean deliveries at the time of study and were randomized into the two following treatment groups: single-layer closure with locking and double-layer closure with locking in the first layer, but not in the second layer (NCT03629028). However, the decidua was not included for treatment in either group. Participants were evaluated at 6-9 months after caesarean section by saline infusion sonohysterography to assess caesarean delivery scar defects. These procedures were conducted by experienced sonographers who were not concerned about the uterine closure technique.

Results

Of the 225 final participants, 116 received the double-layer closure technique, while 109 received the single-layer technique. In this regard, the niche rates and median niche depths based on transvaginal ultrasounds and sonohysterography investigations were 21%, 0.9±1.8mm and 41%, 2.1±1.9mm ($p<0.001$, $p<0.001$), respectively. The niche rates were 37% for the single-layer group and 45.7% for the double-layer group ($p=0.22$). While no statistically significant intergroup differences were found in terms of median niche length, median niche widths were higher in the double-layer group ($p=0.006$). Finally, no significant intergroup differences were found based on comparisons of residual myometrium thickness, adjacent myometrium thickness, or healing ratio values.

Conclusions

The single- and double layer closure techniques did not produce different impacts on uterine scare niche development. However, median niche width was higher for the double-layer closure group. Additional research is needed to determine appropriate uterine closure techniques to ensure the prevention of uterine scar defects.

ES2020-0030
Best Selected Abstracts

Does the benefit of the repair of isthmocele persist after a subsequent cesarean section ?

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Background

To evaluate the clinical outcomes after a laparoscopic repair of isthmocele, the gain in myometrial thickness, and to know if that gain persists after a following cesarean section (C-section).

Methods

This is a prospective study in progress based on the analysis of patients who underwent a laparoscopic repair of isthmocele between October 2016 and February 2020.

Patients were included in the study based on the diagnosis of isthmocele after one or more C-section(s), and the presence of at least one of the following symptoms: chronic pelvic pain (CPP), metrorrhagia or secondary infertility.

The cesarean scar defect was diagnosed with ultrasound and sometimes explored with hysteroscopy. All patients underwent a laparoscopic repair that consisted in an excision of the defectuous scar and a two-layer suture of healthy myometrium. Myometrial thickness was measured both pre-operatively and post-operatively with endovaginal ultrasound.

Out of 41 patients who underwent surgery, 12 were excluded due to lack of information, therefore 29 patients were included in the study. 25 patients were subjected to a programmed intervention, while 4 patients had an emergency repair after being diagnosed with an ectopic pregnancy on the C-section scar.

Regarding the patients who had a successful pregnancy after the repair, and a subsequent C-section, the myometrium was then measured one year after delivery.

Results

Mean myometrial thickness increased from 1,74mm to 6,78mm after ambulatory surgery, and from 1,1mm to 5,85mm for patients with an ectopic pregnancy.

13 patients reported metrorrhagia pre-operatively and 70% of them had a complete relieve of their symptom. CPP concerned 10 patients before surgery with a post-operative improvement of 60%.

Among the 29 patients, 12 presented with secondary infertility, with no etiologic factor other than the scar defect. 8 pregnancies were recorded in that specific group of patients (66%), but only 7 were carried to term (1 early miscarriage). A C-section was performed for all but one of these patients, who had a rapid vaginal delivery in the admission room.

Four patients had an ultrasound one year after the following C-section, the rest of them either refused follow-up or gave birth recently.

These four patients had initial mean myometrial value of 1.24mm, which was improved after laparoscopic repair (6,77mm). One year after C-section, the mean myometrial thickness was 3,69mm. None of these four patients reported isthmocele symptoms such as CPP or metrorrhagias.

Conclusions

Laparoscopic repair of C-section scar dehiscence ensures great benefit in terms of clinical outcomes - including fertility - and myometrial thickness in patients with large symptomatic isthmocele. The myometrial thickness gain seems to persist after a following hysterotomy, as well as the clinical improvement.

ES2020-0051
Best Selected Abstracts

Reproductive performance of women with versus women without intrauterine adhesions following recurrent dilatation and curettage for miscarriage, follow-up of a randomized controlled trial.

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Background

Intrauterine adhesions (IUAs) are one of the main reproductive system diseases in women worldwide. IUAs formation is multifactorial, characterized by endometrial fibrosis and hysteroscopic adhesiolysis is the standard treatment aiming to restore uterine architecture. The relationship between IUAs and reproductive performance has been frequently described in the literature, but the association is primarily based on retrospective, cohort studies, making it difficult to compare reproductive performance of women with and without IUAs.

Methods

This was a follow-up of the Prevention of Adhesions Post Abortion (PAPA-study), a multicenter randomized controlled trial following recurrent D&C for miscarriage. Written and signed informed consent for randomization and follow-up was provided by all participants before inclusion. All included women received a hysteroscopy 8-12 weeks after randomization and adhesiolysis conducted if IUAs were present.

Questionnaire were sent at least 30 months after randomization to all eligible participants. Main outcome of the current study was ongoing pregnancy and live birth. Respondents were divided in two groups based on the hysteroscopic findings; in a group with identified and treated IUAs and in a group without IUAs.

Results

Questionnaires were posted to 140 eligible participants. Nine women were lost to follow-up, they were not included in the current analysis. The response rate was 86.7% in the group with identified and treated IUAs and 95.5% in the group without IUAs (*P*-value 0.10). In women with identified IUAs, adhesiolysis was executed in all cases.

The mean duration of the follow-up was comparable in both groups. The demographic characteristics of the study populations were comparable, except that significant more women in the group with identified and treated IUAs had three or more previous D&C procedures.

In women pursuing a pregnancy, 14 (58.3%) ongoing pregnancies were recorded in women with identified and treated IUAs versus 80 (89.9%) ongoing pregnancies in women without IUAs OR 0.18 (95% CI 0.06 to 0.50, *P*-Value <0.001). Documented live birth was also lower in women with IUAs; 54.2% with versus 84.3% in women without IUAs, OR 0.22 (95% CI: 0.08 to-0.59, *P*-value 0.004).

Conclusions

Reproductive outcomes in women with identified and treated IUAs following recurrent D&C for miscarriage are impaired compared to women without IUAs; less ongoing pregnancies and live births are encountered with a prolonged time to a live birth.

ES2020-0131
Best Selected Abstracts

Placenta accreta spectrum in subsequent pregnancy following myomectomy

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Background

Placenta accreta spectrum (PAS) is an increasingly prevalent and potentially life-threatening complication of pregnancy. Data concerning the risk of PAS after myomectomy is limited. The aim of this study was to compare the prevalence of placental abnormalities in pregnancy following different modes of operative myomectomy.

Methods

A retrospective cohort study, including all women after myomectomy that gave birth in a single tertiary care center from February 2011 to January 2019. Data was collected from the patients' medical files and completed by telephone questionnaire. Patients were stratified to 3 groups, according to the mode of operative myomectomy (laparotomy, laparoscopy, hysteroscopy). Groups were compared for women demographics, fibroid's characteristics, operative management, post-operative placental evaluation and delivery characteristics. Primary outcome was defined as the need for any intervention for placental separation during the third phase of the delivery.

Results

241 women met inclusion criteria. Complete follow-up was achieved in 199 (82.57%) women, of whom 82, 89 and 28 underwent laparoscopic, laparotomy and hysteroscopic myomectomy, respectively. There were no in-between groups differences in women's age, BMI, and gravidity. Disruption of the endometrial cavity during laparoscopy and laparotomy was reported in 3 (3.6%) and 7 (7.8%) cases, respectively ($p=0.21$). During the subsequent pregnancy following myomectomy, placenta accreta spectrum disorder was suspected in only one woman in each of the study groups ($p=0.63$). Placenta previa was not seen in any of the women included in the study. Vaginal delivery rate was significantly higher in the hysteroscopy group, as compared to the laparoscopy or the laparotomy groups [11 (36.3%) vs. 5 (6.1%) vs. 4 (4.5%); $p=0.001$], with significantly lower need for manual lysis of the placenta [11(39.0%) vs. 51 (62.1%) vs. 62 (69.7%); $p=0.01$] and further interventions for blood loss control.

Conclusions

Subsequent pregnancy following surgical myomectomy was not found to be associated with higher prevalence placental abnormality. Furthermore, other than manual lysis, the different modes of myomectomy did not necessitate any further intervention for complications associated with abnormal placentation requiring intervention.

ES2020-0136

Best Selected Abstracts

Predictive score for pre-operative adnexal torsion diagnosis

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Background

The aim of this study is to develop a predictive score for pre-operative adnexal torsion diagnosis.

Methods

This is a retrospective cohort study between 2011 and 2020 in a tertiary, university affiliated medical center. Overall, 546 women were enrolled, with 615 separate episodes of suspected adnexal torsion. Intervention in all episodes was diagnostic laparoscopy. We collected clinical characteristics, sonographic findings and laboratory results of suspected adnexal torsion episodes. We compared those who had adnexal torsion confirmed in laparoscopy (72%) and those who had adnexal torsion ruled out (28%).

Results

Pregnancy and assisted reproductive technology treatments were more common in the confirmed torsion group [OR 95% CI 2.3(1.46-3.71), P <0.001, and 4.24(2.21-8.13), P<0.001 respectively], while previous pelvic surgery was less common [OR 95% CI 0.54(0.37-0.77), P=0.001].

More patients in the confirmed torsion group appeared painful on admission [OR 95% 2.37(1.64-3.42), P<0.001], were more likely to have visual analogue score > 7 [OR 95% CI 1.95(1.36-2.80), P=0.001] and to experience vomiting [OR 95% CI 2.53 (1.68-3.81) P<0.001].

On ultrasound scan, an enlarged ovary [OR 95% CI 2.36(1.62-3.44), P<0.001], a higher maximal diameter of affected adnexa (P<0.01) and absent doppler flow [OR 95% CI 1.83(1.01-3.30) P=0.04] were more common in the confirmed torsion group.

Neutrophils to Lymphocytes ratio (NLR) above 3.5 was more common in the confirmed torsion group [OR 95% CI 2.09 (1.42-3.07) P<0.001].

On multivariate regression analysis, vomiting, NLR>3.5 and enlarged ovary finding in ultrasound scan were independently associated with adnexal torsion [OR 95% CI 2.78(1.21-6.36), 3.15(1.42-6.97) and 2.80(1.33-5.88) respectively]. Considering a basal rate of 50% for adnexal torsion if clinical suspicion was raised, the rate of torsion was 69.7% with one, 84.4% with two, and 93.1% with three predicting factors present.

Conclusions

Our predictive score may improve pre-operative adnexal torsion diagnosis and reduce rates of unnecessary laparoscopies.

ES2020-0011
Best Selected Abstracts

A comparative study reviewing postoperative recovery outcomes for total laparoscopic hysterectomy with superior hypogastric plexus nerve block compared to standard technique using intraperitoneal local anaesthetic

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Background

Superior hypogastric plexus (SHP) nerve block can be performed during a laparoscopic hysterectomy by infiltrating local anaesthetic retroperitoneally in the area of the superior hypogastric plexus. Although there are studies confirming its safety, there are limited publications regarding its use during laparoscopic hysterectomy.

Overall our unit undertakes 79% of its hysterectomies via the laparoscopic route. Pre-study previous unit quoted rates of day case TLH were over 68%. This is achieved in part by clear day case hysterectomy and associated anaesthetic protocols.

Methods

We retrospectively examined the notes of 150 women who underwent total laparoscopic hysterectomy without or without bilateral salpingo-oophorectomy performed by the same advanced laparoscopic surgeon or his trainee during the months January 2018- December 2019. These were split into two groups; the first 88 performed using standard analgesia with 10ml of 0.25% chirocaine subcutaneously and 30ml of 0.25% chirocaine intraperitoneal. The second group, containing 62 women, were those performed using 10ml 0.25% chirocaine subcutaneously and a SHP nerve block mid-procedure, using 30ml of 0.25% chirocaine.

Results

Firstly, we are confident that the results are comparable; the operations in both groups were all the TLH completed by the same surgeon or his trainee in the period. Therefore neither group should be more or less complicated. The mean ages were similar (51 in block group v 47 in control). There was a similar split across the operating sites; only one site has inpatient beds, so potentially more complicated surgery completed here.

The control group had an 83% rate of same day discharge, this increased to a 92% discharge same day rate in SHP block group.

SHP block group required less analgesia in recovery, 31% required no analgesia compared to 2% in the control group and 67% required strong analgesia compared to 95% in the control group. This has been shown to be significant ($p < 0.001$).

76% were discharged within 8 hours in the SHP block group compared to 18% in the control group.

Neither group had any serious complications. More in the SHP block group required a catheter for a short time postoperatively.

Conclusions

Our study provides more evidence that SHP nerve block is a safe and effective adjunct for the pain management of patients undergoing TLH. It significantly reduces postoperative pain requirements, increases the same day discharge rate & decreases the time in hospital for patients. There were higher rates of requiring catheter in SHP block group, however, all passed TWOC 48 hours later

This study looks at more cases than the current available literature.

We feel that the increased uptake of this procedure, after appropriate training, could improve the post-operative management and day case hysterectomy rates across all staff in our unit and across other units.

BEST SELECTED VIDEO ABSTRACTS

ES2020-0072

Best Selected Videos

Extraperitoneal para-aortic and pelvic lymphadenectomy via the robotic double bipolar method

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Background

To demonstrate the accuracy of dissection of the double bipolar method (DBM) in robotic retroperitoneal lymphadenectomy including paraaortic and pelvic surgery. We will show how the DBM works in real surgical settings for procedures such as modified radical hysterectomy and retroperitoneal lymphadenectomy for clinical stage I endometrial cancer.

Methods

From December 26th 2018 to April 22nd 2019, 13 patients underwent extraperitoneal paraaortic dissection and 3 patients underwent both paraaortic and pelvic extraperitoneal dissection for stage I ovarian cancer (n=5) and endometrial cancer (n=8)- stage I-III. Informed consents were obtained from all study subjects before enrolment in the study.

After retroperitoneal lymphadenectomy we performed robotic modified radical hysterectomy and bilateral salpingo-oophorectomy with or without a transperitoneal pelvic lymphadenectomy. Some patients also underwent omentectomy and peritoneal sampling.

The DBM was pioneered by Prof Ichiro Uyama, a robotic gastrointestinal surgeon. We use robotic Maryland forceps as the cutting device with a Valleylab TM FT10 energy platform (ForceTriad TM energy platform) at macromode 60W. The advantage of this technique is that many of the concerns surrounding the use of other instrumentation such as monopolar scissors, where adjacent tissue may be inadvertently injured due to thermal spread, are removed by the pinpoint accuracy of this technique. This technique is important for bladder and ureteral dissection and exposure of vessels. As the cuts are made at a very limited point by a lightning strike mechanism, causing spark vaporization of the tissue, there is minimal thermal spread to adjacent organs.

Results

The median number of retrieved lymph nodes in the paraaortic dissection was 32, in the pelvic dissection- 27. The estimated blood loss in the paraaortic dissection was almost 0ml, and 75ml in the pelvic. The median operating time was 147mins for the paraaortic dissection and 50mins for the pelvic dissection. No patients who underwent these interventions suffered organ injury or required a blood transfusion. There was no conversion to laparotomy and, as for the retroperitoneal approach, there was no conversion to the transperitoneal or laparoscopic approach.

Conclusions

The pinpoint accuracy of the DBM allowed for safe and complete dissection of more complicated procedures can be performed robotically laparoscopically. The DBM can be adopted with a number of surgical approaches making it a flexible surgical technique in the robotic environment.

<https://player.vimeo.com/video/422256746?autoplay=1>

ES2020-0076
Best Selected Videos

Laparoscopic upper vaginectomy after cervical cancer treatment

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Background

Upper vaginectomy can be a treatment option in patients with upper vaginal cancer recurrence and in patients with vaginal high grade intraepithelial neoplasia. The aim of this video is to present a clinical case where laparoscopic upper vaginectomy was performed.

Methods

A 52 year-old woman, was diagnosed with a well-differentiated invasive squamous cell carcinoma of the cervix, with dimensions of 0.48mm and thickness of 0.76mm, FIGO stage IA1, after being subjected to total hysterectomy and bilateral adnexectomy. The patient was sent to IPO Porto after an altered cytology and vaginal vault biopsy, five months after surgery. No macroscopic lesions were observed at vaginoscopy but an iodonegative area in the center of the vaginal vault, about 2cm in diameter was present. Multiple biopsies were performed and revealed a high grade lesion but were inconclusive about an invasive disease. Pelvic magnetic resonance imaging (MRI) was normal but positron emission tomography-CT (PET-CT) showed a small focus with increased uptake corresponding to an area adjacent to the posterior wall of the bladder. After a multidisciplinary meeting, laparoscopic upper vaginectomy was proposed as diagnosis and treatment. At beginning of the surgery, iodine was applied on the vagina to identify and limit the lesion. Laparoscopy was performed starting with the opening of the peritoneum, followed by rectovaginal and vesicovaginal spaces dissection and bilateral paracolpos approach. After opening the vagina and removing the piece with an endobag, the vagina was closed by laparoscopic intracorporal knots.

Results

No intra or postoperative complications occurred. The vaginectomy piece contained an invasive squamous cell carcinoma with 8mm in length and 3.5mm depth of invasion and tumor free margins. Six weeks after surgery the patient started adjuvant radiotherapy and is currently in follow up.

Conclusions

Laparoscopic upper vaginectomy is a safe and feasible technique associated with good recovery. It can be an option in the diagnosis and treatment of vaginal lesions.

<https://player.vimeo.com/video/422374977?autoplay=1>

ES2020-0058
Best Selected Videos

Surgical approach in uterine complete septum with cervical duplicity and vaginal septum

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Background

The purpose is to describe, diagnose and treat a complete uterine septum with cervical duplicity and vaginal septum.

Methods

Narrative review of the literature about this pathology and description of the surgical technique, step by step, from a clinical case.

Results

Congenital uterine abnormalities derived from Mullerian fusion-reabsorption defects are the most frequent malformations that affect the female reproductive system. Among the patients with uterine septum, there are some that associate cervical duplicity and vaginal septum, currently unclassifiable by the classical theories and, in many cases, misdiagnosed. The alternatives are the ESHRE/ESGE classification and the VCUAM classification. Currently, its diagnosis is achieved by diagnostic hysteroscopy, bi and three-dimensional ultrasound, and magnetic resonance imaging. In case of surgical indication, a hysteroscopy with variable nuances is performed: cervical section, removal of the vaginal septum, laparoscopic control, intrauterine guide. The following clinic control can be done with three-dimensional ultrasound, assessing the need for a new diagnostic hysteroscopy according to the findings.

Conclusions

The cervical section reduces the surgical time but it can increase the risk of bleeding and in all cases a prophylactic cerclage will be necessary in pregnancy. Using a guide to cut the uterine septum reduces the risk of perforation and helps to locate the section points. Laparoscopic guided hysteroscopy is optional, but allows better visualization of the uterine contour and better control by transillumination of the residual myometrial thickness after septoplasty. In addition, if there is a uterine perforation, it provides an immediate access to control it.

<https://player.vimeo.com/video/422128265?autoplay=1>

ES2020-0027
Best Selected Videos

Fertility- and nerve-sparing laparoscopic eradication of deep endometriosis with anterior and posterior compartment peritonectomy

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Background

Laparoscopic nerve-sparing techniques represented by the Negrar method have been described as resulting in lower rates of postoperative bladder, rectal, and sexual dysfunctions than classical approaches. A systematic review and meta-analysis has shown significant advantages of a nerve-sparing technique for deep endometriosis (DE) in reducing the risk of urinary retention due to iatrogenic injury to nerves. In addition, a recent paper has shown that complete excision of DE with the posterior compartment peritonectomy could be surgical treatment of choice to decrease postoperative pain, improve fertility rate, and prevent future recurrence. However, these procedures are even more challenging than oncologic radical procedures because the pathology resembles advanced cervical cancer and ovarian cancer. Therefore, the objective of this video is to show anatomical and stepwise technical highlights of nerve-sparing laparoscopic eradication of DE with anterior and posterior compartment peritonectomy.

Methods

After adhesiolysis and ovarian surgery, we developed retroperitoneal space at the level of promontory. The hypogastric nerve consists of the upper edge of pelvic plexus, so autonomic nerves were separated as a "nerve plane" by sharp interfascial dissection of the loose connective tissue layers both above (between fascia propria of rectum and prehypogastric nerve fascia) and below (between prehypogastric nerve fascia and presacral fascia) the hypogastric nerve. As a result of these dissections, autonomic nerves in pelvis were separated like a sheet with surrounding fascia. We then completely resected all DE lesions including peritoneal endometriosis while avoiding injury to the nerve plane.

Results

40 patients underwent this procedure. 25% of the patients received hormonal treatment before the surgery and 45% of the patients received after the surgery. All patients presented with stage 3 or stage 4 endometriosis, 45% of the patients presented with complete cul-de-sac obliteration and 83% of the patients presented with ENZIAN B2 or B3 lesions. No patients underwent bowel, bladder or ureteral resection in this population. Endometriosis was laparoscopically and histologically confirmed in all patients. All procedures included nerve-sparing eradication of DE in the uterosacral ligament with the posterior compartment peritonectomy. The mean score of visual analogue scale significantly decreased after the surgery ($p < 0.01$). Although one patient developed postoperative ureteral stenosis, no patients developed postoperative bladder, rectal, and sexual dysfunctions. No patients required self-catheterization. With a short-term follow up, no evidence of recurrence was seen in all patients. This nerve-sparing method is a modification of the technique of total mesorectal excision (TME) and total mesometrial resection (TMMR). We considered that this nerve-sparing technique is also applicable to segmental bowel resection and radical hysterectomy.

Conclusions

Our novel nerve-sparing surgery based on detailed meso-anatomy reproducibly simplify this complex procedure. Step-by-step technique help to perform each part of the surgery in a logical sequence, making the procedure easier and safer to complete.

<https://player.vimeo.com/video/419878794?autoplay=1>

ES2020-0028
Best Selected Videos

Robot-assisted nerve-sparing eradication of deep endometriosis

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Background

Laparoscopic nerve-sparing techniques in deep endometriosis (DE) represented by the Negrar method have been described as resulting in lower rates of postoperative bladder, rectal, and sexual dysfunctions than classical approaches. Recently, robotic surgery has become available and two meta-analyses have confirmed that robotic surgery is safe and feasible in the treatment of endometriosis, especially in advanced cases. However, few papers have shown the surgical technique for nerve-sparing procedure using a robotic approach in DE. Therefore, the objective of this video is to demonstrate anatomical and stepwise technical highlights of a robot-assisted nerve-sparing surgery for DE.

Methods

Robot-assisted nerve-sparing excision of DE was performed using the following 8 steps: Step 1, adhesiolysis and adnexal surgery; Step 2, checking the ureteral course; Step 3, separation of the nerve plane [Step 3-1, dissection of the avascular layer below the hypogastric nerve, between the prehypogastric nerve fascia and presacral fascia]; and Step 3-2, dissection of the avascular layer above the hypogastric nerve, between the prehypogastric nerve fascia and the fascia propria of the rectum]; Step 4, reopening of the pouch of Douglas; Step 5, complete removal of DE lesions while avoiding injury to the nerve plane; Step 6, hysterectomy (if the patient desires non-fertility-sparing surgery); Step 7, checking for rectal injury using an air leakage test; and Step 8, barrier agents for adhesion prevention. The preserved pelvic autonomic nerves were separated into a nerve plane, like a sheet, along with the surrounding fascia.

Results

No patients developed perioperative complications including bladder, rectal, and sexual dysfunctions after the surgery. No patients required self-catheterization. The nerve-sparing technique allows nerve preservation in cases where the nerve plane is disease-free. In cases where endometriosis lesions are embedded in the deep lateral pelvic wall near structures such as sacral nerves, nerve-sparing techniques are no longer feasible, except in cases with unilateral involvement. This nerve-sparing method based on detailed meso-anatomy is a modification of the technique of total mesorectal excision (TME) and total mesometrial resection (TMMR). We considered that this nerve-sparing technique is also applicable to segmental bowel resection and radical hysterectomy.

Conclusions

Robot-assisted nerve-sparing eradication of DE based on detailed meso-anatomy is as technically feasible as the conventional laparoscopic approach. The step-by-step technique should help perform each part of the surgery in a logical sequence, making the procedure easier and safer to complete.

<https://player.vimeo.com/video/419890358?autoplay=1>

ES2020-0024
Best Selected Videos

ovarian remnant with ureteral stenosis laparoscopic resection of ureteral endometrioma

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Background

Endometriosis is a chronic condition with a variety of different symptoms. Therefore diagnosis can be delayed years after appearance of first symptoms. This is a case report of a woman with a history of dysmenorrhea, dyspareunia and dyschezia. The first surgical treatment in 2016 included a laparoscopic hysterectomy, bilateral adnexectomy and a partial small bowel resection. Three years later, the patient presented again with pain in the right lower abdomen. The MRI showed a 3 cm endometrioma next to the right ureter and hydronephrosis. After preoperative assessment including ultrasound and MRI resection of the endometrioma was planned.

Methods

Laparoscopic complete dissection of the pelvic part of the right ureter and resection of the ovarian remnant.

Results

The resection of the ovarian remnant was complete and the ureter was freed. Hydronephrosis disappeared and the patient remained free of symptoms until now.

Conclusions

Ovarian remnants are rare complications after difficult interventions for endometriosis with the need for further surgery. These cases require careful exploration, planning and experienced surgeons.

<https://player.vimeo.com/video/416856873?autoplay=1>

ES2020-0016
Best Selected Videos

En-bloc resection of the “butterfly area” for deep infiltrative endometriosis

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Background

In this video, we demonstrate our structured approach for excision of the “butterfly area” when endometriosis involves both pelvic sidewalls, uterosacral ligaments and torus uterinus.

Methods

This is an edited video of a procedure performed at our unit in Chertsey, UK, CEMIG (Centre for Endometriosis and Minimal Invasive Gynaecology).

Results We follow a structured approach which we call by the mnemonic “**SO SURE Resection**”. Depending on the case there may be an adjustment on the above order but in general the acronym itself is a well structured approach that facilitates the procedure.

The stages of the excision are as following:

1. **S**urvey of lower and upper abdomen and **S**igmoid mobilisation
2. **O**varian mobilisation (combination of sharp/blunt dissection)
3. a. **S**uspension of uterus using sutures b. **S**uspension of ovaries
4. **U**reterolysis
5. **R**ectovaginal septum entry (disease is left on the uterus and normal tissue is entered in the rectovaginal space)
6. **E**nter into pararectal space
7. **R**esection of the “Butterfly area”(care is taken to lateralize the hypogastric nerve) At the end of the procedure we perform the Michellin test to ensure the integrity of rectal wall.

The previous steps can be slightly altered depending on the complexity of the case.

Conclusions

Following a structured approach ensures a safer and quicker procedure. En-bloc excision not only provides a cleaner, more satisfying surgical field, it also ensures that the microscopic skip lesions between the endometriotic lesions are included in the specimen, providing a clean surgical field where all anatomical structures, (including the hypogastric nerves) can be easily seen and preserved.

<https://player.vimeo.com/video/410535050?autoplay=1>

ES2020-0123
Best Selected Videos

Laparoscopic approach to excision of Ureteric Endometriosis leading to gross Hydroureter and Hydronephrosis

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Background

To present approach used at Aberdeen Royal Infirmary (ARI) for the excision of extrinsic ureteric endometriosis.

Methods

This lady was referred to the endometriosis centre in ARI with worsening back and pelvic pain, severe hydroureter and hydronephrosis. She was known to have severe endometriosis. She has had 3 previous laparoscopies being the last one in 2018 when excision of rectovaginal endometriosis and left salpingo-oophorectomy was performed. She was unable to tolerate hormonal treatment as this has caused her suicidal ideation in the past.

In view of worsening backache, she had CT KUB which showed severe left hydronephrosis and hydroureter. She also had a renogram which showed reduced left renal function. The urologist placed a stent in the left ureter and subsequently referred her to the endometriosis centre in ARI. After assessment at specialist Centre, ureteric endometriotic nodule was suspected. Therefore, a plan was made for laparoscopic excision of grade IV endometriosis + ureteric endometriotic nodule excision +/- ureter reimplantation.

Results

On the day of the procedure, she had hysteroscopy and cystoscopy which were normal. The left ureteric stent was due for replacement and this was performed before laparoscopy. Two advanced laparoscopic surgeons, the urologist, radiographer and gynae registrar were present on the day of the operation. During the procedure a Vascular loop was used to partially isolate the ureter and aid dissection without compromising its blood supply. This has the purpose of reducing the risk of ureter avascular necrosis.

Conclusions

Dissection of endometriosis was performed in a careful and meticulous manner which allowed excision of the ureteric endometriotic nodule so ureteroneocystostomy was not required.

The patient is recovering well from this operation and she will be seen in 3 months' time to remove ureteric stent and re-assess renal function.

<https://player.vimeo.com/video/422605633?autoplay=1>

ES2020-0064
Best Selected Videos

Aiming for a bloodless operative field - The double bipolar method in robotic radical trachelectomy.

Masaaki Andou¹, Shiori Yanai¹, Kyoshi Kanno¹, Shintaro Sakate¹

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Background

To present and describe how the double bipolar technique was applied in a patient with 1b1 cervical cancer who wished to preserve her fertility potential. After experiencing 104 cases of laparoscopic and robotic radical trachelectomy with a disease free 5 year survival rate of 98% and the birth of 29 babies from 51 of these patients who attempted pregnancy, we introduced the double bipolar method in our robotic surgery to overcome technical difficulties of the procedure due to the necessity for precise dissection and reconstruction in the deep pelvis. We will show our operative techniques, such as nerve sparing radical trachelectomy and retroperitoneal lymphadenectomy for early invasive cervical cancer in a bloodless operative field.

Methods

Informed consents were obtained from all study subjects before enrolment in the study.

After Robotic radical trachelectomy using monopolar scissors in 30 cases of stage Ib1 cervical cancer, we considered techniques for a more bloodless operative field. The double bipolar method (DBM) was originated by a robotic gastrointestinal surgeon, Prof Ichiro Uyama. Robotic Maryland forceps are used as the cutting device with a Valleylab TM FT10 energy platform (Force Triad TM energy platform) at macromode 60W.

Using robotic Maryland forceps as a cutting device allows for pinpoint accuracy that cannot be found in other instruments. It is important for bladder and ureteral dissection and exposure of vessels. Cuts are made at a very limited point by a lightning strike mechanism or pinpoint spark vaporization, meaning there is minimal thermal spread to adjacent organs.

Results

Mean Blood loss was 250ml in the cases presented. In surgeries not using the DBM (n=34), the blood loss ranged from 350ml (100-1200ml). While there is no supporting data, the dissection of the ureter was very smooth.

Conclusions

A bloodless operative field allows for accurate dissection which can prevent intraoperative injuries. The DBM is able to provide precision cutting and limit thermal spread to adjacent tissue, reducing injury and allowing for a clear operative field.

<https://player.vimeo.com/video/422153474?autoplay=1>

ES2020-0102
Best Selected Videos

Laparoscopic excision of retrocervical deep infiltrative endometriosis with bowel shaving

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Background

This is the case of a 46 years old patient who presents with dysmenorrhoea and groin pain. Transvaginal US showed a 5 cm endometrioma on the left ovary and a nodule on the left uterosacral ligament was palpated. This video presentation outlines the surgical steps of laparoscopic excision in a systematic approach.

Methods

Laparoscopy demonstrated deep infiltrating endometriosis (DIE) involving the left sacrouterine ligament, retrocervix and upper rectum.

A standard 4 port laparoscopy is undertaken and a systematic approach is followed. Surgery begins with division of the physiological sigmoid colon adhesions. The left ureter is visualised and dissected at the pelvic brim. The adhesions between the uterus, left adnexa and left ovary were dissected. Left salpingo-oophorectomy was performed. The left pararectal space is opened medial to the left sacrouterine ligament and then the right pararectal space and the right ureter are dissected. The nodule on the left sacrouterine ligament is dissected. The nodule on the rectum which lies to the rectovaginal septum was carefully shaved off until normal tissue below the nodule is reached. The nodule is shaved from the rectum with cold scissors and short bursts of monopolar energy to avoid thermal injury to the bowel. Vaginal and rectal examination during the dissection assists in identifying the correct plane. The nodule is excised en bloc. The serosa of the rectum was sutured accordingly. At the end of the operation the bowel integrity is checked with an under water leak test which was negative.

Results

The patient made an uncomplicated recovery and was discharged on day one post operatively. Endometriosis was confirmed on histology.

Conclusions

A systematic approach for the surgical excision of DIE is followed in this video. Shaving gives a lower risk of immediate complications than resection, with better functional bowel outcomes and should be considered first line treatment for non-infiltrating rectal/recto-sigmoid colon nodules.

<https://player.vimeo.com/video/422530310?autoplay=1>

ES2020-0053
Best Selected Videos

Sacrocolpopexy for bladder prolaps with JAIMY innovating robotic system

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Background

The purpose of this non sponsored video is to evaluate the feasibility of using robotic technology (the JAIMY needle holder) for laparoscopic sacrocolpopexy and its impact on AOT (Average Operating Time) and ALOS (Average Length Of hospital Stay).

Methods

69 patients who received a laparoscopic sacrocolpopexy intervention by 2 surgeons were divided into two groups: The first group contains patients who were operated using the JAIMY robotic needle holder (Group A), while the second group contains patients who were operated using classic laparoscopic instruments (Group B). The Equality Test and the Student Test were used to determine whether the use of JAIMY had an impact on AOT and ALOS. The learning curve for each of the surgeons regarding the use of JAIMY was also plotted.

Results

A total of 69 patients were grouped as following: 36 in Group A and 33 in Group B. Mean age was 63.6 years (39-85). Mean Body Mass Index (BMI) was 25.4 (17.4-36). The AOT was at least 25 minutes shorter with JAIMY: average surgical time was 116.22(+/- 43.94) minutes in Group A versus 143.82(+/- 36.13) minutes in Group B ($p < 0.05$). The ALOS was shorter with JAIMY: this mean score was 1.89 (+/- 1.69) days in Group A versus 4.09 (+/- 1.31) days in Group B ($p < 0.05$). In the last 2 years 33 % of cases were operated in an outpatient setting. Regarding the learning curve, after 5 uses with the robotic needle holder, the operating time decreases: an average of 146.2 minutes for the first 5 interventions versus 101.33 minutes for the subsequent interventions for Urologist 1 and 141.2 minutes versus 106.95 minutes for Urologist 2.

Conclusions

The JAIMY system is easy to use and it leads to significant benefits for the patients and the healthcare system. By facilitating tunnelling and suturing, this instrument makes outpatient laparoscopic sacrocolpopexy feasible, reproducible and less dependent on the surgical skills and experience of the operator.

<https://player.vimeo.com/video/422005556?autoplay=1>

ES2020-0143
Best Selected Videos

Ureterolysis is the critical step for removing complex ovarian masses

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Background

Laparoscopic surgery is considered the gold-standard route for the treatment of benign ovarian masses and endometriosis. Several factors, such as adhesions or degree of endometriosis can increase the difficulty of the operation and advanced laparoscopic skills are required to complete the procedure laparoscopically. Ureterolysis is the critical step in safe dissection of complex ovarian masses that involve the pelvic side wall or broad ligament.

We present a case of a 46-year-old lady who underwent a right salpingo-oophorectomy for a large ovarian mass. The cyst was classified as a complex mass that was discussed on the gynaecology oncology MDT and the decision was for a laparoscopic approach as no sinister features were identified.

The procedure was complicated by the presence of a 15X20 cm right ovarian/tubal endometrioma that was diagnosed only intra-operatively. This endometrioma expanded into the broad ligament and onto the pelvic sidewall. The edge of the ovary was continuous with the rectum and no clear dissection plane was identifiable.

A right ureterolysis was performed to safely separate the ovarian mass from the pelvic side wall, ureter and uterine vessels. The video clearly demonstrates how the course of the ureter can be significantly deviated by the presence of a large adnexal mass, and its course cannot be predicted without direct visualization. The adhesions between the endometrioma and the right para-rectal space and sigmoid colon were divided with cold scissors. The endometrioma was then mostly removed.

The pararectal space was then opened and a rectal probe was used to demonstrate the close proximity of the bowel serosa with the endometrioma tissue and, as the patient did not complain of dyschezia, this was left untreated due to high risk of bowel injury.

<https://player.vimeo.com/video/468993772?autoplay=1>

ES2020-0035
Best Selected Videos

Laparoscopic treatment of Dolichodouglas pathology associated to pelvic organ prolapse

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Background

To present the laparoscopic treatment and outcomes of a patient with pelvic organ prolapse associated with Dolichodouglas.

Methods

Video/presentation.

Results

The Dolichodouglas is often unrecognised. It represents an abnormally profound Douglas' pouch (recto-uterine pouch). It may be congenital or acquired. The increased depth of the Douglas' pouch brings it in close anatomical contact with the posterior vaginal wall. Therefore, intestinal loops may apply pressure to this wall, causing a condition known as enterocoele, which presents as an out-pouching on the posterior vaginal wall. It's also possible a herniation of omentum, in the recto-uterine pouch. The symptoms can be pelvic heaviness, dyschesia, constipation, foreign body sensation in the rectum or anus and incomplete rectal emptying. Perineosonography and pelvic magnetic resonance imaging with morphological sequences and dynamic sequences in thrust can be very useful, allowing a comprehensive study of pelvic floor dysfunction and confirming the complete diagnosis, especially before surgery. The optimal surgical treatment of rectocele and enterocoele associated with Dolichodouglas with a posterior vaginopexy is insufficiently defined in guidelines for clinical practice (2016). We present the surgical treatment and the outcomes of a patient treated by laparoscopic sacrocolpopexy, douglasectomy, cystocele treatment and rectopexy with anterior and posterior fixation by a mesh. At 1-year follow up, the patient described an improvement of the functional anorectal disorders, and the resolution of pelvic organs prolapse.

Conclusions

Laparoscopic treatment provides a complete management of total pelvic prolapse associated with Dolichodouglas pathology. More cases with long term results need to be evaluated.

<https://player.vimeo.com/video/421257748?autoplay=1>

ES2020-0113
Best Selected Videos

Performing Myomectomy Prior to a Challenging Hysterectomy

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Background

Total laparoscopic hysterectomy (TLH) in patients with enlarged adenomyotic uterus is a demanding and technically challenging procedure. Knowledge of the retroperitoneal anatomy and extensive laparoscopic experience are of paramount importance to avoid serious complications. Performing myomectomy prior to the hysterectomy could help to achieve this challenge and ease extracting the materials.

Methods

We will present a 44 year old patient who presented with groin pain. She had been followed for 12 cm myoma. She had laparoscopic myomectomy 6 years before. Her examination revealed an enlarged uterus up to the umbilicus. Her MRI showed an enlarged uterus with multiple fibroids, among them one had a 12 cm diameter.

Entry was through Palmer's point due to large size of the uterus and suspected adhesions. Four ports were used. First the biggest fibroid was excised. After myomectomy it was observed that uterus was reduced to a 16 weeks gravid uterus. Lateral retroperitoneal spaces were dissected and both ureters were dissected to the point where they cross with uterine arteries. Uterine arteries were clamped. Adhesions on the right side were dissected. Bilateral salpingectomy was performed and hysterectomy was completed. The materials were extracted through the vagina after being morcellated with cold knife. The pelvic anatomy was remarkable.

Results

Although the operation lasted for 5 hours the patient was discharged in two days. There were no complications during and after surgery. Postoperative recovery was uneventful.

Conclusions

Although laparoscopic approach to enlarged uterus lasts longer than laparotomy, the patient recovery is so remarkable that these patients should have the chance for laparoscopy. Knowledge of the retroperitoneal anatomy and extensive laparoscopic experience are of paramount importance to avoid serious complications.

<https://player.vimeo.com/video/422570490?autoplay=1>

ES2020-0063
Best Selected Videos

Primary ectopic pregnancy in the pouch of Douglas: an unlikely scenario

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Background

Abdominal pregnancy is a rare type of ectopic pregnancy and can be primarily or secondarily located in the pouch of Douglas (POD). It is also associated with a high risk of maternal morbimortality.

Methods

Video case report of a primary abdominal ectopic pregnancy, implanted in the POD, successfully treated by a laparoscopic approach.

Results

A 33 year-old woman, gravida 2 para 1, with 8 weeks of amenorrhea and a positive pregnancy test, presented in the Obstetrics & Gynecology Emergency Department due to painless vaginal bleeding. The medical evaluation revealed a pregnancy of unknown location. After 2 days, she had an episode of lipothymia and acute abdominal pain and returned to the hospital. At this time, she had severe tenderness in the POD, a β -hCG of 5059 mIU/mL and a significant hemoperitoneum with blood clots at the transvaginal ultrasound. An emergency laparoscopy was performed and a large hemoperitoneum (~1 litre) was detected and drained. The adnexa were normal, but trophoblastic tissue with peritoneal implantation was found in the POD. This tissue was gently removed followed by peritoneal toilet and control of hemostasis with a resorbable hemostatic material. The postoperative recovery was uneventful, with a steady decline of β -hCG levels.

Conclusions

Diagnosis and management of an abdominal pregnancy is very challenging and requires a high level of suspicion. Laparoscopic management and careful inspection of the abdominal cavity are essential to find the exact implantation site of the trophoblastic tissue in a pregnancy of unknown location. Normal adnexa findings are suggestive of a primary abdominal location. Peritoneal implantation is associated with a high hemorrhagic risk, requiring a gentle removal of the products of conception and a careful hemostasis. A comprehensive anatomical knowledge is essential to avoid surgical complications.

<https://player.vimeo.com/video/422148861?autoplay=1>

ES2020-0142
Best Selected Videos

Equivocal laparoscopic diagnosis of endometriosis. How to treat?

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Background

Laparoscopy is the gold standard for diagnosis of pelvic endometriosis and many patients will undergo a diagnostic laparoscopy for symptoms of pelvic pain and subfertility. Endometriosis may not be classical in appearance and often the operator is left with an intraoperative challenge of how to diagnose and treat an individual. Incorrect diagnosis of endometriosis, either false positive or false negative, can have damaging long term sequelae for the woman.

Where the diagnosis is equivocal, we recommend an approach that relies on excision as this will both provide a histological diagnosis and negates the need for a repeat laparoscopy to excise the disease. We present a video of a 24 year old woman with pelvic pain with equivocal endometriotic deposits on both pelvic side walls. The video demonstrates advanced laparoscopic techniques such as ovarian suspension, ureterolysis and excision of peritoneum. The video demonstrates the hypogastric plexus and its preservation whilst excising overlying peritoneal disease.

<https://player.vimeo.com/video/468980583?autoplay=1>

ES2020-0025
Best Selected Videos

Laparoscopic paravaginal mesh fixation during laparoscopic sacrocolpopexy – an important step to avoid anterior recurrence. A surgical video.

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Background

Laparoscopic sacrocolpopexy has been demonstrated to be the gold standard of prolapse surgery in cases with apical defect. Isolated anterior compartment failure can occur especially if paravaginal defect has initially been present. According to our and other results anterior recurrence can occur in up to 10% of cases and additional surgery is needed in about 5-6%. In the last 2 years we adapted our technique of lateral fixation of the anterior mesh during laparoscopic sacrocolpopexy to reduce the risk of anterior recurrences and the first results are very encouraging.

Methods

The Video demonstrates the cases of a 67 years old patient undergoing laparoscopic sacrocolpopexy because of combined prolapse. After accomplishing supracervical hysterectomy and posterior dissection, the anterior dissection is started by opening the vesico-vaginal space and separating the bladder from the vagina till the level of the bladder trigone. Lateral dissection is performed by opening the paravaginal space and exposing the lateral edge of the vagina. The distal part of the ureters is dissected from the anterior parametrium to the bladder to avoid ureteral damage. The anterior mesh is then sutured to the distal vaginal in the midline and laterally to the edge of the vagina. Posterior mesh is sutured on the levator ani muscle and the cervix. Both meshes are fixed at the longitudinal ligament of the promontory to guarantee a tension free suspension. At the end a fully peritonealization is performed.

Results

Perioperative results of laparoscopic sacrocolpopexy with deep and lateral mesh fixation are excellent. As we are following all our patients after laparoscopic sacrocolpopexy we can report on a significant improvement of anatomical outcome in the anterior compartment at least in the short term follow up.

Conclusions

Lateral dissection and mesh fixation in the anterior compartment during laparoscopic sacrocolpopexy seem to be feasible and safe and could help to significantly reduce the risk of anterior recurrences. Prospective anatomical evaluation must be performed to scientifically verify these promising initial results. This video demonstrates the surgical technique which has become standard in our institution.

<https://vimeo.com/431072977/314cd39a27>

ES2020-0070
Best Selected Videos

An incidental diagnosis of hemi-uterus with non-communicating rudimentary cavity

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Background

The hemiuterus is a rare uterine malformation (2.4–13.7% of all uterine malformations) which features a rudimentary accessory cavity in more than 65% of the cases. It can be asymptomatic or associated with symptoms such as dysmenorrhea or complications as endometriosis or intracornual pregnancy. The diagnosis is usually achieved by ultrasound or MRI, but definitive diagnosis is possible by laparoscopy.

Methods

We present the video of a laparoscopic hemihysterectomy with homolateral salpingectomy, performed due to the diagnosis of hemiuterus with a rudimentary noncommunicating accessory cavity (ESHRE/ESGE Class U4a).

Results

A 34 year old patient was referred to our department because of a pelvic mass identified on CT-scan – suggesting a Pedunculated Fibroid. She was asymptomatic and reported 3 previous pregnancies: 2 normal vaginal deliveries and 1 uncomplicated spontaneous miscarriage. Pelvic examination was normal. The transvaginal ultrasound revealed a pelvic mass measuring 43x32x27mm, on the right adnexal region, with myometrial echogenicity, and a central hyperechogenic region, suggesting endometrial tissue. The CT-Scan showed no renal abnormalities.

Laparoscopy confirmed a noncommunicating accessory horn, a hemihysterectomy was performed without complications. There was no signs of adhesions or endometriosis.

Conclusions

The diagnosis of asymptomatic hemiuterus with noncommunicating rudimentary cavity is challenging. This is a rare case as the patient had an obstructive malformation with endometrial cavity but no gynecological or obstetrical complications during her reproductive life.

Surgical treatment is recommended for symptomatic patients (dysmenorrhea, dyspareunia, and chronic pelvic pain), but also for asymptomatic patients with obstructive malformations with endometrial cavity, to prevent a pregnancy within the rudimentary cavity and the risk of endometriosis.

<https://player.vimeo.com/video/422241626?autoplay=1>

ES2020-0040
Best Selected Videos

Ultrasound-guided hysteroscopy following endometrial ablation

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Background

Endometrial ablation is commonly used to treat abnormal uterine bleeding. It can cause cervical stenosis and adhesions inside the endometrial cavity creating future challenges in accessing the cavity. Failure of endometrial sampling following endometrial ablation if found to be 23%.

Methods

This video abstract will demonstrate simultaneous use of pelvic ultrasound and hysteroscopy to access an ablated endometrial cavity.

Results

Ultrasound-guided hysteroscopy was demonstrated. Surgical pearls were reviewed.

Conclusions

This video demonstrated that ultrasound-guided hysteroscopy on a scarred and distorted endometrial cavity is safe and cost efficient. It facilitates access into the uterine cavity and prevents false passage and uterine perforation.

<https://player.vimeo.com/video/421604966?autoplay=1>

ES2020-0105
Best Selected Videos

How challenging can an oophorectomy be?

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Background

Adnexal masses are common causes of gynecologic surgeries. Symptoms may vary from acute severe pain, mild chronic pain, to abdominal distension. Life threatening complications are likely to occur as internal hemorrhage, torsion and underlying possible malignancy. This video represents a 47 years old female suffering from pelvic pain. Ultrasound and MRI revealed a 9 cm left ovarian cyst. Tumor markers are negative. She has a history of two laparoscopic procedures. She had total laparoscopic hysterectomy and unilateral salpingo-oophorectomy due to fibroids and severe adhesions. As a second procedure she underwent retroperitoneal cyst excision.

Methods

Laparoscopic unilateral salpingo-oophorectomy procedure complicated with severe adhesions
Port Set up: 10 mm umbilical main trocar, three 5 mm satellite trocars
Energy Source: Maryland Ligasure

Results

Entering to the abdomen was through the umbilical natural orifice. Laparoscopic exploration showed an 9 cm left ovarian cyst, pelvic peritoneal severe adhesions and bowels were densely adhered to the left abdominal wall. Firstly the bowels were liberated from the abdominal wall. The cleavage was formed and dissection was deepened after finding the obliterated umbilical artery. Adhesions between bladder and bowels were dissected carefully until the cyst was visualised. The tension of the cyst was used to carry out the dissections instead of aspirating it in the first place. Then the cyst was aspirated and ureter trace was observed and distal part of the ovary was dissected from the surrounding tissue while protecting the ureter. The infundibulopelvic ligament was ligated. The specimen was extracted with endobag. Rectum and bowels and ureter were inspected. No complications were observed. The postoperative period was uneventful. The histology of the cyst was benign.

Conclusions

Laparoscopic excision procedures may require advanced gynecologic surgical skills due to severe adhesions. Bowel and urinary tract injuries can be avoided with attentive dissection and proper use of the surgical instruments. Excision of the adnexal masses lead to pelvic anatomic restoration and pain relief and excluding malignancy is the most important outcome.

<https://player.vimeo.com/video/422558831?autoplay=1>

ORAL FREE COMMUNICATIONS

ES2020-0007
Endometriosis

Overview of endometriosis surgical management in France

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Background

Endometriosis is a common disease in women, which requires a medical and surgical approach. Surgical societies recommend a multidisciplinary management in tertiary referral centres. The objective of our study is to assess the surgical management of endometriosis in France by studying the surgeons' attitude for bowel and urinary endometriosis.

Methods

We sent a survey to French endometriosis surgeons. We did a descriptive analysis, and a comparative analysis between surgeons who believe endometriosis surgeons should be considered as "pelvic surgeons", able to treat bowel and urinary involvement.

Results

We included 90 answers, from gynaecological surgeons from all over France. Surgeons considering that gynaecologists should be able to deal with urinary and bowel endometriosis carry out more bowel and urinary procedures. They have an additional training in surgery and perform more endometriosis surgery every year.

Conclusions

Bowel and urinary endometriosis management by gynaecological surgeons is contested among gynaecologists. To this day, there is no dedicated training in France to coach gynaecologist to perform such procedures. Multidisciplinary approach is essential for quality care, in expert centres. The basic education of gynaecological surgeons does not allow them to perform complex pelvic surgeries, but they can be qualified for these interventions if they have a special training, and perform a great number of surgeries.

ES2020-0069
Endometriosis

A rare case of intraligamentary endometrioma mimicking leiomyoma

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Background

Endometriosis is one of the most common diseases in women worldwide, where nearly 80 million are affected. The two cardinal symptoms are pain and sterility and may severely burden patients, their family members and employers, as well as the public health system. The current treatment of women with endometriosis is poor and represents a huge medical need. Most clinical guidelines recommend laparoscopic surgery for removing lesions and hormone therapy to reduce pain. Mostly, endometriosis is found in the pelvic peritoneum, in ovary, sacrouterine ligament, septum rectovaginal and extragenital on the bladder or rectosigmoid. However, location on diaphragm, vermiform appendix and umbilicus are also described. Of great rarity is location in the spleen, lungs, kidneys, brain or skeleton. Broad-ligament endometriosis occurs almost as a random finding. The aim of the present case report is to emphasize the variety of endometriosis location that may also imitate other gynecologic disease such as leiomyomas.

Methods

A case study is presented with an intraligamentary endometriosis on the right broad ligament in a 41-year-old woman with lower abdominal pain, which on ultrasound was appreciated to be an intraligamentary leiomyoma. Additionally, a cyst on the right ovary was diagnosed. Exposure of the abdominal cavity by laparoscopy revealed an extended endometriosis according to ASRM Stage III. Superficial peritoneal implants were found to be on the ovarian fossae, the pouch of Douglas, the sacrouterin ligament and the bladder reflection and were all totally excised. The ovarian cyst was dissected uncomplicated. By preparation of the expected leiomyoma, a cyst with "chocolate" liquid as a sign of deep infiltrated endometriosis was found. This unexpected finding was almost dissected with Ultracision.

Results

Pathological examination revealed a luteinised follicular cyst in ovary. An infiltration of endometriosis was diagnosed in all other locations including the broad ligament. The postoperative course of the patient was uneventful and the symptoms were alleviated.

Conclusions

Endometriosis is always a challenging disease which may have unexpected locations. Thus, intraligamentary endometrioma is a rare entity and should be included in differential diagnosis among women with abdominal pain and/or ultrasound findings suggestive of other gynecologic problems such as leiomyomas.

Association of Endometriosis with Inflammatory bowel disease (IBD): frequency and characteristics in a multidisciplinary approach

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Background

Inflammatory bowel disease (IBD) and endometriosis are both immuno-mediated chronic inflammatory diseases, affecting the young population. IBD and endometriosis share some of the observed symptoms. Endometriosis may be associated with other immuno-mediated diseases but its possible association with IBD is undefined. In a multidisciplinary prospective single-center study we aimed to assess the frequency of previously undiagnosed endometriosis in IBD patients referring symptoms compatible with this condition (dysmenorrhea, dyschezia and/or dyspareunia). Secondary end point was to characterize clinical characteristics of IBD and endometriosis in patients with both conditions.

Methods

This prospective pilot study included patients in fertile age with a diagnosis of IBD (Ulcerative colitis, UC or Crohn's disease, CD), referring symptoms compatible with endometriosis (dysmenorrhea dyspareunia). During a routine gastroenterological visit. According to symptoms, gynecological evaluation and transvaginal ultrasonography (TVS) by a dedicated gynecologist were performed in compliant patients, to search for pelvic endometriosis. IBD diagnoses were based on clinical, biochemical and histological parameters. Endometriomas, pelvic adhesion, deep infiltrating endometriosis and adenomyosis were accurately recorded. Painful symptoms were evaluated using a visual analogue scale (VAS) and infertility factors were considered. Heavy menstrual bleeding (HMB) was considered by subjective evaluation.

Results

During the study period, a total of 27 patients were enrolled. Clinical characteristics recorded included: age 39 (35-47) years, body mass index 21.8 (18-25.6), IBD duration 12.2 (1-21) years. IBD cohort included 16 (59.2%) Crohn's Disease (CD) and 11 (40.7%) Ulcerative Colitis (UC) patients. In CD, lesions involved the ileum in 5 (31%), colon in 3 (19%), ileum-colon in 8 (50%). UC extent included proctitis in 3 (27.3%), left-sided in 6 (54.5%), pancolitis in 2 (18.1%) patient. Dysmenorrhea was reported by 25 (92.6%) patients, dyschezia in 17 (62.9%), dyspareunia in 14 (51.8%). At transvaginal ultrasonography, endometriosis in any form was observed in 15 (55.6%) of the IBD patients. Deep infiltrating endometriosis was visualized in 10 IBD patients, and 7 out of these showed rectal endometriosis. TVS features of adenomyosis were detected in 8(53.3%) cases. Among the 15 patients with endometriosis, 10 (67%) had CD and 5 (33%) UC.

Conclusions

In this pilot study, endometriosis was newly diagnosed in more than half of IBD patients referring compatible symptoms. In particular a prevalence of deep infiltrating endometriosis mostly on the rectal wall was observed. IBD patients, particularly in those referring dysmenorrhea, dyspareunia and HMB, should be investigated by a dedicated gynecological unit in order to rule out concomitant endometriosis and/or adenomyosis deserving specific treatments. Considering the lack of knowledge of the disease in IBD patients and the association of bowel symptoms in both pathologies, further study and follow up should be performed.

ES2020-0083
Endometriosis

Evaluation of endometriosis surgery's impact on symptom and quality of life

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Background

Symptomatic endometriosis can have significant physical, psychological and mental impact on a patient's quality of life. Laparoscopic surgical techniques are used in the management of endometriosis with the aim to improve symptoms. Northtees and Hartlepool NHS hospital is an approved endometriosis treatment centre and our objective is to evaluate our data regarding the outcomes of surgical treatment on symptoms and the quality of life of these patients.

Methods

Details of the surgery done and medical management given was collected. Patients completed approved questionnaires assessing symptoms and eq5d (euro qol 5d) and eqvas (euro qol visual analogue scale) questionnaires assessing their quality of life. Pre-procedure, 6 month and 2 year follow up was assessed statistically to have an objective data analysis.

Results

In this study, every patient had deep infiltrating endometriosis and pararectal dissection. Majority of patients also required ureterolysis. More than three-fourth, had rectovaginal nodule excision. No one needed bowel resection or had any immediate concerning complications of the surgery. Only a lower percentage of patients had removal of ovaries or uterus. There was significant improvement in symptom score and quality of life score following surgery, though by the 24 month time there appears to be reappearance of symptoms and slight lowering of quality of life score, but not to the preoperative levels. This trend was in those who had conservative rather than radical surgery. Prior to surgery, on average, patients rated their quality of life 53/100 compared to 81/100 6 months post-surgery. 84% of patients reported a higher quality of life score 6 months post-operatively; 4% reported no change and 12% reported a lower quality of life score. About one third of patients were put on some form of medical treatment for endometriosis postoperatively.

Conclusions

This study revealed that there was improvement in symptoms and quality of life score in majority of patients operated in our endometriosis centre. Also the larger proportion of patients could be managed with conservative surgery without removal of uterus or ovaries. There was very low rate of peri-operative and post-operative complications. Even though the worsening of bowel symptoms were only in a low proportion of patients, it is very essential to consent the patient adequately regarding this. It is important to discuss with patients that, due to the nature of endometriosis, it is difficult to predict pre-operatively which patients will not improve or worsen symptomatically following surgery. In this study the larger proportion of patients who had to have rectovaginal node excision and pararectal dissection could be managed without any bowel resection or complications. Further work would include following up these patients for a longer period of time to see if the benefits of surgery continue in the long term.

ES2020-0092
Endometriosis

Assessment of effectiveness of post-operative triptorelin in improving pain symptoms from DIEs: a 24-month multicentre, prospective, non-interventional study in highest pain intensity patient population

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Background

Symptom recurrence in patients with deep infiltrating endometriosis (DIE) undergoing conservative surgery is common. Adjuvant use of gonadotropin-releasing hormone agonists (e.g. triptorelin, IPSEN Pharma) can improve postoperative pain caused by DIE and prolong the asymptomatic period. This analysis from a multicentre, non-interventional, observational study (NCT01942369) assessed the effect of triptorelin administration on the most severe intensity symptoms reported by the patient.

Methods

This study included patients with DIE aged ≥ 18 years who underwent conservative surgical treatment within 1 month before inclusion and were prescribed triptorelin (3.75 mg) as part of their treatment for up to 24 weeks. The intensity of symptoms was assessed using a 10-cm visual analogue scale (VAS) or numerical scale ranging from 0 to 10 at baseline and 3, 6, 9, 12, 18 and 24 months. At baseline (pre-surgery assessment), the most severe intensity for all the symptoms reported by the patient was identified, and changes in selected symptoms' intensity were assessed. Patients were categorised into 3 groups based on the number of injections administered: <3 , 3-5 and >5 injections. Paired t-test was used to assess the change from baseline in intensity.

Results

In total, 384 patients (mean \pm standard deviation [SD] age: 33.4 ± 6.2 years) were included. Among the symptoms identified with the most severe intensity at baseline, dysmenorrhea (69.5%), pelvic pain (28.9%) and dyspareunia (13.8%) were most frequently reported. At baseline, the mean (SD) VAS scores for pelvic pain ($n=111$), dysmenorrhea ($n=267$) and dyspareunia ($n=53$) were 5.25 (3.11), 6.32 (3.06) and 3.68 (3.09) cm, respectively, which significantly decreased at all-time points (mean VAS decrease <1 cm, $P < 0.0001$ for all). Irrespective of the number of injections, the mean VAS score of these three symptoms significantly decreased from baseline ($P < 0.05$). Patients who received higher number of injections showed a larger decrease in intensity of symptoms, but this was not statistically significant.

Conclusions

This observational study confirmed that postoperative triptorelin administration was beneficial in women with DIE suffering from the highest pain intensity. However, individualised treatment for optimal pain relief needs to be further addressed.

ES2020-0093
Endometriosis

Effectiveness of post-operative triptorelin in alleviating gastrointestinal symptoms in patients with deep infiltrating endometriosis in a multicentre, non-interventional study

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Background

Adjuvant use of gonadotropin-releasing hormone agonists (e.g. triptorelin, Ipsen Pharma) can improve pain symptoms, including gastrointestinal (GI) symptoms, in patients with deep infiltrating endometriosis (DIE) following conservative surgery. From a multicentre, non-interventional, observational study assessing the effectiveness of triptorelin in premenopausal Chinese patients with DIE (NCT01942369), this subgroup analysis evaluated the effectiveness of triptorelin in alleviating post-operative GI symptoms.

Methods

The study included premenopausal patients with DIE aged ≥ 18 years who underwent surgery 1 month before the study inclusion and received triptorelin intramuscular injections (3.75 mg every 28 days for up to 24 weeks). We assessed the intensity of GI symptoms using visual analogue scale (VAS) pre-surgery and at 3, 6, 9, 12, 18 and 24 months post-surgery. The patients were categorized based on the number of triptorelin injections received (<3 , 3-5 or >5 injections). Logistic regression was used to compare improvement in GI symptoms across subgroups; $P < 0.05$ was considered statistically significant.

Results

Of 384 study patients, 119 (31%) women had GI symptoms, with 52, 32 and 35 patients reporting the intensity of GI symptoms as mild, moderate and severe, respectively, at the baseline. At 3 months, the proportion of women with GI symptoms decreased to 3% and remained low until the last follow-up (3% at 24 months). At 24 months, the improvement in the intensity (a decrease of at least 3 points) was higher in patients receiving >5 injections (81%) or 3 to 5 injections (68%) in comparison with those receiving <3 injections (33%; with P values 0.006 and 0.060, respectively). Similar results were obtained at all timepoints.

Conclusions

This study confirmed the effectiveness of post-operative triptorelin therapy in alleviating GI symptoms in patients with DIE. Further research is needed to define the optimal post-operative medical treatment.

ES2020-0103
Endometriosis

Transvaginal sonography findings after laparoscopic partial cystectomy for bladder endometriosis

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Background

To evaluate transvaginal sonography (TVS) findings in patients who underwent resection of bladder deep endometriosis by laparoscopic partial cystectomy and to correlate post-surgical ultrasound findings to symptoms.

Methods

A retrospective observational study including 36 premenopausal women with bladder endometriosis who underwent partial cystectomy in order to remove the endometriotic lesion. Within 12 months after surgery a TVS examination was conducted in all patients to evaluate the bladder morphology and the presence of any post-surgical sonographic findings was recorded. Pelvic pain and in particular bladder symptoms were assessed in all women by visual analogue scale.

Results

At follow up visit 20 patients (group A) were on medical treatment while 16 women (group B) declined post-surgical medical therapy and tried to conceive. High percentage of adhesions with a negative vesico-uterine sliding sign was found in 20 (55%) women. Recurrence or persistence of bladder deep infiltrating endometriosis (DIE) was found in 8 cases (22%) and in 7 cases (19%) only a small fibrotic thickening of the bladder wall was observed. All patients with TVS sign of bladder DIE suffer with dysmenorrhea, 1 patient had also macroscopic haematuria and 27 (75%) painful urinary symptoms. Adenomyosis was observed in 75% of women, posterior DIE in 56% and endometriomas in 16%. No significant differences in TVS findings between group A and B were observed except for the presence of endometriomas, which was higher in group B.

Conclusions

Women after laparoscopic cystectomy for bladder DIE may continue to be symptomatic and the post-operative TVS reveals foci of disease or vesico-uterine adhesions. Moreover, adenomyosis could be associated to symptoms complained during follow up. Women should be aware that painful symptoms and alteration of pelvic organs could be present after surgery detectable by TVS.

ES2020-0110

Endometriosis

Is there an increase prevalence of bowel obstruction and intussusception in women with endometriosis?

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Background

Bowel obstruction and intussusception have been described as possible complications of endometriosis. The purpose of our study was to evaluate the association between endometriosis and bowel obstruction or intussusception using a large population database.

Methods

This was a population-based study using data from the Healthcare Cost and Utilization Project-Nationwide Inpatient Sample (HCUP-NIS) from 2005-2014. We studied women aged 18 to 55 years; those with neoplasms and/or inflammatory bowel disease were excluded. Multivariate logistic regression was used to examine the association between endometriosis and bowel obstruction on one hand and between endometriosis and intussusception on the other hand.

Results

Of a total 18,427,520 women aged 18 to 55 years without inflammatory bowel disease or cancer, 96,539 had bowel obstruction (overall prevalence of 52 per 10,000) and 3,825 had intussusception (overall prevalence of 2 per 10,000). The percentages of endometriosis among women with or without intussusception were comparable. Whereas for bowel obstruction, after adjustment for sociodemographic characteristics, women with pelvic endometriosis consistently had higher likelihood of bowel obstruction (odds ratio 2.60, 95% confidence interval (CI) 2.29-2.95, $P < 0.01$). In particular, intestinal endometriosis was associated with a higher risk of bowel obstruction (adjusted OR = 14.61 (95% CI) 11.35-18.79, $P < 0.01$), while rectovaginal endometriosis was also associated with a higher risk (adjusted OR=1.97 (CI) 1.53-2.55, $P < 0.01$). Pelvic endometriosis was significantly associated with adhesive bowel obstruction (adjusted OR: 3.19; CI 2.59-3.93), as well as with non-adhesive bowel obstruction (adjusted OR: 2.35; CI 2.01-2.75).

Conclusions

Pelvic endometriosis, in particular rectovaginal and intestinal endometriosis was strongly associated with bowel obstruction independent on the presence of intraabdominal adhesion. We did not find association between pelvic endometriosis and intussusception.

ES2020-0121
Endometriosis

A case of unusual endometriosis after hysterectomy mimicking disseminated cancer in a young woman
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Background

Endometriosis can be easily confounded with neoplasia and has itself a malignant transformation potential as high as 0.8-1.0%. The purpose of this case is to report a case of endometriosis mimicking malignant tumors and raise attention to the difficulties in the management of these cases.

Methods

Review of medical records and literature available.

Results

A 31-year-old woman with a recent onset of abdominal pain and nausea was admitted to our center because of the finding of a suspicious intra-abdominal mass. The patient had a previous diagnosis of deep infiltrating endometriosis since 2009. She was followed in another hospital where she underwent two surgeries: a laparoscopic ovarian cystectomy and a myomectomy in 2009, and an open hysterectomy and bilateral ovarian cystectomy in 2015. Magnetic resonance imaging revealed an extensive solid abdominal mass with 15x9,3x13 cm, with vegetations and hemorrhagic cystic areas, with no apparent relation with adnexal areas, strongly adherent to the rectosigmoid transition.

She also had elevated serum cancer antigen (CA) 125 level, normal HE4, and ROMA of 58%. The mass conditioned compression of the ureters bilaterally, with worsening of renal function, which led to the decision to place bilateral urethral stents.

Diagnostic laparoscopy revealed a frozen pelvis, with multiple adhesions of the bowel that covered an abdominal-pelvic mass without an identified starting point of about 15 cm. The upper abdomen had no changes. The surgeons' clinical impression was that it was a neoformative process. During the laborious lysis of intestinal adhesions, an iatrogenic lesion of the small bowel occurred, and the surgical team decided to convert to laparotomy. During the procedure was performed lysis of the remaining adhesions, excision of the retroperitoneal mass and bilateral salpingectomy. Omentectomy was performed because suspicious nodular lesions were identified in the epiploon. Lymphadenectomy of two clinically palpable lymph nodes in the left iliac artery bifurcation was also performed.

Contrary to what the macroscopic examination predicted, the postoperative pathology examination revealed that the mass was covered with a monolayer of endometrial glands and stroma consistent with endometriosis. The patient's recovery was uneventful.

Conclusions

This case is relevant because of the unusual presentation and the gross morphology of endometriosis. Regarding the latter, it is well known that endometriosis should be included in the differential diagnosis of reproductive-age women presenting with apparent ovarian malignancy. In this case, the preoperative investigation supported the hypothesis of the recurrence of endometriosis. However, the macroscopic appearance of the lesions was in favor of a neoformative process. This case stresses the importance of biopsies and pathological assessments before further procedures even for experienced surgeons. Interestingly, the patient had already undergone surgery with hysterectomy 4 years before, which should remind us that endometriosis' recurrence is possible after hysterectomy, especially in case of preservation of ovaries.

ES2020-0006

Fibroids, including morcellation OR tissue extraction

Three-year results of the sonata pivotal trial of Transcervical Fibroid Ablation (TFA) for symptomatic uterine myomata

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Background

We report the 3-year clinical outcomes of the SONATA pivotal trial. SONATA was a prospective, controlled, multicenter interventional trial involving 147 premenopausal women with symptomatic uterine fibroids who underwent a uterus-preserving, sonography-guided transcervical fibroid ablation (TFA) procedure with the Sonata ® System. Treatment was provided at 22 clinical sites (21 in the US and 1 in Mexico).

Methods

Transcervical fibroid ablation was performed on up to 10 clinically relevant uterine fibroids, each ranging from 1 to 5 cm in diameter. Patients were treated on an outpatient basis and returned for regular follow-up visits over 2 years. Assessed outcomes included changes in symptom severity and health-related quality of life (via the SSS and HRQL sub-scales of the UFS-QOL questionnaire), general health status reported on the EQ-5D questionnaire, work and activity limitations, treatment satisfaction, adverse events, surgical reintervention, and occurrence of pregnancy and associated outcomes.

Results

The 3-year rate of surgical reintervention for heavy menstrual bleeding calculated by the binomial and Kaplan-Meier methods was 9.2% and 8.2% respectively. Compared to baseline, mean SSS decreased from 55±19 to 22±21, HRQL increased from 40±21 to 83±23, and EQ-5D increased from 0.72±0.21 to 0.88±0.16 (all p<0.001). Treatment benefit with regard to the SSS, HRQL and EQ-5D exceeded the minimal clinically important difference at every follow-up visit over 3 years. At 3 years, 94% reported treatment satisfaction, 88% reported improved fibroid symptoms, work absenteeism due to fibroid symptoms decreased from 2.9% to 1.4%, and impairment due to fibroids decreased from 51% to 12% for work, and 58% to 14% for physical activity (all p<0.001). No late complications occurred.

Conclusions

Women treated with sonography-guided TFA in the SONATA pivotal trial experienced significant and durable improvement in fibroid-related symptoms with low surgical reintervention rates over 3 years of follow-up.

ES2020-0014

Fibroids, including morcellation OR tissue extraction

Peri-operative haemostatic techniques for complex myomectomy. Could laparoscopy be considered outdated compared to robotic surgery?

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Background

We compare the surgical outcome of laparoscopic versus robotic myomectomy in cases of complex myomectomies by focusing on various hemostatic techniques.

Methods

Review of literature.

Results

Uterine fibroids are the most common tumors of the uterus and is associated with substantial morbidity to several women. For women who wish to preserve their fertility, a myomectomy is the surgical procedure of choice, furthermore minimal invasive surgery is preferable to laparotomy. Laparoscopic myomectomy is the "gold standard" surgery in cases of uterine myomas, however robotic myomectomy was later introduced to overcome some of the difficulties associated with laparoscopic surgery. M myomectomy is a suture-intensive surgery where the properties of a surgical robot have been suggested to be of value. The haemostatic techniques adopted in complex cases apply to both surgical methods. The submyometrial injection of diluted vasopressin is effective in reducing blood loss. The efficacy of intravenous tranexamic acid in multiple myomectomies (more than 3) is yet to be proved following the latest randomized clinical trials, which, however, seem promising. The real difference between laparoscopic and robotic complex myomectomy relates to the suturing techniques. The barbed effectively reduces the time required for suturing, thereby decreasing the total operative time as well as the operative blood loss. the option of performing peripheral superficial suturing, with absorbable suture, to the areas that reveal high vascularity is a feasible and possibly cost-effective method, specifically in cases of robotic surgery. The main difference is that the multi-articulated instrumentation of a robotic system further reduces the surgical difficulty as it requires a smaller learning curve, allowing a multi-layer suturing in numerous angles and at the same time enhances the confidence of the surgeon. This triplet of benefits provided by the robotic system may differentiate the robotic from the laparoscopic approach. A quicker and more confident surgeon may not choose to convert a minimal invasive myomectomy to an open laparotomy in cases of large uteri and multiple myomas.

Conclusions

Randomized trials comparing laparoscopic to robotic myomectomy are yet to be published. Robotic myomectomy is considered with similar outcome as laparoscopic surgery and has expanded the indications of minimal invasive myomectomy to more complex cases, previously performed by laparotomy.

ES2020-0019
Hysteroscopic surgery

A simple way of decreasing pain during office hysteroscopy – a prospective randomized double blind, placebo controlled trial

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Background

Office hysteroscopy is a relatively painless procedure, especially when performed using the vaginoscopic approach with a small caliber hysteroscope, without the use of a speculum and tenaculum. However, pain associated with the procedure is still a main deterrent for patients from undergoing the procedure. Many studies have been performed to evaluate the efficacy of local or regional anesthesia or analgesia. Most of these studies included local injections or instillation of local anesthetic into the uterine cavity prior to the procedure, thus adding time and discomfort for the patients. However, we found no studies that evaluated the addition of a local anesthetic agent into the distension medium used for hysteroscopy along with the vaginoscopic approach. The main objective of the study was to evaluate the effect of adding a local anesthetic into the distension medium in office hysteroscopy on pain during the procedure. Secondary aims included documenting side effects, patient satisfaction and the time needed to complete the procedure.

Methods

This was a prospective randomized double blind placebo controlled study, using 10 ml of lidocaine 2% added into 1000 ml of saline solution that was used as the distension medium for hysteroscopy in the study group vs. 1000 ml of saline alone in the control group.

Results

A significant difference was found in the increment of pain following the hysteroscopy between the two groups. Patients receiving lidocaine had an average rise of 1.9 points in Visual Analogue Scale (VAS) score following the procedure compared with 2.92 in the control group ($P=0.033$). There was also a non-significant trend for shorter duration of hysteroscopy in the intervention group compared to the control group (180.1 vs. 222.1 seconds, $P=0.08$). Patients satisfaction was high in both groups (98% for the study group and 92% for the control group) success rates were also similar between the two groups at around 95%. No side effects were recorded in both groups.

Conclusions

The addition of local anesthetic into the distension medium in office hysteroscopy produces significant reduction in pain during the procedure without adding time to the procedure and without side effects.

ES2020-0129

Hysteroscopic surgery

Office operative hysteroscopy for the management of retained products of conception

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Background

Office operative hysteroscopy (See-and-treat) allows most women with abnormal ultrasound findings suspected for retained products of conception (RPOC) to avoid the added risks of anesthesia and the inconvenience of the operating room. The aim of this study is to compare office to conventional operative hysteroscopy for the treatment of RPOC.

Methods

This is a retrospective cohort study, conducted in a tertiary university affiliated medical center, including all women who underwent hysteroscopy due to RPOC between January 2018 to March 2019. Data were collected from women's medical records. Primary outcome was defined as successful removal of all suspected RPOC. Data are presented as median and interquartile range.

Results

During the study period, 229 women underwent hysteroscopy due to RPOC, of them 141 (61.57%) and 88 (38.43%) office and conventional operative hysteroscopy, respectively. No in-between group differences were observed in women's age, body mass index and parity. Time interval to hysteroscopy was longer [2.13 (1.55-2.78) vs. 1.63 (1.02-1.63) month; $p=0.001$], and maximal diameter of the suspected finding was smaller for the office group compared to the conventional operative group [12.0 (8-20) vs. 20 (15-30) mm; $p=0.001$]. Positive finding rate on histopathology was higher for the operative group (76.1% vs. 61.0%; $p=0.02$). Additional analysis comparing success ($n=111$) to failure ($n=30$) of office operative hysteroscopy, revealed that maximal diameter ≤ 27.5 mm had significantly higher success rate ($p=0.007$). This finding was supported by logistic regression analysis that found maximal diameter of the suspected finding as the only parameter associated with success rate in office operative hysteroscopy ($B=0.12$; $p=0.001$).

Conclusions

Office operative hysteroscopy is a feasible treatment option for the removal of RPOC when maximal content diameter is taken under consideration due to its association to success rate.

ES2020-0050
Hysteroscopic surgery

Feasibility, effectiveness and safety of office hysteroscopy: a report of 3000 cases in a 11-year period

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Background

The aim of this study was to assess feasibility, effectiveness and safety of our Office Hysteroscopy Unit over an eleven-year period.

Methods

It was performed a prospective observational study of consecutive hysteroscopies conducted from May 2008 to October 2019 in our Office Hysteroscopy Unit. The study has been approved by our institution's ethics committee. There were included all the patients who attended an ambulatory hysteroscopy in our centre during the study period. There were not any exclusion criteria. All hysteroscopies were performed with several rigid devices available in 5-6 mm diameter: mechanical instruments (scissors and forceps), bipolar electrode, morcellator and bipolar resector. They have been set up gradually in our Unit. The primary endpoint was to determine the feasibility defined as the proportion of explorations that could be completed from all patients who attended for the procedure.

Secondary endpoints were to evaluate:

- Effectiveness, which was evaluated through the percentage of patients that did not require surgical hysteroscopy to complete the diagnosis or treatment of their uterine pathology.
- Safety, which was assessed as the percentage of hysteroscopies in which a complication was produced.
- Need of cervical dilation or anaesthesia.
- Pain, which was quantified through a Verbal Numerical Rating Scale (from 0 to 10) asked to the patients during the procedure and ten minutes later.

Results

During the 11-year period, three thousand office hysteroscopies were performed. Outpatient hysteroscopies feasibility was 94,5%. Failed hysteroscopies (5,5%) were more frequent in postmenopausal women and the main cause was cervical stenosis (63%). Looking at the relation between feasibility and menopausal status, more hysteroscopies were failed in postmenopausal women compared with premenopausal women: 6,6% vs. 4,5% respectively (p .013). Additionally, a higher incidence of cervical stenosis in postmenopausal women compared to premenopausal: 4,9% vs 1,9% respectively (p<.001). In terms of effectiveness, 87,4% of patients did not require another procedure and 12,6% women were scheduled for a hysteroscopy in a surgical setting to complete the diagnosis or treatment. Complications were registered in 1% of cases, including vasovagal response in 28 cases and uterine perforation in 2 cases. Perforation cases received oral antibiotic and any case required other measures than observation. Cervical anaesthesia was required in 5,1% of the cases (n=153) and cervical dilation was needed in 3,57% of cases (n=107). Pain mean score during the procedure was 5,90 (SD 2,67) and 10 minutes later was 1,38 (SD 2,15). Pain was related to menopausal status, being higher in postmenopausal women compared to premenopausal: mean score during the procedure of 6,10 vs 5,72 (p<.001).

Conclusions

The results of our Outpatient Hysteroscopy Unit show that it is a feasible, safe and effective technique to manage the most common benign intrauterine disorders. These encouraging results keep outpatient hysteroscopy as a first-line or gold standard technique for the management of intrauterine disorders.

ES2020-0075
Hysteroscopic surgery

Knowledge, attitude and practice on usage and toxicity of local anaesthetic (LA) agents amongst health care professionals in obstetrics and gynaecology

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Background

Gynaecologists, Mid-wives and Specialist Nurses often use local anaesthetics. A sound knowledge on LA and their dosage is essential for effective anaesthesia and patient safety as LA toxicity could be potentially life-threatening. Thus, a clinician undertaking LA procedures must be competent in early recognition of a toxicity and instigating remedial measures timely. Therefore, we undertook the survey with a view to assess the knowledge among health care professionals in common Obstetric and Gynaecological procedures including their dosage, complications and management of toxicity.

Methods

A prospective knowledge, attitude and practice (KAP) survey using self-administered questionnaire among health care professionals in Obstetrics and Gynaecology primarily based in Worcestershire Acute Hospital NHS Trust and further extended to other regions within the United Kingdom. The participants were chosen by random sampling and given unlimited time to complete the questionnaire but directly observed to prevent conferring or referring to literature. The questionnaire is focussed on evaluating the knowledge, attitude and practice on the common local anaesthetic agents, their dosage, toxic effects and management of those complications

Results

Of the total of 102 participants surveyed, the consultants contributed to 32.3%(n=33) of the sample, followed by Midwives, Nurse-practitioners and doctors of various grades forming 29.4%(n=30), 18.4%(n=18.4%) and 17.6%(n=18) respectively. 77.4%(n=79) of the participants chose Lignocaine as the most commonly used LA followed by Lignocaine with adrenaline(33.4%,n=34),Prilocaine(28.4%,n=29), Bupivacaine(16.6%,n=17) and Mepivacaine(10.7%,n=11). LA was found to be used on a weekly basis by 50%(n=51) followed by fortnightly use by 27.4%(n=27) and monthly by 13.7%(n=14). The common Obstetrics procedures that LA was used for included performing and repair of episiotomies (76.4%,n=78), repair of perineal tears (71.5%,n=73) and pudendal nerve blocks (32.3%,n=33). Gynaecological procedures included Hysteroscopy (48%,n=49) and Vaginal repair (31.3%,n=32). On an average, only 5.6%(n=6) of the participants calculated the concentration of LA in the given quantity correctly, 9.3%(n=10) were aware of the maximum safe dosage of various LA agents and 54.6%(n=55) considered various patient characteristics including age, body weight, systemic impairment and cardiac status like arrhythmias. Only 40.2%(n=41) were aware of the organ systems involved and early complications associated with LA toxicity. As far as the management of toxicity was concerned, only 29.4%(n=30) answered all correctly.

Conclusions

All groups of health care professionals did not demonstrate adequate knowledge on safe effective use of LA agents. Recommendations: a formal and structured accredited knowledge-based module must be made compulsory for all those administering LA to ensure patient safety and experience, Laminated information cards include dosage for different LA should be available in all clinical areas where LA procedures are undertaken. Similarly, the antidote for LA; Lipid Emulsion Therapy should be made available in those clinical areas.

ES2020-0087
Hysteroscopic surgery

The efficacy and feasibility of operative hysteroscopy using the intrauterine Bigatti shaver for the treatment of placental remnants in all types

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Background

About 15-20% of pregnant women will miscarry spontaneously during the first trimester. Traditionally, the surgical treatment of placental remnants was dilation and curettage (D&C). However, because of its blind nature there is a risk of serious complications, such as infection, adhesion, uterine perforation, or bowel injury. Hysteroscopy with the ability of direct visualization, decreases these complications. In this retrospective case series, we evaluated the efficacy and feasibility of operative hysteroscopy using the Intrauterine Bigatti Shaver (IBS) for the treatment of placental remnants in a private hospital in Iran.

Methods

168 patients suspected of retained products of conception underwent operative hysteroscopy from December 2013 to May 2020 using the IBS. The median age of the patients was 34 years. placental remnants occurred after 131 early miscarriages, 35 terminations of pregnancy, 1 vaginal delivery, and 1 cesarean delivery. 80 patients had type 0 rpoc, 48 patients had type 1 rpoc, 22 patients type 2 and 18 patients type 3 rpoc. All cases were diagnosed with transvaginal ultrasound and Doppler study.

Results

The median interval between surgery and the end of pregnancy was 58 days (range, 15-90 days). The median resection time was 4 minutes, and the median total surgery time was 5,5 minutes. Median fluid deficit (saline solution) was 200 ml. No perforation or postoperative complications occurred. There was no need for second-look operative hysteroscopy, and postoperative ultrasound confirmed complete evacuation of the retained products in all patients. Only 3 patient had a minor adhesion.

Conclusions

The IBS seems to be an effective, safe, and fast technique for removal of placental remnants with a high rate of complete removal and a low complication rate in all 4 types of rpoc.

ES2020-0112
Hysteroscopic surgery

Investigating abnormal uterine bleeding in a UK tertiary referral hospital – should transvaginal ultrasound and outpatient hysteroscopy be available at the initial consultation?

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Background

UK guidelines for the diagnosis of endometrial cancer recommend transvaginal ultrasound (TVS), clinical examination and outpatient endometrial sampling at the initial consultation. Outpatient hysteroscopy is reserved for cases where outpatient endometrial sampling is unsuccessful, focal endometrial pathology and for patients considered high risk of endometrial cancer.

Methods

Electronic records for all cases referred to the 'Rapid Access' clinic of a Consultant Gynaecologist at a tertiary referral hospital in the United Kingdom over a 12-month period were reviewed. They were followed up for a minimum of 12 months from the initial consultation.

Results

From June 2017 to May 2018, 456 patients were invited to clinic. 352 patients attended initial consultations. 29 patients failed to attend. 6 endometrial cancers (2.5%) were diagnosed, 1 of which was at a second clinic attendance. 232 patients were referred with PMB. 152 patients (66%) had a normal TVS and were discharged from the clinic at their initial consultation. 70 patients (30%) were referred for hysteroscopy. At hysteroscopy, 3 cases (4% of hysteroscopy referrals) of stage 1A endometrial cancer and 1 case of non-atypical hyperplasia were diagnosed. 33 patients (47%) had benign endometrial polyps. 31 patients (44%) had no pathology requiring treatment. 13 patients (6% of PMB referrals) were referred back to clinic with recurrent bleeding within 12 months of their first attendance. 5 of these patients had undergone hysteroscopy following their 1st clinic attendance. All cases underwent hysteroscopy. One case of stage 1A endometrial cancer was diagnosed. A five-month interval occurred between initial consultation and diagnosis. One case of non-atypical hyperplasia and 5 cases (38%) of benign polyps were found. 6 cases (46%) were found to have no endometrial pathology requiring treatment.

Extending follow up to 24 months, 6 further patients were referred back to clinic with recurrent PMB. All patients underwent hysteroscopy and no malignant disease was found. 41 patients were referred with irregular menstrual bleeding after the age of 45. 12 (29%) patients were referred for hysteroscopy, 5 patients were found to have a benign endometrial polyp and 1 case of non-atypical hyperplasia was diagnosed. 29 patients (71%) were discharged following a TVS showing a normal endometrium. 10 patients under the age of 45 were referred to clinic with intermenstrual or heavy menstrual bleeding symptoms. 1 case had a polyp removed at hysteroscopy. The remainder were discharged after normal TVS.

There were no repeat referrals within 12 months for the perimenopausal bleeding group or patients under 45 years of age.

Conclusions

Postmenopausal patients may benefit from the availability of hysteroscopy at the initial consultation, as a higher rate of pathology requiring treatment was identified at hysteroscopy compared with other age groups. Providing a 'One Stop' service, TVS and outpatient hysteroscopy, at the initial consultation may expedite cancer diagnosis and improve patient experience.

ES2020-0114
Hysteroscopic surgery

Is hysteroscopy a good option to manage severe cesarean scar defect?

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Background

Worldwide, the rate of caesarean section is rising. The presence of a cesarean scar defect has been described in the isthmus anterior wall. It can lead to several gynaecologic symptoms, such as, abnormal uterine bleeding, pelvic pain and secondary infertility. Different techniques are used to repair these caesarean scar defects, but compared with other surgical approach; operative hysteroscopy is the less invasive treatment, with a shorter procedure length and reduced blood loss. Most of the studies report excellent results after hysteroscopic management but none of them evaluate the efficacy of hysteroscopy in women with a residual myometrium equal or less than 3 mm (severe cesarean scar defect). The aim of this study is therefore to compare outcomes of operative hysteroscopy for caesarean scar defect in women with a residual myometrium of more or less than 3mm.

Methods

Women with an operative hysteroscopy for symptomatic cesarean scar defect between March 2011 and May 2018 were included in this retrospective monocentric study. The main objective was to compare success of the procedure (defined as correction of symptoms without another surgical approach) between women with a severe cesarean scar defect and a moderate cesarean scar defect (residual myometrium more or less than 3mm but with a remaining residual myometrium).

Results

We included in our study seventy-one women who underwent operative hysteroscopy for cesarean scar defect with a proper measurement of the residual myometrium between March 2011 and May 2018. Forty-nine had a severe defect (residual myometrium equal or less than 3mm) and 22 had a moderate defect (residual myometrium more than 3mm). The overall success rate was 83.6% and 81.6% in women with a severe defect without any significant difference (OR = 0.78 [0.28-2.16]; p = 0.64).

Conclusions

In conclusion, operative hysteroscopy seems to be a first-line treatment for symptomatic cesarean scar defects even when the residual myometrium is equal or less than 3mm; although there is still some myometrium.

ES2020-0124
Hysteroscopic surgery

Out-patient hysteroscopic resection of resistant retained products of conception after failed initial management: Two-year experience at a tertiary teaching hospital in the UK

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Background

Retained products of conception (RPOC) may occur after medical and surgical pregnancy termination, miscarriage, and vaginal or Cesarean delivery. Short-term complications of RPOC include bleeding and infections, while long-term complications include formation of IUA (intrauterine adhesions) which may subsequently affect future fertility. The traditional surgical treatment of RPOC with dilatation and curettage may further contribute to the endometrial trauma. In 1997, Goldenberg et al. reported on the use of hysteroscopy for treatment of RPOC. Using this approach, the uterine cavity is first evaluated and areas with suspected RPOC are identified. Subsequently Myosure is used to resect and remove tissue from RPOC. Contraindications to using Myosure are current pregnancy, infection, cervical or endometrial cancer.

Methods

We retrospectively reviewed eight cases from March'18 - Feb'20 which had out-patient hysteroscopic resection of RPOC. These cases were identified through our Orsos database system and notes were reviewed for indication for the procedure, findings, type of device, cutting time, fluid deficit, complications, confirmation of retained products and if repeat procedures were required.

Results

Our patients were in the age group from 23 to 41 years. Six out of eight patients had either surgical or medical management of miscarriage, at least once, before having Myosure resection of RPOC. One patient had this procedure following retained placenta after preterm vaginal delivery at 28 weeks and manual removal of placenta. Another patient had placenta percreta and pseudoaneurysm on CT scan following secondary PPH, had uterine artery embolisation and then Myosure for resection of RPOC. Two patients required this procedure twice to completely resect the RPOC. Myosure Classic device was used during seven of these procedures and XL device was used during three procedures. The cutting time ranged from 29 secs to 13 mins 37 secs. Fluid deficit was in the range from 125 mls to 2300 mls. One patient developed endometritis three weeks after the procedure had evidence of RPOC on USS and required a second procedure after treatment of endometritis. One case had 5 cm of RPOC and required a second procedure to completely excise them. RPOCs were confirmed in all cases except one where histology reported hyalinised decidua. There was minimal bleeding in all cases.

Conclusions

In our case series, there was no uterine perforation, systemic infection, bleeding >100 mls or complications of fluid overload. The procedure was well tolerated by patients in the outpatient setting. This procedure has the theoretical advantage of reduced trauma to the endometrium, reduced rates of IUA and improved future reproductive outcomes but further studies are required to evaluate this. In this case series we have evaluated the role of Myosure for removal of resistant RPOC after failed medical or surgical management. It may also help in identification and treatment of uterine cavity anomalies, which are sometimes the underlying cause of RPOC.

ES2020-0125
Hysteroscopic surgery

New approach for T-shaped uterus: Metroplasty with resection of lateral fibrotic tissue using a 15 Fr miniresectoscope. A step-by-step technique

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Background

T-shaped uterus is a congenital uterine malformation (CUM), only recently defined by the ESGE ESHRE classification as Class U1a. The uterus is characterized by a narrow uterine cavity due to thickened lateral walls with a correlation 2/3 uterine corpus and 1/3 cervix.

Although the significance of this dysmorphic malformations on reproductive performance has been questioned, recent studies reported significant improvement of life birth rates after surgical correction in patients with failed IVF or recurrent miscarriage.

The classical surgical technique to treat a T-shaped uterus is by performing a sidewall incision with the micro scissor or a bipolar needle, resulting in a triangular cavity. **Methods**

We describe a new surgical technique with a step-by-step method combining three-dimensional ultrasound (3D-US) and hysteroscopic metroplasty in an office setting, using a 15 Fr office resectoscope (Karl Storz, Tuttlingen, Germany), to treat a T-shaped uterus by resecting the lateral fibrotic tissue of the uterine walls.

Results

No complication occurred and the postoperative hysteroscopy showed a perfect, normal, triangular and symmetric uterine cavity without any adhaesions.

Conclusions

We propose a new surgical approach to treat T-shaped uterus with a step-by-step method combining 3D-US and hysteroscopic metroplasty in an office setting, using a 15 Fr office resectoscope (Karl Storz, Tuttlingen, Germany). The small diameter of the sheaths makes the surgical procedure faster and easier compared with T-shaped uterus previous reported surgical procedures. This technique may allow to completely remove the lateral fibrotic tissue of the uterine walls, removing the fibromuscular constriction rings in the isthmic area. It may also reduce the risk of complications, due to the vaginoscopic approach and the absence of cervical dilatation. Moreover, the use of 3D-US can guide the resection of the lateral fibrotic tissue with a miniaturized bipolar cutting loop.

Long term efficacy and safety of this new surgical technique should be confirmed by further studies before it may be offered as a routine treatment for T-Shaped uterus.

ES2020-0005
Imaging

MR imaging for the diagnosis and staging of deeply infiltrating endometriosis: should there be more standardisation amongst endometriosis centres?

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Background

Deeply infiltrating endometriosis (DIE) affects approximately 1% of women of reproductive age. High quality imaging and reporting, together with close multidisciplinary working are widely accepted as the 'gold standard' in the preoperative workup of DIE. Our objective was to establish the primary mode of imaging and MR protocols utilised in the preoperative staging of deeply infiltrating endometriosis in centres accredited by the British Society of Gynaecological Endoscopy (BSGE).

Methods

An online survey was sent to the lead consultant radiologist for endometriosis in BSGE accredited endometriosis centres.

Results

32/49 (65%) centres responded to the survey. Two centres performed transvaginal ultrasound as the primary method for preoperative staging of DIE and the remainder performed MR imaging. 21/25 centres did not recommend a period of fasting and 22/25 administered hyoscine butylbromide, either by intramuscular or intravenous injection. None of the centres routinely offered bowel preparation or recommended a specific pre-procedure diet. 21/25 centres did not attempt to time MR imaging according to the woman's menstrual cycle, and instructions regarding bladder filling were varied. Rectal and vaginal opacification methods were infrequently utilised. All centres preferentially performed MR imaging in the supine position – six used an abdominal strap and four could facilitate prone imaging. Just under half of centres used pelvic phased array coils and three used gadolinium contrast agents routinely. All centres performed T1-weighted with fat-suppression and T2-weighted without fat-suppression sequences routinely. There was significant variation in practices relating to other MR sequences depending on the unit.

Conclusions

There was significant inconsistency between centres, in terms of MR protocols, patient preparation and the sequences performed. Our survey demonstrates a need for evidence-based standardisation of MR imaging in BSGE accredited endometriosis centres.

ES2020-0077

Imaging

3D transvaginal ultrasound features of small uterine septa: are there other measurements beyond septal length that better correlate to reproductive outcome?

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Background

Recently different classifications have recently been proposed to define a septate uterus mostly based on septal length, however great discrepancy has been observed between them especially for small septa. With regards to small indentations of the fundus the question is still open on the real reproductive impact of these small defects and the need for surgical treatment. The aim of this study was to propose other parameters based on 3D ultrasound measurements to better classify small cavity indentation less 1 cm.

Methods

664 patients with 3D ultrasound diagnosis of a uterine internal fundal indentation of ≥ 3 mm were classified as septate or arcuate/normal according to the following classifications: Salim (2003), ESHRE/ESGE (2013), ASRM (2016), CUME (2018). We divided the study population in 3 groups: patients with uteri with a fundal indentation ≤ 5 mm, $>5<10$ mm and ≥ 10 mm. The reproductive history of each patient was correlated to the type of uterine anomaly according to the four different classifications in the total population and in the 3 sub groups. High discrepancy between classifications were observed for septal lengths $>5<10$ mm whereas patients with uterine indentation ≤ 5 mm and ≥ 10 mm showed similarity in type and reproductive outcomes. Small uterine septa of $>5<10$ mm were evaluated with other parameters of cavity indentation like cavity width, fundal myometrial thickness and indentation angle. These other parameters were correlated to reproductive outcome thus in order to determine which one correlate to fertility problems.

Results

We observed a large discrepancy between the 4 different classifications in diagnosing septate uterus especially in patients with indentation $>5<10$ mm. Of the 664 patients 215 showed a fundal indentation length $>5<10$ mm, of these 136 tried to conceive before our scan: 69(51%) were infertile, 65(48%) had at least one miscarriage, 38(28%) had recurrent abortion (≥ 2 miscarriages) and 5(4%) at least one delivery. The U Mann Whitney test showed among patients who try to conceive a significant correlation with recurrent abortion and an indentation angle $> 128^\circ$. Infertility was significantly correlated to a cavity width <32 mm and a septal length/ fundal myometrial thickness ratio $>75\%$.

Conclusions

Current classifications don't seem to correlate to each other and with reproductive outcomes. These wide discrepancies between different classifications is more evident in small cavity indentation $>5<10$ mm. For these small uterine septa additional parameters like indentation angle $> 128^\circ$ showed more risk for recurrent miscarriage and cavity width < 32 mm and septal length/fundal myometrial thickness ratio $> 75\%$ is more correlated to infertility. Further prospective study should verify if these parameters could guide the management of patients with small uterine septa.

Objective measures of adenomyosis on MRI and their diagnostic accuracy: a systematic review

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Background

Diagnosing adenomyosis is clinically challenging, with histopathology after hysterectomy still constituting the golden standard. Adenomyosis can be visualised in detail using non-invasive imaging techniques such as magnetic resonance imaging (MRI), but there is a lack of consensus on the diagnostic criteria and it remains subjective. There is as of yet no comprehensive overview of how the gynaecological disorder can be objectified using MRI. It is also unknown how the phenotype of adenomyosis on MRI relates to clinical outcomes, and there is consequently no clinically useful imaging-based classification systems for disease severity.

Methods

Objectives: Systematically review existing literature on how adenomyosis can be objectively quantified on MRI, and review the diagnostic performance of these objective characteristics compared to histopathological diagnosis.

Data Sources and Study Selection: our study protocol was registered in the PROSPERO database. We searched databases Pubmed, Embase and Cochrane for relevant literature up to April 2020, according to PRISMA guidelines. We included studies that objectively assessed adenomyosis on MRI, and from within those, separately assessed studies which investigated the diagnostic performance of MRI versus histopathology. Quality assessment of included studies was carried out using the QUADAS-2 tool.

Results

Of 1,713 screened records, 80 studies met eligibility criteria and were included in this review, of which 14 assessed the diagnostic performance of individual MRI parameters. Overall, MRI was shown to have varying sensitivity (range 39% - 89%) and generally high specificity (range 53% to 100%) for adenomyosis diagnosis, however the quality of studies varied. The most commonly evaluated objective MRI parameters were: junctional zone characteristics (56 studies, e.g. maximal JZ thickness, JZ differential and JZ to myometrial ratio), uterine size and morphology (35 studies, e.g. uterine volume or uterine wall asymmetry) and changes in signal intensity (7 studies, e.g. number of high signal intensity foci, signal intensity of adenomyosis tissue versus normal myometrial tissue). However, the diagnostic performance of many of these parameters has not been investigated, and few studies attempted to correlate adenomyosis MRI phenotype to clinical outcomes.

Conclusions

A wide range of objective parameters for adenomyosis exist on MRI, however in many cases their individual diagnostic performance remains uncertain. Specific research is needed into how objective measures of adenomyosis can be correlated to clinical outcomes.

ES2020-0135
Laparoscopic surgery

Risk score for the prediction of surgically proven recurrent adnexal torsion

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Background

Recurrent adnexal torsion (rAT) is not uncommon, but the literature regarding women that present with clinically suspected rAT is scarce. We aimed to develop a risk score for the diagnosis of surgically proven recurrent adnexal torsion (rAT), among women with a previous surgical intervention due to adnexal torsion.

Methods

A retrospective cohort study from a tertiary, university-affiliated medical center. We included all women with a history of surgically confirmed adnexal torsion, who underwent surgical diagnostic procedure due to a suspected rAT, between March 2011 and April 2020. We collected demographic and clinical characteristics, sonographic findings, and laboratory results of all suspected rAT cases. Cases with adnexal torsion were compared to cases without, as confirmed by operative laparoscopy. We conducted a multivariate analysis to identify factors independently associated with the presence of confirmed rAT.

Results

Overall, 115 women were included. Adnexal torsion was identified in 86 (74.8%) of the surgical procedures. Age and pregnancy rates were similar in both groups. Women with adnexal torsion had less prior pelvic surgeries (excluding prior adnexal torsion) [OR(95%CI) 0.24(0.09-0.59), p=0.001], prior oophorectomy [OR(95%CI) 0.36(0.13-0.97), p=0.04] or right adnexal tenderness [OR(95%CI) 0.21 (0.08-0.52), p<0.001] on physical examination. The proportion of virgin women [OR(95%CI) 7.41(0.94-58.2), p=0.04], pregnancies following assisted reproductive technology [OR(95%CI) 4.6(1.01-21.12), p=0.03] and enlarged ovaries [OR(95%CI) 2.88(1.15-7.21), p=0.02] was higher in the adnexal torsion group. The affected ovary's size was significantly larger in the torsion group (p=0.001).

After multivariate analysis, four risk factors remained significantly independently associated with adnexal torsion. Previous pelvic surgery [aOR(95%CI) 0.06(0.007-0.54), p=0.01] and right side pain [aOR(95%CI) 0.05(0.008-0.33), p=0.002] were negatively associated with adnexal torsion. A larger maximal diameter of the affected ovary [aOR(95%CI) 1.78(1.08-2.93), p=0.02] and enlarged ovary [aOR(95%CI) 7.40(1.28-42.59), p=0.02] were positively associated with adnexal torsion. The calculated risk for adnexal torsion was 0%, 51.5%, 86.4% and 100% in the presence of 0, 1, 2 and 3 risk factors respectively.

Conclusions

Our risk score enables to predict a true positive rAT that may assist clinicians in decision management in cases of suspected rAT.

ES2020-0134
Laparoscopic surgery

Predictive factors for recurrence of adnexal torsion

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Background

Recurrent adnexal torsion occurs in up to 5-8% of cases. Nevertheless, the prediction of its recurrence is underreported. We aim to investigate the predisposing factors for recurrent adnexal torsion (rAT) in patients who had surgical intervention for primary adnexal torsion (pAT)

Methods

A retrospective cohort study between 2011 and 2020 performed at a tertiary, university affiliated medical center. Women with a primary occurrence of surgically proven adnexal torsion (pAT) underwent cystectomy, salpingectomy or salpingo-oophorectomy by laparoscopy and followed up. We collected demographic and clinical characteristics, sonographic findings and laboratory results of all pAT episodes. We compared those who had experienced rAT to those who had not.

Results

The study included 358 women. Of those, 35 (9.8%) had a rAT. Women who experienced rAT were younger (mean age 26 vs. 30, $p=0.01$) with higher proportion of age ≤ 15 [Odds Ratio (OR) 95%CI 4.4(1.80-11.1)]. A history of hysterectomy was positively associated with rAT [3(8.6%) vs. 1(0.3%), $p=0.003$]. Pregnancy rates during pAT were comparable between study groups. However, rAT was associated with lower gestational age at pAT (mean 9 weeks vs. 12 weeks, $p=0.01$) and conception by assisted reproductive technologies [OR 95%CI 6.0(1.21-29.65), $p=0.02$]. Clinical characteristics did not differ between groups except smaller ovarian cyst diameter in those with rAT (mean 42 vs. 59 mm, $p<0.001$). Laparoscopic detorsion alone was associated with rAT [OR 95%CI 2.13 (1.02-4.42), $p=0.03$], while a performance of cystectomy was negatively associated with rAT [OR 95% CI 0.10 (0.01-0.79), $p=0.006$]. On multivariate regression analysis, only age ≤ 15 and cyst diameter were independently associated with the risk for rAT [aOR 95% CI 5.0 (1.09-23.2) and 0.68(0.50-0.93), for each 10 mm increase of cyst diameter, respectively).

Conclusions

Recurrent adnexal torsion is more common than previously thought. Younger age and smaller ovarian cyst at pAT are independently associated with the risk for future recurrence of adnexal torsion. These factors should be considered when contemplating oophorectomy at pAT.

ES2020-0133
Laparoscopic surgery

Risk score for the prediction of surgically proven adnexal torsion in pregnancy

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Background

It is often difficult to reach an accurate preoperative diagnosis of adnexal torsion because of its non-specific symptoms and signs. Moreover, the literature regarding preoperative diagnosis of adnexal torsion in pregnancy is scarce. Therefore, we aimed to develop a risk score calculator for the prediction of adnexal torsion during pregnancy.

Methods

A retrospective cohort study from a tertiary, university-affiliated medical center. All women who underwent surgical diagnostic procedure due to suspected adnexal torsion in pregnancy between March 2011 and April 2020 were included. We collected demographic and clinical characteristics. The presence or absence of adnexal torsion during the surgical procedure was recorded. A multivariate analysis was conducted to assess factors independently associated with the presence of confirmed adnexal torsion.

Results

Overall, 156 women were included. Adnexal torsion was identified in 131 (83.9%) of the surgical procedures. The rate of previous ovarian torsion was lower in the torsion group [OR(95%CI) 0.29(0.11-0.79), p=0.01]. Pregnancy following assisted reproductive technology (ART) was more common in the torsion group [OR(95%CI) 7.0(1.99-24.54), p<0.001]. Reported left sided pain was lower in the torsion group [OR(95%CI) 0.41(0.17-0.97), p=0.04], while duration of symptoms <8 hours was higher [OR(95%CI) 7.31(1.65-32.43), p=0.002], as was pain score (0-10) (mean 8.5 vs. 7.2, p=0.007).

On physical examination, women appeared in more pain in the torsion group, had more peritoneal irritation, and less left adnexal tenderness [OR(95%CI) 4.34 (1.74-10.8), p=0.001; 4.59 (1.67-23.23), p=0.02; 0.27 (0.11-0.66), p=0.003, respectively]. White blood cell concentration was higher in the torsion group (11.3 vs. 9.9 K/microL, p=0.01), as was the neutrophils to lymphocytes ratio (3.4 vs. 2.5, p=0.01) and the maximal diameter of the affected ovary (70 vs. 55 mm, p=0.02).

After multivariate analysis, three risk factors remained significantly independently associated with ovarian torsion; previous ovarian torsion was negatively associated [aOR(95%CI) 0.24(0.04-0.80), p=0.03], while ART and women that appeared in pain were positively associated [aOR(95%CI) 9.8(2.22-43.6), p=0.003; 3.8 (1.23-12.18), p=0.02, respectively]. The calculated risk for adnexal torsion was 0%, 68.2%, 90.4%, and 100% in the presence of 0, 1, 2, and 3 risk factors respectively.

Conclusions

Our risk score calculator may assist clinicians in the prediction of adnexal torsion during pregnancy.

ES2020-0041
Laparoscopic surgery

Misoprostol instead of vasopressin at laparoscopic myomectomy - a safer more evidenced option

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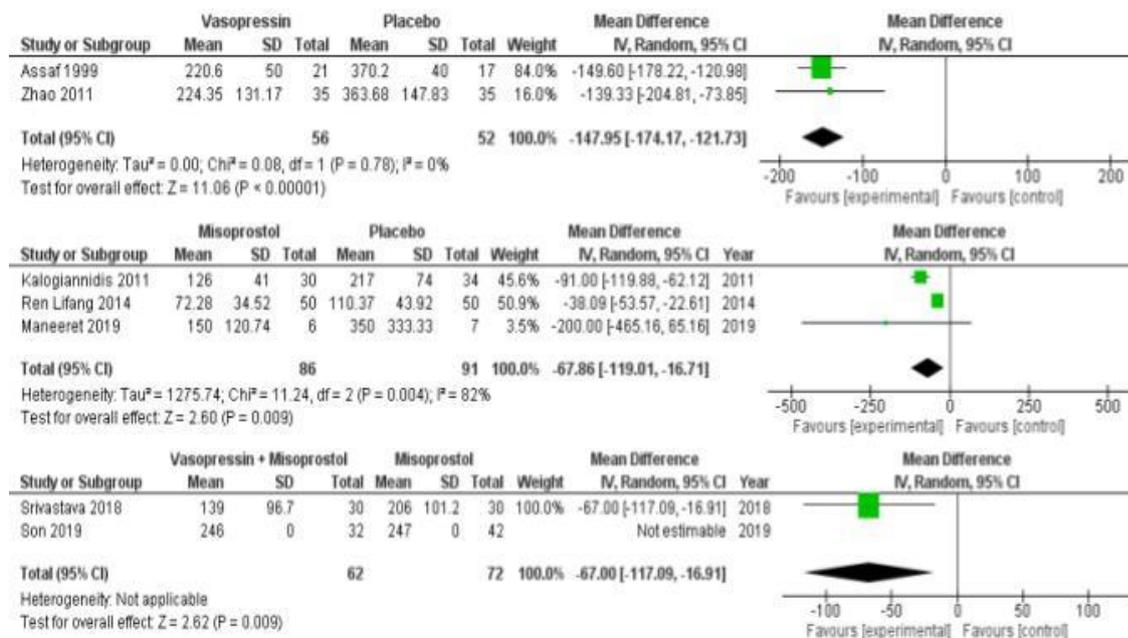
Background

To determine the evidence behind the commonly used vasopressin at laparoscopic myomectomy (LM) and whether misoprostol, a much safer drug, should be used as the routine pharmaceutical to reduce intraoperative blood loss.

Methods

A comprehensive literature review of 5 databases from inception to May 2020 to produce a meta-analysis of randomised control trials (RCTs) describing the use of misoprostol vs placebo, vasopressin vs placebo or misoprostol and vasopressin at LM with estimated blood loss (EBL, mls) as a primary outcome. Full text and abstract articles were included. Non RCT studies and studies discussing open myomectomy or additional methods of intraoperative haemostasis were excluded. Data was analysed using Revman 5.3 according to standard Cochrane guidelines.

Results



Although only a small number of study group participants in the two vasopressin RCTs (n=56) these studies have been the basis for the routine use of vasopressin at LM in many countries. The adverse side effects, including mortality, of this potent vasoconstrictor are however well recognised and reported in the gynaecological literature. The cardiac sequelae is attributed to inadvertent intravascular administration, or systemic absorption after intramyometrial injection usually due to high or highly concentrated doses. This safety concern has resulted in a long term ban of vasopressin use in gynaecological surgery in several European countries including France and Italy.

Misoprostol is an affordable and readily available WHO essential medicine that acts as a uterotonic and vasoconstrictor used in the management of postpartum haemorrhage and established as an effective haemostatic agent in open myomectomy with a safe side effect profile. The evidence for misoprostol as a sole haemostatic agent at LM is significantly favorable from 86 study group participants.

In combination, the use of vasopressin and misoprostol has initially been found to be beneficial by Sivastava (2018). The RCT by Son (2019) has missing data for meta-analysis (neither standard deviation nor interquartile range published). More research is needed to establish the presence of a compound beneficial effect on EBL when using the two agents simultaneously, which may be beneficial in more complex myomectomies.

Conclusions

The evidence available for the use of vasopressin at LM is currently limited to two small RCTs. Despite its significant side effect profile this evidence has managed to form the basis of routine practice in many units. Misoprostol as a safer alternative has a clinically and statistically significant effect, and with the limited prospect to authorise vasopressin use for LM in several European countries, increased interest in its use is expected. Although more high quality studies are needed to further consolidate the beneficial effects of combining the agents, it seems prudent to use misoprostol as first line until clear guidance on safe vasopressin doses and its routine use become available.

ES2020-0044
Laparoscopic surgery

10-year retrospective study of outcomes of all three types of laparoscopic hysterectomy

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Background

This study was conducted to evaluate subtotal laparoscopic hysterectomy (SLH), total laparoscopic hysterectomy (TLH) and laparoscopically-assisted vaginal hysterectomy (LAVH) regarding short-term and long-term outcomes. The arguments presented in favor of any subtotal hysterectomy, such as the reduction of the long-term risk of apical prolapse after total hysterectomy, possible fewer urinary, bowel and sexual symptoms due to less damage to the nerve supply, reduced blood loss and operating time were poorly represented in the studies to date. As stated by the Cochrane review TLH had more urinary tract injuries compared to the other two subcategories of laparoscopic hysterectomy. Nevertheless, there are no studies comparing the outcomes of pelvic floor insufficiency and only a small number of studies have been conducted comparing gynecological characteristics, complication rate, and hospital stay in all three laparoscopic approaches of hysterectomy.

Methods

Data of 934 women who underwent SLH, TLH and LAVH from 2009 to 2019 were obtained from the Hospital Inpatient database at a University tertiary referral center to compare short-term outcomes, such as complications and hospital stay. Due to the start of the Covid-19 pandemic only 190 women could be invited to assess the long-term outcomes, including urinary incontinence (UI) and pelvic organ prolapse (POP). They were asked to complete a questionnaire and underwent a POP-Q examination.

Results

Only LAVH was performed until 2012; after the introduction of TLH and SLH the number of LAVH surgeries dropped severely. There was a significant difference in the mean hospital stay with the shortest one observed in SLH (4.17) compared to TLH (6.09) and LAVH (5.85, $p < 0.00001$). 4 (1.38%) complications in SLH, 5 (1.64%) in TLH and only 1 (0.29%) complication in LAVH occurred. The most common intraoperative complication was bladder injury. The long-term outcomes that were evaluated in 158 out of 190 invited women (response rate of 83.16%). UI occurred most frequently in TLH (29.27%) compared to SLH (21.74%) and LAVH (20%). Significantly higher mean in total vaginal length was observed in SLH compared to TLH and LAVH (means 9.14, 7.84, 7.75; $p < 0.001$). Pelvic floor support was good in all three groups without any statistical difference.

Conclusions

In conclusion, the lowest complication rate was in LAVH with a similar rate of complications between TLH and SLH, but the shortest hospital stay was in SLH. More women were urinary incontinent after TLH, yet there was no difference in overall POP between the three types of hysterectomy. Our findings add to the existing data on SLH, which in the past was associated with better short and long-term outcomes compared to TLH; it also brings new knowledge regarding LAVH, which appears to be the safest surgery regarding intra-operative complications.

ES2020-0084
Laparoscopic surgery

Robotic reconstructive surgery for Pelvic Organ Prolapse: two years experience of a single center
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Background

Pelvic organ prolapse (POP) is a highly prevalent anatomic disorder with functional implications. It has been estimated that approximately 3% of women will have symptomatic prolapse in their lifetime. Robotic surgery is associated with a shorter learning curve and has allowed a larger number of gynecologists to master complex laparoscopic procedures. Robot-assisted surgery offers all the benefits of minimally invasive surgery, making them accessible to a much broader spectrum of patients. Robotic-assisted laparoscopic surgeries in gynecology include benign hysterectomy, myomectomy, tubal reanastomoses, radical hysterectomy, lymph node dissections, and sacrocolpopexies. Robot-assisted gynecologic surgery is often associated with longer operating room time but generally similar clinical outcomes, decreased blood loss, and shorter hospital stay when compared to open or laparoscopic surgery. The aim of our study is investigate in postoperative complications and short-term outcomes of patients who underwent robotic sacrocolpopexy / sacrohysteropexy / pectopexy and high uterosacral ligament suspension due to pelvic organ prolapse.

Methods

A retrospective cohort study was performed on 28 patients who underwent robotic surgery between January 1, 2018 and December 31, 2019. Only symptomatic uterine or vaginal vault prolapse patients with stage 2-4, according to the pelvic organ prolapse quantification system, were included. Robotic sacrocolpopexy was performed using Da Vinci Si (Intuitive, Sunnyvale, Calif) robot by single gynecologic surgeon.

Results

A total of 28 robotic surgery on pelvic floor reconstruction; 16 sacrohysteropexies (modified Manchester procedure was added in 3 cases), 8 sacrocolpopexies, 3 uterosacral ligament suspension and 1 pectopexies were analyzed. In 7 patients concomitant hysterectomy was added to reconstructive robotic surgery. One asymptomatic mesh erosion was occurred. Baseline characteristics and intraoperative variables were similar. The mean duration of operation was 182 minutes. We didn't have any intraoperative complication like neighbour organ damage or big amount of blood loss. The rate of recurrence and mesh extrusion in our cohort is 3,5% at 6 months from RALS. These findings correlate with previously published data.

Conclusions

The best approach for restoration of vaginal apical support remains controversial, with both transabdominal and transvaginal routes most commonly utilized. It is possible that RALS procedure may provide the best improvement in symptoms and quality of life by avoiding laparotomy while optimally restoring the normal vaginal anatomy, but at an added cost. In conclusion, we found out that robotic-assisted laparoscopic pelvic reconstructive surgery provides a minimally invasive approach to treatment of pelvic organ prolapse with excellent outcomes and low complication rates.

ES2020-0091
Laparoscopic surgery

Comparison of perioperative outcomes between standard laparoscopic and robotic-assisted approach in women with rectosigmoid endometriosis: a randomized controlled trial

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Background

Robotic-assisted laparoscopic surgery (RALS) has gained widespread application in several surgical specialties because of its technological advantages over standard laparoscopy (S-LPS). However, clinical superiority is still far from proven for colorectal surgery for deep infiltrating endometriosis (DIE). Previous comparative studies on the feasibility and safety of robotic surgery for deep infiltrating endometriosis are limited by lack of randomization and inclusion of different disease stages. The present study compares S-LPS and RALS in women with colorectal endometriosis in terms of perioperative surgical and clinical data.

Methods

This is a multicentric randomized controlled trial on symptomatic patients between 2017 and 2019. Exclusion criteria were post-menopausal status, suspected gynecological malignancy and medical diseases precluding minimally invasive approach. During the preoperative examination, patients were randomized according to a computer-generated schedule to the two study groups. Our primary outcome was operating time from skin incision to closure. Secondary outcomes included length of hospitalization, estimated blood loss, laparotomic conversion rate, perioperative complications and evaluation of endometriosis-related symptoms at 3-month follow-up.

Results

Forty-five women were enrolled for the study analyses. Twenty-three were assigned to S-LPS, while 22 to RALS. The two groups were similar regarding age (mean \pm SD, 38.1 \pm 7.0 in S-LPS and 35.7 \pm 5.6 in RALS) and body mass index [median (range), 24.5 (18-35) in S-LPS vs 22 (18-36) in RALS]. Operating time was similar between S-LPS and RALS (mean \pm SD, 182.1 \pm 111.3 vs 207.1 \pm 78.6, respectively). No statistically significant difference was found in terms of length of hospitalization, perioperative complications and early postoperative clinical outcomes. Only one patient in the robotic group needed conversion to laparotomy due to mechanical lesion of the internal iliac vein. Pain and bowel symptoms improved in both group at 3-month follow up.

Conclusions

RALS can be considered as a valid alternative to S-LPS in deep endometriosis with bowel involvement. Despite RALS has some advantages such as degrees of freedom in instrument mobility, a three-dimensional view and improved surgeon's dexterity and comfort, a learning curve is required. Further studies are needed to evaluate mid-term clinical and functional outcomes and cost-effectiveness analysis of the two approaches.

ES2020-0117
Laparoscopic surgery

10-year's experience in a training hospital to codify the seven-step laparoscopic hysterectomy: the history study

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Background

From its codification, the laparoscopic hysterectomy received an increasingly wider diffusion along with the gynecological community. Different Authors have proposed standardized surgical techniques to simplify the surgical technique. However, the dissection of the retroperitoneum and the closure of the uterine arteries represents a rarely performed surgical steps in cases of increased surgical complexity.

The present study aims to describe and codify a standardized "seven-steps" surgical technique to perform the laparoscopic hysterectomy basing on our single-center 10-years experience in laparoscopic hysterectomies with the opening of the retroperitoneum and the closure of the uterine artery at its origin.

Methods

This retrospective study included data of consecutive patients who underwent minimally-invasive surgery for elective hysterectomy with or without bilateral salpingo-oophorectomy between 1st of January 2009 and 31st of December 2018 at Fondazione Policlinico Universitario A. Gemelli IRCCS of Rome. The research was conducted from the hospital's database, basing on ICD-9/10 procedural codes referable to a laparoscopic hysterectomy in a surgical setting limited to the pelvis. Ethics Committee approval was obtained (51172/19 id:2915). All enrolled patients received a laparoscopic hysterectomy carried following the same surgical maneuvers that can be summarized in seven steps:

1. Access to the pelvic retroperitoneum (individualization of ureteral pathway and closure of the uterine artery)
2. Coagulation and transection of the ovarian pedicles
3. Bilateral development of the vesico-uterine space
4. Medial development of the vesico-uterine space
5. Coagulation of the uterine vessels
6. Colpotomy
7. Colporraphy

Results

In the decade 2009 – 2018, 3300 patients referring to the Department of Obstetrics and Gynecology at Fondazione Policlinico Universitario A. Gemelli IRCCS of Rome, underwent an elective minimally-invasive hysterectomy. Among them, 1636 patients did not meet the inclusion criteria, and 1664 were enrolled for the study purpose. The median age was 52 years (range 29-91): 50.7% of cases (N=834) received surgery for suspicion of early-stage uterine malignant disease. The remaining 830 patients (49.3 %) had a preoperative indication of benign disease or risk-reducing surgery. The median BMI was 25 (17-71), and 971 (70.3%) cases had a previous laparotomy. The median OT was 130 min (30 – 375) with a median EBL of 5 ml (5-2000). Nineteen (1.1%). LPT conversions were recorded. The overall intraoperative complication rate was 3.2 % (N=54). Along the study period, the median age of surgeons was 38 years, and the rate of intraoperative complications was 3.2%.

Conclusions

Our results demonstrate that the "Seven Step" laparoscopic hysterectomy is safe, feasible, and reproducible. The acquired control of the retroperitoneal structures, with the closure of the uterine artery at its origin, represents the milestone of this approach to reduce the complication rate and to facilitate the dissemination of surgical principles along with a constantly growing community of minimally invasive surgeons.

ES2020-0118
Laparoscopic surgery

Uterine niche pregnancies – An increasing phenomenon, its relation to adenomyosis and minimally invasive treatment approaches

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Background

Uterine niche pregnancies – An increasing phenomenon, its relation to adenomyosis and minimally invasive treatment approaches. Local uterine scar adenomyosis and its relation to surgical suture principles of the uterotomy may play an important role in the pathogenesis of uterine niche. Transvaginal ultrasound and saline infusion sonohysterography emerge as the most specific, sensitive and cost-effective methods to diagnose an isthmocele. The treatment includes different surgical approaches, depending on the size of the defect, the symptomatology and the presence of a scar pregnancy or secondary infertility. We present six cases from ultrasonographic diagnosis to minimally invasive treatment by hysteroscopy and / or laparoscopy including four cases with ectopic uterine niche pregnancies from 7 to 14 weeks of gestation.

Methods

No methods.

Results

Will be included by the presentation.

Conclusions

Will be included by the final presentation.

ES2020-0119
Laparoscopic surgery

Enhanced recovery after surgery for benign minimally invasive hysterectomy

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Background

Enhanced recovery after surgery consists of a set of actions performed in order to enhance perioperative management of patients. For benign minimally invasive hysterectomy, enhanced recovery after surgery might finally led to day care surgery for some women. The aim of this study was to report practice in a department before and after application of enhanced recovery actions mainly in comparing the mean hospital stay.

Methods

This retrospective study compared women who had a minimally invasive (vaginal or by laparoscopy) hysterectomy in 2013 and in 2017 in the gynecologic department of a teaching hospital. In the meantime, the department's team starts using actions from the enhanced recovery after surgery program.

Results

A total of 203 women had a minimally invasive hysterectomy: 83 in 2013 and 118 in 2017. The main approach was vaginal way in 79.8% of cases and laparoscopic hysterectomies were performed in 20.2% of cases. The mean hospital stay significantly decreased between 2013 and 2017: 3.2 in 2013 [3.0-3.4] versus 2.3 days in 2017 [2.2-2.5], $p < 0.05$. Some actions of the enhanced recovery after surgery program were more implemented than others, such as preventing nausea and vomiting, multimodal analgesia, non-use of a systematic drainage, early liquid and solid intake and early removal of urinary catheter. In 2017, seven women were in day care surgery for their hysterectomy.

Conclusions

An enhanced recovery after surgery program led to a decrease in hospital stay and finally to day care surgery as the recovery time is shortened.

ES2020-0139
Laparoscopic surgery

Incarceration of the fallopian tube to the uterine cavity mimicking the endometrial polyp: A rare case

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Background

Vacuum aspiration is widely performed for termination of pregnancy especially in the first trimester. Iatrogenic uterine perforation is a rare complication after this procedure, occurring in approximately 1-2 per 1000 cases. Although uterine perforation occurs rarely, we should take into account this complication if the patients have some symptoms such as abdominal pain, vaginal discharge, and dyspareunia. In the evaluation of these symptoms, we may observe some findings that mimicking intracavitary lesions.

Methods

We would like to present a rare case of tubal incarceration mimicking the endometrial polyp.

Results

A 33 year old gravida 2 para 2 woman had a spontaneous vaginal delivery in another hospital. Vacuum aspiration was performed for termination of the first trimester pregnancy. The pathological result of curettage was 'rest placenta' and the patient was discharged uneventfully. The patient had experienced persistence of vaginal bleeding and pelvic pain. She presented to our hospital with these symptoms 6 months later. Transvaginal ultrasound demonstrated irregular tissue infiltrated to the uterine fundus extending to the endometrial cavity, where it resembled an endometrial polyp (Figure 1). We suspected an endometrial intracavitary lesions and uterine perforation. Firstly, we performed diagnostic laparoscopy. In the laparoscopic exploration, the right fallopian tube was incarcerated into the uterus. The incarcerated tube was extracted laparoscopically (Figure 2). After laparoscopy, we performed hysteroscopy to make an exploration for the endometrial cavity and we did not find any pathologic abnormality in the endometrial cavity. To the best of our knowledge, this case is the fifth reported case of fallopian incarceration worldwide and the first in Turkey.

Conclusions

Uterine perforation is a rare complication after pregnancy termination by vacuum curettage. If vacuum aspiration was performed; the bowel, omentum or fallopian tube can be incarcerated into the uterine cavity. If there is a suspicion about uterine perforation, diagnostic laparoscopy should be performed prior to finishing of the procedure. Vacuum aspiration under the ultrasound guidance may prevent these complications. Fallopian tube incarceration is rare complication after pregnancy termination. If the patients have persistence of vaginal bleeding and pelvic pain; uterine perforation and incarceration should not be missed out.

Prophylactic salpingectomy with delayed oophorectomy as a two-staged alternative for primary prevention of ovarian cancer in BRCA1/2 mutation carriers: Women's point of view

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Background

Bilateral salpingo-oophorectomy as primary surgical prevention is considered the most effective option and gold standard for ovarian cancer risk reduction in women at increased risk. Nevertheless, its consequence on long term health is significant. Due to growing evidence of the role of the fallopian tube in the pathogenesis of ovarian cancer in BRCA mutation carriers, alternative treatment of prophylactic salpingectomy with delayed oophorectomy (PSDO) as risk-reducing surgery has been suggested. The aim of our study was to determine women's interest and acceptability participating in a study examining this new approach, having taken addition potential risk for ovarian cancer.

Methods

All women visiting the high risk clinics for hereditary breast and ovarian cancer, in a single tertiary medical center, from October 2018 to December 2019, were asked to complete questionnaire concerning the two staged approach. Additional part of the questionnaire was given to women after risk reducing surgery, for assessment of menopausal symptoms and total satisfaction. Before completing the questionnaire, detailed explanation was given to all women by senior physician, regarding the procedure, the limited data known in the literature and potential hazards of PSDO.

Results

Study population included 290 women, of them 178 (61.37%) with BRCA1, 97 (35.92%) with BRCA2 and 13 (4.5%) with unknown mutation. Risk reducing surgery was completed in 160 (55.17%) of the women, while 130 women were pre-prophylactic surgery. 22% of the women had personal history of malignancy. First degree and second degree family history was reported in 166 (57.24%) and 52 (17.9%) of the women, respectively. More than half of the women (n=66, 51%) in the pre-prophylactic risk reducing surgery group reported interest in a study of two step approach. Among women in the post-prophylactic surgery group, 64 (40%) found PSDO to be an acceptable treatment alternative, having reported any degree of menopausal symptoms in 61.9%, and only 37 (23.12%) treated with hormonal replacement therapy.

Conclusions

Women at increased risk to ovarian cancer due to BRCA mutation indicated interest in a PSDO risk reducing surgery, taking into consideration the potential additional risk. These findings suggest that a clinical study offering PSDO as alternative treatment is feasible.

ES2020-0060
Oncology

UCHL1 promotes lymph node metastasis in SCNEC by reducing PROX1 ubiquitination

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Aim

Investigate the differential genes and explore the roles of crucial gene of small cell neuroendocrine carcinomas of the cervix (SCNEC).

Background

SCNEC are rare tumors with highly aggressive clinical behavior and extremely poor prognosis.

Materials / Patients

Prognostic factors of SCNEC were analyzed in 53 SCNEC patients. Gene expression microarrays and immunohistochemistry were used to screen out candidate genes in SCNEC. Cervical adenocarcinoma and squamous cell carcinoma samples were used as controls. The clinical significance of candidate genes was analyzed by SPSS 22.0, while biological functions were investigated in primary SCNEC cells using siRNA and overexpression. Co-expression network analysis and immunoprecipitation were used to explore molecular mechanisms.

Methods / Results

UCHL1, PROX1, CRMP5, and TM4SF1 were identified as preliminary candidates with different positively rates. According to the requirement of a >85% positive rate in sample size calculation, only UCHL1 was identified as a specific gene for SCNEC, which was positively associated with lymph node (LN) metastasis ($p=0.003$). LN metastasis was significantly related to a worse prognosis of SCNEC patients ($P=0.021$, HR =3.49, 95% CI 1.20-10.09). Scratch migration and transwell invasion assays indicated that the migration and invasion abilities of primary SCNEC tumor cells were significantly higher following UCHL1 overexpression and decreased by downregulation ($P<0.001$). Co-expression network analysis suggested that PROX1 might interact with UCHL1, and *in vivo* immunoprecipitation and western blots verified that levels of ubiquitinated PROX1 decreased significantly following UCHL1 overexpression ($P<0.001$). Immunohistochemistry indicated that UCHL1 expression was positively correlated with PROX1 in SCNEC samples ($R=0.766$, $P<0.001$).

Discussion

Our study also had some limitations. First, for our *in vitro* experiments, only one cell line was successfully cultured, and this may not fully represent the characteristics of all SCNEC tumors. Second, the number of SCNEC samples is still small, and this study needs to be further expanded to verify our conclusions, especially for survival outcomes.

Conclusion

UCHL1 is highly expressed in SCNEC and positively associated with lymph node metastasis. Mechanistically, UCHL1 promotes migration and invasion by reducing PROX1 ubiquitination.

Impact to Patients' Health

UCHL1 could become a new diagnostic and/or therapeutic target for SCNEC.

Data from small cell neuroendocrine carcinomas of cervix: compared with FIGO 2009 staging system: FIGO 2018 is more accurate, but still needs to be optimized.

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Background

The major change of revised 2018 International Federation of Gynecology and Obstetrics (FIGO) staging system of cervical cancer for evaluating prognosis is to add IIIc stage based on lymph node metastasis. Small cell neuroendocrine carcinomas of cervix (SCNEC) is very suitable to evaluate whether this change is reasonable, based on its poor prognosis and high rate of lymphatic metastasis.

Methods

We retrospectively reviewed a total of 5544 patients with FIGO 2009 stage IB–IIA cervical cancer surgically treated from January 2014 to December 2018 in the Obstetrics and Gynecology Hospital of Fudan University, Shanghai, China. In patients with SCNEC, the prognostic factors were analyzed and advantages of FIGO 2018 was evaluated.

Results

SCNEC accounts for 1.15% ($N=64$) of all cervical cancers. Univariate analysis showed that FIGO 2009 stage, lymph node metastasis (LN) and parametrial involvement were the predictors of SCNEC prognosis, while multivariate analysis showed only FIGO 2009 stage was the independent predictor. When LN metastasis status was replaced by different degree of metastasis according to the rate of LN, the FIGO stage (2009 / 2018) and the degree of LN metastasis were significantly related to the prognosis. Univariate analysis showed that FIGO 2009 was related to LN, parametrial involvement and lower uterine involvement, and FIGO 2018 was related to six prognostic indicators (lymph vascular space invasion, depth of tumor invasion, tumor size, LN, vagina and parametrial involvement). The 5-year overall survival rate (OS) was 78.5% in stage I and 22.2% in stage II (FIGO 2009). In FIGO 2018, there was no difference in 5-year OS between stage I and II ($p=0.761$) and the 5-year OS was 74.1%, 60.2% and 0% in stage I/II, IIIC1 and IIIC2. After IIIC stage combined with the local invasion factor (T1, limited to the cervix and vagina, and there is no parametrial infiltration; T2, involves parametrial; T3, involving the pelvic and abdominal cavity), the 5-year OS of IIICT1, IIICT2 and IIICT3 were 83.3%, 30.0% and 0%, respectively, $P = 0.010$. When IIIc was divided into IIICN1a, IIICN1b and IIICN1c according to the rate and location of LN metastasis (N1a: limited to the pelvic LN and the metastasis rate ≤ 0.20 ; N1b: limited to the pelvic LN and the metastasis rate > 0.20 ; N1c: metastasis to the para-aortic LN), the 5-year OS of IIICN1a, IIICN1b and IIICN1c were 80.0%, 26.7%, 0%, respectively, $P = 0.016$.

Conclusions

Compared with FIGO 2009, FIGO 2018 can evaluate the prognosis of surgically patients with SCNEC more accurately. However, it might be more individualized and accurate after the IIIc stage is subdivided by combining tumor local invasion factors. It is also a reasonable method to combine with the degree and location of LN metastasis for SCNEC to evaluate prognosis.

ES2020-0127

Oncology

Mismatch repair deficiency assessment by Immunohistochemistry in patients conservatively treated for early Endometrial cancer and atypical endometrial hyperplasia: a "screening" strategy for Lynch Syndrome?

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Background

Lynch syndrome (LS) is an autosomal dominant inherited disorder caused by germline mutations in DNA mismatch repair (MMR) genes. Microsatellite instability (MSI) which is caused by deficiency of DNA MMR system is the molecular abnormality observed in LS associated tumors.

Around 30% of endometrial cancers (EC) are mismatch repair deficient (MMR-d), mostly as result of mutations acquired during tumorigenesis, but a minority is caused by Lynch syndrome (LS).

Up to date, no guidelines exist regarding the safety of fertility sparing treatment in young women with LS-associated MMR-d EC and atypical endometrial hyperplasia (AEH).

Methods

This is a multicentric, observational, retrospective study of 70 patients with EC or AEH conservatively treated at the "Fondazione Policlinico Universitario A. Gemelli IRCCS" in Rome and at the "DAI materno-infantile, Area ostetrico-ginecologica AOU Federico II" in Naples from January 2004 to December 2018.

All tumour samples were analysed for immunohistochemistry (IHC) of MMR proteins (MLH1, MSH2, MSH6 and PMS2).

Results

IHC of MMR proteins (MLH1, MSH2, MSH6 and PMS2) was conducted on tumor samples of 70 patients. 20 patients showed stage IA, G1-2 endometrioid EC; 50 patients showed AEH.

All samples were analysed for immunohistochemistry (IHC) of MMR proteins (MLH1, MSH2, MSH6 and PMS2).

In total, six cases (8.5 %) had abnormal MMR IHC. Among these patients 3 showed stage IA, G1-2 endometrioid EC; 3 patients showed AEH. So, 15% of patients conservatively treated for EEC showed abnormal MMR IHC; 6% of patients conservatively treated for AEH showed abnormal MMR IHC.

Conclusions

MMR IHC "screening" in EC and AEH conservative management is feasible. This technique performed on hysteroscopic specimens could provide a specific tool to identify genetic high risk patients to counsel about the fertility-sparing treatment and to consider for further preventive measures.

Data presented are promising, although larger series are needed.

ES2020-0090

Reproductive medicine and surgery

Laparoscopic preconceptual niche repair. Single center experience

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Background

Rate of uterine rupture after caesarean sections is 0,2% and it can increase up to 1,95% of large niche with residual myometrium thickness (RMT) is less than 2,6 mm in Russian Federation increased every year on 1%. In our clinic rate of CS is 31,1%.

Methods

From 2010 to 2018 we perform 104 laparoscopic niche repair after C/S. Reproductive outcomes were analyzed during 108-18 months.

All patients before and six months after surgery were underwent to Bettocchi hysteroscopy with concomitant ultrasound investigation with measurement niche size end RMT. Indication for surgical treatment was residual myometrium thickness less than 3 mm, and niche location at the internal os level or upper.

Results

No complications during laparoscopic procedures was detected. Estimated myometrial thickness after surgery was 9,8 +/-2.0 mm. Six months after surgery RMT 7,7±1,8 mm (-21,4%). Only 25% patients become pregnant, among them only in one case delivery was performed at 35 weeks due to eclampsia, other were delivered at 37-39 weeks. No uterine rupture or scar dehiscence was detected.

Conclusions

Preconceptual niche resection allows to preserve pregnancy to term delivery age and prevent uterine rupture.

ES2020-0101

Reproductive medicine and surgery

Ultrasound diagnosis of adenomyosis: impact on pregnancy rate in ivf cycles with donated oocytes

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Background

The aim of this prospective study was to evaluate in patients who underwent embryo transfer (ET) in an oocyte donation cycle, the impact of adenomyosis, diagnosed by transvaginal sonographic (TVS), on the implantation rate. Also type and degree of adenomyosis scored by TVS were correlated to the implantation rate and pregnancy outcome,

Methods

All the patients aged ≤ 45 years old undergoing, for several personal problems, their first oocyte donation at IVI center Rome from June 2019 were included in this study. All had as usual an accurate workup which included history, pelvic exam and 2/3D TVS scan which was saved as images, videoclips and volumes and stored. The off line evaluation of the stored TVS was performed blind to IVF indication and outcomes by expert sonographer of the University of Rome Tor Vergata, who assessed the presence or absence of TVS signs of adenomyosis. Patients were divided into 2 groups according to findings on a baseline pre-treatment TVS: patients with and without adenomyosis. In the patients with adenomyosis, the disease was further classified according to type (diffuse,focal), localization (inner and outer myometrium) and extension inside the uterus (mild, moderate, severe) and correlated to pregnancy rate and outcome

Results

A total of 51 patients were included in this study: 24 with adenomyosis and 27 without adenomyosis. Those with TVS signs of adenomyosis showed a lower pregnancy rate (62.5%) compared to those in the control group (74.1%). Women with adenomyosis that infiltrated only the external myometrium showed a lower pregnancy rate (50%) compared to those who had the involvement of only the inner myometrium (71%). The presence of ultrasound findings of focal disease was associated with a lower pregnancy rate (66%) compared to the diffuse disease (70%); We observed a slightly higher miscarriage rate in the first trimester in patients with adenomyosis in particular in the diffuse type

Conclusions

The presence, type and degree of adenomyosis showed an important correlation to embryo implantation rate and early miscarriage. Results of this study may be used to evaluate the impact of different medical or surgical treatment in women with adenomyosis undergoing IVF.

ES2020-0120

Reproductive medicine and surgery

Hysteroscopy, infertility and obstetric outcomes: 10 years of experience

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Background

Lower pregnancy rates are observed in patients with uterine cavity abnormalities. Treatments for correction of these anomalies have been connected with improved pregnancy rates. Diagnostic hysteroscopy can be performed in an office with a little pain and high sensitivity and specificity in evaluation of the uterine cavity. Characterization of the population of women who underwent office hysteroscopy in context of infertility/recurrent pregnancy loss, the abnormal hysteroscopic findings, their surgical correction and subsequent obstetric outcomes were the main objectives of this study.

Methods

Retrospective analysis of the clinical files of patients who underwent office hysteroscopy during the workup study of infertility/recurrent pregnancy loss between September 1st, 2009 and August 1st, 2019.

Results

171 women with a mean age of 33.5 and a BMI of 25.6 were included and a total of 184 hysteroscopies were performed (120 for infertility and 64 for recurrent pregnancy loss), in which, 125 intracavitary pathologies were suspected. Abnormal findings were found in 96 hysteroscopies, with a major predominance of endometrial polyp (40.6%) and uterine septum (31.3%). Regarding the surgical correction of structural abnormalities, polypectomy (35 cases) and metroplasty (15 cases) stood out. Subsequent pregnancy occurred in 38.5% after polypectomy, with a favorable outcome in 66.7% of these - 20% using the ART (assisted reproductive techniques), with an average time from the surgical intervention to conception of 16 months (1-37 months). After metroplasty - 33.3% hysteroscopic, 33.3% resectoscopic assisted by laparoscopy, occurred 11 cases of pregnancy, 45.5% with favorable outcome (40% using the ART), with an average time since correction of the septum until conception of 38 months (27-58 months).

Conclusions

In conclusion, hysteroscopy may play an important role before or in conjunction with assisted reproductive techniques to help infertile couples achieve their goals of a pregnancy and live birth of a child.

ES2020-0126
Teaching and training

Digestive resection performed by gynaecologists: 7-year observational cohort

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Background

Digestive resection is a surgical procedure frequently employed when performing oncological surgery in order to obtain complete cytoreduction or to remove endometriosis in case of digestive invasion. However, gynecologic surgeons are not always used to this surgical technique. Acquiring the surgical skills to perform this kind of procedure is crucial to offer our patients an optimal management. The aim of this study is to describe a 7-years surgical experience in digestive resections by comparing the short term (30 days) postoperative outcomes with those found in the literature and thus to discuss under what circumstances and according to what controlled standards, a gynaecological surgeon can perform a digestive resection.

Methods

This is a monocentric retrospective cohort study reporting specific surgical procedures with digestive resections performed between January 2013 and April 2020 in the department of Gynecology of Strasbourg University Hospital. Patients were divided into two groups according to the initial pathology: endometriosis and gynaecological cancer. The main outcome measure was the short-term (30 days) postoperative complications rate, based on the modified Clavien-Dindo severity system. Secondary endpoints included mean operative time, transfusion needs, drainage use, mean length of hospital stay, reoperation rate, post-operative functional disorders reported at the 6-weeks follow-up visit and mortality.

Results

A total of 90 surgeries were included: 47 in the endometriosis group and 43 in the gynaecological cancer group. The overall complication rate was 43.3% in total. Minor complications such as infections, urinary disorders and parenteral nutrition needs were found in 30.0% of the cases (19.2% in the endometriosis group and 38.3% in the cancer group). The rate of major complications, i.e. ≥ 3 according to the modified Clavien-Dindo severity system, was 13.3% in total and only concerned patients operated for carcinological reasons. The mean operative time was 297.2 ± 104.5 minutes in the general population. It was higher in the cancer group (345.7 ± 115.7 minutes) than in the endometriosis group (252.7 ± 68.5 minutes). 7.8% of the population was transfused perioperatively, involving only patients who had oncological surgery. Drainage was performed in 73.3% of cases, mainly in cases of cancer (86.0%) but also in case of endometriosis (61.7%). Mean length of hospital stay was significantly longer in case of carcinological surgery (16.3 ± 10.5 days) compared to the endometriosis group (6.6 ± 1.9 days). Reoperation was carried out in 15.6% of cases, mainly in cancers (25.6% versus 6.4% in the endometriosis group). Post-operative functional disorders at 6-week were described in 21.0% of the cases in common (11.1% of constipation and 9.9% of diarrhea). Mortality rate was 0.0%.

Conclusions

These rates are comparable with those in the literature and suggest that a digestive resection could easily be performed by a gynaecological team under certain controlled standards.

ES2020-0130

Technical innovation in minimal invasive surgery

Adenectomy via transvaginal natural orifice transluminal endoscopic surgery (vNOTES) approach:

Preliminary results

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Background

The use of transvaginal natural orifice transluminal endoscopic surgery (vNOTES) as an alternative for a laparoscopic salpingo-oophorectomy without concomitant hysterectomy has been questioned due to challenging accessibility. Data concerning the experience using this technique for salpingo-oophorectomy is scarce. The aim of this study is to report preliminary results using the vNOTES approach for bilateral salpingo-oophorectomy.

Methods

A cohort study including all women undergoing bilateral salpingo-oophorectomy via vNOTES approach performed by a single operator, from January 2019 to December 2019. Data were collected from women's medical records. Primary outcome was defined as uncomplicated operation.

Results

The study included 26 women that underwent bilateral salpingo-oophorectomy via vNOTES approach. More than half of the women (n=14) underwent the operation as prophylactic due to BRCA mutation. The mean age was 49 (SD \pm 8.07) years old. Mean duration of the operation was 65.8 (SD \pm 17.05) minutes, with no complications documented in any of the cases. All women were released the day after being operated. All specimens were clear from malignancy on histo-pathological examination, and except from one woman with withdrawal bleeding, all others reported being satisfied from the operation on follow up visit.

Conclusions

Transvaginal natural orifice transluminal endoscopic surgery provides a feasible new approach for performing bilateral salpingo-oophorectomy, with improved patient comfort and better cosmetic results.

Vaginal vault closure following laparoscopic hysterectomy: comparing techniques and outcomes

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Background

Hysterectomy is the most common, major gynaecological procedure worldwide. In recent years, the incidence of total laparoscopic hysterectomy has increased, due to its associated benefits. Despite standardization of the procedure, there is a number of different options on how to close the vaginal vault, following removal of the specimen. We present and compare different techniques, suture materials and their associated outcomes.

Methods

Thorough literature search on comparing different surgical approaches (vaginal versus laparoscopic, horizontal versus vertical, continued versus interrupted, single-layer versus double-layer) and suture materials (barbed sutures versus conventional sutures) in terms of associated surgical outcomes and complications. Where appropriate, surgical videos and/or animations are used to facilitate understanding of the described surgical approaches.

Results

Laparoscopic closure of the vaginal vault, compared with vaginal closure, appears to be associated with overall higher risk of vaginal cuff dehiscence. However, laparoscopic closure appears to be quicker and leads to a longer post-operative vaginal length and, possibly, improved sexual life post-operatively. It has been repeatedly shown the barbed sutures can reduce the time required for vaginal vault closure and they are also considered easier to use due to absence of surgical knots. Some observational studies suggest a lower risk of vault dehiscence with barbed sutures. Higher suture material cost may be balanced by reduced operating time. One retrospective study showed that vertical (laparoscopic) closure is associated with longer post-operative vaginal length, compared with horizontal closure. No significant differences were demonstrated when comparing single-layer with double-layer or continuous versus interrupted closure techniques. However, one randomized study showed that addition of 3 "figure-of-eight" sutures to reinforce the first suture layer, may reduce the risk of vaginal cuff dehiscence.

Conclusions

Laparoscopic hysterectomy, and particularly laparoscopic closure of the vault, appear to lead to a higher risk of vault dehiscence, however, it has been demonstrated that the risk of this complication can be reduced with increased surgical experience. Barbed sutures appear safe and easier to use. There is little level I evidence to suggest an overall superiority of vertical versus horizontal, single-layer versus double-layer or continuous versus interrupted closure. Appropriately designed randomized-controlled trials are likely to shed light on the most effective method of vault closure. Surgeon's preference and appropriate training remain, as always, paramount.

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ES2020-0017
Endometriosis

Fertility outcomes following excision of stage IV endometriosis at a BSGE accredited Endometriosis Centre

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Background

Endometriosis is a chronic debilitating disease that affects 6-10% of women; in women with infertility this increases to 35–50%. The aim of our study was to assess fertility outcomes in women diagnosed with stage IV endometriosis following subfertility investigation who underwent surgical excision of disease at a BSGE accredited Endometriosis Centre.

Methods

Retrospective case note review of 9 women suffering infertility and stage IV endometriosis who underwent surgical excision of disease from August 2018 to August 2019. Patient demographics, duration of infertility, previous fertility treatment, AMH, imaging, operative findings, treatment and fertility outcomes were analysed.

Results

66.7% were suffering primary and 33.3% secondary infertility. Duration of infertility ranged from 2-4 years. 2 women had previously undergone IVF and 1 IUI. AMH ranged from <1 to 27.5. 33.3% were asymptomatic, 66.7% reported pelvic pain. Bilateral endometriomas identified in 66.7%, unilateral endometrioma 22.2% and normal ovaries 11.1%. All surgeries proceeded uneventfully with nil complications. Post operatively 77.8% were pain free, those with ongoing pain were awaiting a second stage procedure. With regards to fertility, 4 conceived spontaneously 44.4%, 1 is undergoing IVF, 2 are awaiting second stage procedure and 2 have placed fertility plans on hold.

Conclusions

Our study demonstrates that women with stage IV endometriosis have improved fertility outcomes following excision of disease, as well as the benefits of pain reduction. Conception often occurs spontaneously, on average within 5 months post operatively. Severe disease can be successfully removed with improvements in fertility and where feasible should be offered to appropriate patients.

ES2020-0018
Endometriosis

Thoracic endometriosis syndrome: catamenial pneumothorax case report

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Background

Thoracic Endometriosis Syndrome (TES) is an extremely rare disorder that involves the presence of endometrial tissue in the pleura, lung parenchyma, airways, and/or diaphragm. TES encompasses three clinical entities: catamenial pneumothorax, catamenial haemoptysis and pleural nodules, of which catamenial pneumothorax is the most common clinical presentation. Catamenial pneumothorax is defined as spontaneous and recurrent pneumothorax occurring with the onset of menstruation.

Methods

Review of literature and patient medical records. Thoracoscopy and laparoscopy findings and treatment, and ongoing management discussed.

Results

20 year old female referred to BSGE accredited Endometriosis Centre with a history of recurrent bilateral catamenial pneumothoraces. Thoracoscopy and bilateral talc pleurodesis in 2015, histology confirmed endometriosis. Post operatively contraceptive implant sited 2015-2018. Further catamenial pneumothorax suffered in 2018 following removal of contraceptive implant. Patient attended for gynaecology review reporting cyclical chest pain, however otherwise fit and well. Laparoscopy revealed deposits of deep infiltrating endometriosis on uterosacral ligaments bilaterally and pouch of douglas obliterated. All visible deposits of endometriosis were excised with nil complications. Ongoing management with hormonal suppression and follow up in place at Endometriosis clinic.

Conclusions

Although endometriosis in general can affect up to 10% of women, thoracic endometriosis is exceedingly rare. It is a complex condition and diagnosis is often delayed or missed resulting in recurrent hospitalisations and complications. Thoracic and pelvic endometriosis are often concomitant and require multi-disciplinary management. Current treatments include hormone suppressive therapy and where warranted surgical intervention from both a pleural and pelvic perspective with excision of disease.

ES2020-0048
Endometriosis

Bowel symptoms pre and post excision of deep infiltrating endometriosis at a BSGE accredited endometriosis centre

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Background

Endometriosis is a chronic debilitating disease that affects 6-10% of women; of these women 5-30% suffer with advanced disease. Deep infiltrating endometriosis can occur in a variety of sites; bowel, rectovaginal, bladder, pelvic sidewalls and ovaries, resulting in gross distortion of pelvic anatomy. Most commonly, patients complain of pelvic pain, dysmenorrhoea, dyspareunia, dyschezia, altered bowel habit, constipation, diarrhoea and bleeding. The overarching principle for surgical excision of severe endometriosis in a specialist centre is that all endometriosis is to be removed. We aimed to assess pre and postoperative bowel symptoms following surgical excision of deep infiltrating endometriosis within a BSGE accredited Endometriosis Centre, to assess if optimal symptom relief was being achieved.

Methods

Retrospective review of pre and postoperative bowel symptoms following excision of deep infiltrating endometriosis at BSGE accredited Endometriosis Centre, Queen Elizabeth University Hospital, Glasgow. Analysis of patient demographics, presenting symptoms, previous surgery, pre-operative imaging, surgical procedures, intra and postoperative complications and recovery. Assessment of BSGE database symptom questionnaires pre, 6 and 12 months post-operatively, assessing bowel symptoms - frequency, urgency, incomplete emptying, constipation and bleeding.

Results

Marked improvement in patients pain, bleeding and bowel symptoms following surgical excision of advanced disease, even when a more cautious approach to excision was performed as per patient wishes. Minimal intra-operative or post-operative complications, short hospital stay and quick recovery. High patient satisfaction rates achieved with postoperative questionnaires.

Conclusions

BSGE guidance recommends that surgical excision of advanced endometriosis should be undertaken in an accredited Endometriosis Centre where such work can be undertaken by specialist multidisciplinary teams and experienced experts in endometriosis surgery. Our results confirmed that our unit is worthy of its BSGE accredited status with low complication rates and high patient satisfaction achieved. We hope for further improvements now an established Endometriosis Centre with dedicated experienced colorectal input.

ES2020-0141
Endometriosis

The effectiveness and safety of laparoscopic excision of Deep Rectovaginal Endometriosis in Edinburgh

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Background

The Royal Infirmary of Edinburgh (RIE), has been an accredited Endometriosis centre for the last 6 years. In this period up until 2019, a total of 147 cases of rectovaginal endometriosis have been operated on and followed up for at least 12 months post operatively. The aim of this research is to report our experience by evaluating change in endometriosis symptoms scores postoperatively and record any perioperative complications in that period.

Methods

Setting is the EXPPECT Edinburgh Endometriosis centre with the operations performed at both The Western General Hospital and the Royal Infirmary of Edinburgh. A total of 147 patients underwent planned excision of rectovaginal endometriosis involving dissection of the para-rectal space between 2014 and 2019. The objectives were to audit the improvement in pain and quality of life scores following laparoscopic excision of rectovaginal endometriosis; and to audit the incidence of peri-operative complications incurred in excision of deep rectovaginal endometriosis in comparison to that of the British Society for Gynaecological Endoscopy (BSGE) audit. There preoperative data, as well as 6, 12 and 24-months post-operative data were collected using standardized symptom questionnaires and stored into the BSGE database. The main outcome measures were the median scores for chronic pelvic pain, bladder and bowel symptoms, analgesia use and quality of life (EuroQol) scores as well as the frequency and preoperative complications. The data was then analysed and compared with findings from the BSGE study.

Results

There was marked improvement in Endometriosis pain symptom scores postoperatively, with significant improvement in pre-menopausal, menopausal and non-cyclical pain as well as dyschezia symptoms at 6 months post op. This improvement was sustained at 24 months post operatively. There was significant improvement in the overall quality of life scores as well as reduction in use of analgesia.

The overall incidence of peri-operative complication was 4.8% which was less than observed in the BSGE study.

Conclusions

Laparoscopic excision of rectovaginal endometriosis is increasingly safer and more effective when carried out in specialist centre by a multi-disciplinary team.

ES2020-0080
Hysteroscopic surgery

Outcomes of the use of the Myosure shaver in removal of remnants after miscarriage and placental remnants in comparison to hysteroscopic resection: a retrospective study

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Background

Retained product of conception (RPOC) is a term used to describe placental remnants after miscarriage, termination of pregnancy, vaginal birth or caesarian section. There is no standardized treatment for the removal of RPOC. Conventional treatment consists of surgical treatment with vacuum aspiration or hysteroscopic resection. The use of vacuum aspiration leads to complications during and following the procedure. The most recent development for removal of RPOC is hysteroscopic morcellation. Advantages compared to previous treatment options are the ability to perform the procedure in an outpatient setting and the theoretical reduced risk of damaging the myometrium. There is a lack of scientific research on comparing the Myosure shaver with hysteroscopic resection. The goal of this study is to research the effectiveness and safety of the Myosure shaver in regards to hysteroscopic resection of RPOC

Methods

The design of this study is a retrospective data research. A dataset was made of 177 women who have had a procedure for the removal of RPOC in Isala hospital Zwolle between 1-1-2015 and 1-1-2020. This produced two cohorts of 115 and 62 inclusions for Myosure and hysteroscopic resection respectively. Patient characteristics and results were compared between the two groups.

Results

There is no significant ($p=0.096$) difference found in the number of patients who were in need of a repeat procedure. There was a significant ($p=0.014$) difference in number of patients with complications after the procedure, with 6% ($n=4$) in the hysteroscopic group ($n=1$ perforation and $n=3$ signs of infection) and 0% in the myosure group. Total amount of blood loss during surgery was significantly ($p=0.040$) higher in the hysteroscopic group with a median of 30ml (5-100) against a median of 5ml (1-20) in the Myosure group. The use of the Myosure shaver, corrected for age, gives significantly reduced chance of repeated procedure compared to the use of hysteroscopic resection with 34% (95%CI 0.117-0.996, $p=0.049$)

Conclusions

The Myosure procedure seems to be just as effective in removing RPOC as hysteroscopic resection. The Myosure seems to have less complication in comparison to hysteroscopic resection. Due to the retrospective nature of this study, more research is indicated

ES2020-0082

Hysteroscopic surgery

Surgery for retained products of conception

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Background

Retained products of conception (RPOC) may occur after medical and surgical pregnancy termination, miscarriage and vaginal or cesarean delivery. Complications of RPOC are important, short-term bleeding and infection, long-term formation of intra-uterine adhesion.

Our goal of this retrospective study was to evaluate the clinical factors of these patients with RPOC who underwent surgery (curettage, hysteroscopic removal) and to look to the complication rate of surgery, need for a second surgery and pregnancy-rate.

Methods

All the patient who underwent surgery for the removal of RPOC from January 2017 to January 2019 were included. The follow-up time was at least 4 months.

Results

A total of 63 patients had surgery for the removal of RPOC. A total of 41 (65%) was by hysteroscopic removal and 22 (35%) by curettage. The decision was made by the surgeon himself. 42 (67%) cases were after medical treatment for miscarriage with misoprostol . The other 21 (33%) cases were RPOC after delivery or surgical termination of pregnancy. The main symptoms of these patients were bleeding disorder, 92%. Symptoms of endometritis were present in 5 (8%) patients.

The clinical factors of the group of medical termination for miscarriage (n=42), a total of 15 (36%) patients had no bleeding at presentation, 17 (40%) had a diameter of the amniotic sac more than 3 cm, 10 (24%) were nullipara, 17 (40%) had a history of miscarriage. Total of 23 (55%) of this group had 2 or more treatments with misoprostol. A total of 19 (45%) patients had an expectant care for a period of 1 month after the diagnosis of RPOC. In the latter there were no cases of endometritis.

Complications occurred in 4 (6%) cases, all of them were bleeding. There were no cases of incomplete removal. In 2 cases there was no confirmation of RPOC after examination of the removed tissue. The pregnancy rate after the procedure is 64% (28/44). In 4 cases it ended in a miscarriage. A total of 19 (30%) started with contraception after the procedure.

Conclusions

We can say that hysteroscopic removal and curettage for RPOC are save procedures with good results. There was no need for a second procedure and it gives a high number of pregnancies after the procedure. Almost all cases of RPOC had bleeding disorders and risk of endometritis stays low. It is still difficult to create a prediction model for RPOC and patients with miscarriage. We need to look and analyze the different factors and baseline characteristics in all misoprostol-cycles for miscarriage. A more tailored management like adding mifepristone or direct surgery could be offered in order to prevent RPOC.

ES2020-0122

Imaging

Fitz-Hugh-Curtis syndrome

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Background

The Fitz-Hugh-Curtis syndrome or perihepatitis is a rare chronic manifestation of pelvic inflammatory disease. It consists of inflammation of the liver capsule and peritoneal surfaces within the anterior right upper quadrant with adhesion formation, accompanied by right upper quadrant pain.

Methods

We report a case in which antibiotic therapy failed and was ultimately managed using a laparoscopic approach. We include photographic documentation of the characteristic “violin string–like adhesions” between the anterosuperior hepatic surface and the abdominal wall.

Results

The Fitz-Hugh-Curtis syndrome is the rarest complication of pelvic inflammatory disease.

Conclusions

Despite the extensive description of these adhesions in the literature, their photographic documentation is scarce. The authors present a case with photographic documentation of the “violin string–like adhesions”.

ES2020-0002

Laparoscopic surgery

Laparoscopy with biopsy in patients with tuberculosis peritonitis and immunosuppression

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Background

The purpose of the research was to evaluate the informativeness of laparoscopy with biopsies in the diagnostic of tuberculosis peritonitis in patients with different immune status.

Methods

We examined 52 patients with tuberculosis peritonitis who were treated in our clinic from 2014 to 2019. 14 (26.9%) of the examined patients were HIV-positive, the number of CD4 lymphocytes did not exceed 350 cells / μ l., 3 (5.6%) patients had a history of receiving interleukin inhibitors. The examination included diagnostic laparoscopy (DL), peritoneal fluid analysis and histopathological evaluation of the biopsy sample.

Results

During laparoscopic debridement, exudate in the abdominal cavity was detected in 49 (94.2 \pm 3.2%) patients, its volume ranged between 100 and 3000 ml. Caseous-purulent exudate was detected in immune compromised patients only, under minimal expressed adhesive process in the abdominal cavity. Peritoneal fluid analysis showed the growth of mycobacterium tuberculosis (MBT) in 6 (11.5 \pm 4.4%) patients. PCR diagnostics of peritoneal exudate revealed MBT DNA in 26 (50.0 \pm 11.1%) cases. 5 (9.6 \pm 4.1%) patients had local non-specific alterations in the peritoneum in the form of edema, stratification and hyperemia. In 34 (65.4 \pm 6.6%) patients, dense whitish tubercles up to 6 mm in diameter were detected on the peritoneum, which imitated the appearance of tumor dissemination. Tuberculous formations on the peritoneum were not detected in patients with compromised immune status. In the group of patients with HIV-negative status, a histopathological assessment of peritoneal biopsy samples revealed typical tuberculous granuloma in 37 cases (71.1 \pm 12.3%). Assessment of biopsy samples of the peritoneum revealed accumulations of caseous necrosis without the formation of classical tuberculous granulomas in the majority of immunocompromised patients (13; 25.1 \pm 11.7%). Ziehl-Neelsen staining of the tissues detected acid-resistant mycobacterium in 32 (61.5 \pm 6.8%) clinical cases. Analyzing the data obtained, we can assume that the intraoperative picture can be very variable due to the different stages of the pathological process and the degree of its activity. In patients with compromised immune status were reliably detected predominantly destructive and alterative processes, macroscopic picture shows necrobiotic changes in the peritoneum with the accumulation of caseous effusion, while microscopy reveals absence of "classical" tuberculous granulomas, which makes it extremely difficult to verify the diagnosis.

Conclusions

The course of peritoneal tuberculosis in individuals with compromised immune status is characterized by a predominance of destructive processes with the accumulation of caseous and purulent exudate, and signs abdominal sepsis. The unclear clinical picture, low detection rates of MBT in exudate and MBT DNA in PCR diagnostics make it possible to consider the diagnostic laparoscopy with tissue biopsy as the most informative method for the diagnostic of peritoneal tuberculosis, including immunosuppressed patients cases.

ES2020-0010

Laparoscopic surgery

Unusual presentation of isolated fallopian tube torsion

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Background

Isolated torsion of the fallopian tube is an unusual finding in a female patient presenting with acute lower abdominal pain radiating to the leg. Right tubal torsion is considered to be a particularly rare condition. We present a case of a lady admitted to the emergency department for lower abdominal pain.

Methods

The patient underwent laparoscopy and a right salpingectomy was done for torsion of the right ischemic hydrosalpinx with no ipsilateral ovarian involvement.

Results

The follow-up was uneventful.

Conclusions

In conclusion, isolated torsion of the fallopian tube remains a tricky challenging diagnosis. Laparoscopy is the gold standard for diagnosis and management. Preservation of the tube is generally desirable if possible. Here we present a case in which diagnosis of torsion was made correctly with surprising isolated tube torsion and completely intact ipsilateral ovary. Appropriate treatment of right isolated tubal torsion was achieved with laparoscopy and salpingectomy.

ES2020-0012

Laparoscopic surgery

Rare case of appendiceal neurofibroma in a patient with bilateral, mucinous ovarian tumors

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Background

We describe the case of visceral occurrence of neurofibromatosis in a patient with bilateral, mucinous ovarian tumors.

Methods

Case report.

Results

Young patient with diagnosed neurofibromatosis type 1 (nf1) and a previous history of transvaginal needle aspiration of an ovarian cyst, reported abdominal pain, bulk symptoms and sexual dysfunction. The case presented was hospitalised with suspected pelvic inflammatory disease one year ago. During hospitalisation an ultrasound-guided cyst aspiration of the right ovary was conducted, but the patient was not followed up. One-year post-hospitalisation, the irm findings indicated a 9,3 x 7,7 cm heterogeneous and well limited pelvic mass that seemed attached to the right ovary, whereas the transvaginal ultrasound, also, indicated a 4,3 x 5,2 cm, multilocular cyst in the left ovary. Tumor markers were not elevated in the clinical setting. The patient underwent diagnostic laparoscopy which revealed very large, bilateral, multilocular tumors in both ovaries. There were no remarkable findings from the uterus. Conservative surgery was preferred, given the fact that the nulliparous patient strongly desired to retain her fertility. Bilateral cystectomy was performed. Histopathology revealed mucinous cystadenomas. During surgery, an inflamed appendix was revealed, and a typical appendectomy was performed. The appendix was removed intact from the abdominal cavity with the use of an endobag. The histology revealed an appendiceal neurofibroma. neurofibromatosis, also known as von recklinghausen's disease, is an autosomal dominant disorder, characterized by café au lait freckling, multiple cutaneous and less commonly visceral neurofibromas. Few cases of appendiceal neurofibromas have been reported, even in patients with nf1.

Conclusions

The laparoscopic management of bilateral mucinous cysts is challenging, especially in case of young patients. Appendiceal neurofibromas are extremely rare and are often diagnosed as appendicitis. In this case, two very different pathologies that needed surgical management were co-existing in the same patient.

ES2020-0039

Laparoscopic surgery

Retroperitoneal lymphangioma in an adult: a rare case report

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Background

Lymphangioma is a rare benign tumor arising from lymphatic vessels. The disease most frequently occurs in the pediatric age group, and ~90% of cases are diagnosed prior to 2 years of age. The most common sites of the tumor are regions of the neck, head and axillae, while abdominal location is infrequent. Retroperitoneal lymphangiomas account for less than 1% of all lymphangiomas and their occurrence in adulthood is rare.

Methods

We present a case of a 66-year-old woman, who referred to our clinic due to pain in lower right abdomen and back. The transvaginal ultrasound image showed a well-defined and thin-walled hypoechoic structure with dimensions – 10,1x6,5x4,8 cm. This finding is indicative of sactosalpinx or fluid between adhesions. MRI scan displayed location of the structure between the right iliac vessels, bladder and uterus.

Laparoscopic surgery was planned. During the operation a retroperitoneal cystic tumor 11X6X4 cm was visualised on the right side of the abdominal wall. It was filled with serous fluid. The tumor was completely removed. Blood loss during the operation was minimal.

Results

The postoperative period elapsed without complications. Patient was discharged from the hospital in good general condition on the 3rd postoperative day. The histology finding was consistent with cystic lymphangioma. Nine months after surgery the patient referred on follow up appointment and had no complaints. Ultrasound examination showed no abnormalities.

Conclusions

Retroperitoneal lymphangioma is a rare location and type of benign abdominal tumors, which presents a diagnostic dilemma and final diagnosis is often made after the operation, based on histological finding.

ES2020-0043
Laparoscopic surgery

Acute surgical abdomen in Gynecology: new paradigms and practices

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Background

Ectopic pregnancy, adnexal torsion and complicated uterine fibroids (torsion/necrobiosis) are gynecological conditions presented as an acute abdomen and requiring emergent surgical treatment. Minimally invasive surgery is a safe option and when possible is the gold standard for the treatment of these conditions. The aim of this study is to evaluate the changes in the approach of major acute surgical abdomen in Gynecology in the last 10 years.

Methods

Retrospective and comparative analysis of the surgeries performed in cases of acute abdomen in our department in 2008 (group 1) vs. 2018 (group 2). Statistical analysis was performed using IBM SPSS® Statistics v22 (p -value<0.05).

Results

There were 46 women in group 1 and 32 in group 2. The median age, parity and post-menopausal status were similar in both groups (p =n.s.). In group 1 there were 40 cases of adnexal pathology (87.0%) including ectopic pregnancy (n=16), large ovarian cysts (n=11), adnexal torsion (n=9), pelvic inflammatory disease (n=2) and a uterine malformation conditioning hematosalpinx (n=1), as well as 6 cases of complicated uterine fibroids (13.0%). All cases of acute surgical abdomen in group 2 presented adnexal disease, comprising ectopic pregnancies (n=21), adnexal torsions (n=9) and ruptured hemorrhagic cysts (n=2). Half of the women (n=23) in group 1 presented just with acute abdominal pain, while in group 2 the majority of women (59.4%; n=19) presented abdominal pain associated with other symptoms (p =n.s). Laparoscopy was the most used surgical approach for adnexal pathology in group 2 (87.5%) and laparotomy was more common in group 1 (70.0%), p <0.001. The laparoscopic interventions performed in group 1 included salpingectomy (n=3), ovarian cystectomy (n=3), adnexectomy (n=2), diagnostic laparoscopy (n=2), hemoperitoneum drainage and hemostasis (n=1) and salpingostomy (n=1). Laparotomic hysterectomies with salpingectomy/adnexectomy (n=10) were only performed in group 1, mainly associated with complicated uterine fibroids. Other laparotomic surgeries like salpingectomy (n=8), adnexectomy (n=7) and ovarian cystectomy (n=3) were also performed in this group. In group 2, laparoscopic surgeries included salpingectomy (n=20), adnexectomy (n=6) and hemoperitoneum drainage and hemostasis (n=2). There were only 3 ovarian cystectomies (large ovarian cysts associated with adnexal torsion) and 1 adnexectomy (bulky adnexal mass with a large hemoperitoneum) by laparotomy in group 2. Patients from group 2 had shorter hospital stay than group 1 (3.0 [1-7] vs. 2.0 [1-3] days, p <0.001). Postoperative complications (2 cases of wound dehiscence) only occurred in group 1.

Conclusions

Uterine conditions like complicated fibroids were uncommon in recent times, currently representing an unusual cause of acute surgical abdomen. Laparotomic hysterectomies were also rarely performed as emergent indications, probably due to available medical treatment. Laparoscopy has been increasingly used as a first line surgical approach in many emergent gynecological interventions, emphasizing a shorter hospital stay and recovery.

ES2020-0099

Laparoscopic surgery

Sacrocolpopexy for vaginal vault prolapse: 7-year experience from a Peripheric Center

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Background

Pelvic organ prolapse (POP) is defined by herniation of the anterior or posterior vaginal wall, uterus, or vaginal apex into the vagina; descent may occur in one or more structures. It's a common, benign condition that can cause vaginal bulge and pressure, voiding, defecatory and sexual dysfunction, which may adversely affect women's quality of life.

According to the literature, the cause of apical prolapse is multifactorial, but vaginal parity and previous hysterectomy are the most commonly associated risk factors.

Apical vaginal support for post-hysterectomy vault prolapse can be provided by vaginal, abdominal or laparoscopic routes. Sacrocolpopexy is associated with higher satisfaction rates and a lower re-operation rate compared with other surgical procedures.

The objective was to investigate the gynecological and obstetric history of women submitted to Sacrocolpopexy for surgical correction of vault prolapse and the main complications associated with it.

Methods

Retrospective study that included all women who underwent Sacrocolpopexy since the procedure was started at the Hospital do Divino Espírito Santo in Ponta Delgada(HDES) in 2013 until today, with data obtained through clinical files and telephone contact. In this study, there was a significant association between a history of vaginal delivery and postoperative complications, considering the $p < 0.05$ ($p = 0.03$) using the chi-square test.

Results

We studied a group of 20 women who underwent sacrocolpopexy, with a mean age of 60.95 ± 9.65 years and 95,00% ($n=19$) of the patients who underwent the procedure had a grade IV Baden POP.

It was found that 95,00% ($n=19$) of them had previous vaginal deliveries, 15,00% ($n=3$) had 1 eutocic delivery(PE), 25,00% ($n=5$) 2 PE and 55,00% ($n=11$) 3 or more PE, the average PE being 3 ± 1.89 .

When evaluating the surgical gynecological history, it was found that 70,00% ($n=14$) had undergone previous total abdominal hysterectomy and 30,00% ($n=6$) vaginal hysterectomy. Thirty-five percent ($n=7$) had some degree of associated urinary incontinence(UI), of which 10,00% ($n=2$) stress urinary incontinence, with a TVT-O being applied at the same surgical time in 15,00% ($n=3$) of the patients.

The procedure was effective in 61,90% ($n=13$) of the patients, 9,60% ($n=2$) reported UI complaints and 23,80% ($n=5$) reported some degree of prolapse, with only one patient needing another surgical correction for POP (posterior compartment).

Conclusions

Thus, it is concluded that although the study sample is small and we had a short follow-up, sacrocolpopexy constitutes a very satisfactory surgical treatment associated with high rates of success in the medium and long term, a fast recovery and low rates of morbidity, mortality and recurrence.

ES2020-0115

Laparoscopic surgery

Laparoscopic tubal sterilization and regret

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Background

Female sterilization is the most common method of contraception worldwide, used by 19 per cent of women aged 15 to 49 years old.

Although preoperative counselling should always address regret, little information is available about the proportion of patients who later regret the surgery, ranging from 1 to 26 per cent.

The purpose of this study is to evaluate the regret rate 5 years after a laparoscopic tubal sterilization and its reasons.

Methods

A retrospective data analysis from all cases of laparoscopic bilateral tubal sterilization in our ambulatory surgery unit from July 2014 to December 2014 was conducted combining patient history at that time and a 5-year after the procedure phone call.

Results

In 6 months, 118 laparoscopic bilateral tubal sterilization procedures by bipolar electrocoagulation were performed. 45 cases were excluded.

Mean age and median parity were $38,3 \pm 4.2$ and 2, respectively. 34,2% had history of caesarean section.

The majority of patients were healthy (76,7%), with hypertension (15,1%) being the most frequent comorbidity.

The estroprogestative combination was the previous contraceptive method more frequently used (73,97%), followed by no method in 10.9% and copper intrauterine device in 9,59%.

Regret 5 years after the procedure was reported in 20,5% of women who had undergone tubal sterilization, being the most frequent reasons abnormal uterine bleeding (53,3%) and desire to have more children (40%). Although this desire, no patient demanded a medically assisted reproductive technique or tubal ligation reversal procedures.

No failure cases were reported.

Conclusions

Although our study has a considerable limitation (small sample), our findings showed that regret is relatively common among women who have undergone laparoscopic tubal sterilization (20,5%).

The issue of relatively permanent fertility loss and risk of menstrual abnormalities should be discussed openly and clearly to women considering surgical sterilization as a permanent contraceptive method.

ES2020-0137

Laparoscopic surgery

Comparison of the clinical characteristics and sonographic findings of adnexal torsion between pregnancy trimesters

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Background

The aim of this study is to compare the clinical characteristics and sonographic findings of adnexal torsion between pregnancy trimesters.

Methods

This is a retrospective cohort study between 2011 and 2020 in a tertiary, university affiliated medical center. Overall, we enrolled 122 pregnant women with 131 separate episodes of surgically proven adnexal torsion. Intervention was laparoscopy for confirmation and treatment of adnexal torsion.

We collected demographic and clinical characteristics as well as sonographic findings and laboratory results of all adnexal torsion episodes. We compared the three trimesters of pregnancy

Results

Overall, 92 of the episodes occurred during 1st trimester, 29 and 10 occurred during 2nd and 3rd trimester, respectively. The majority of cases were right sided (61%).

Pregnancy achieved following assisted reproductive technology (ART) was more common in the 1st trimester group ($p < 0.001$). Visual analogue scale score of >6 was more common in 1st and 3rd trimester, compared to 2nd trimester ($p = 0.02$). Gastrointestinal symptoms were also more common among patients in the 1st trimester ($p < 0.007$).

The mean diameter of affected adnexa was similar in all trimesters, while the non-affected adnexa was marginally significantly smaller in the 2nd and 3rd trimesters. In approximately one third of all cases ultrasound findings included at least one specific feature: edematous ovary, absent doppler flow or presence of whirlpool sign. Absent doppler flow was more common in the 2nd and 3rd trimester compared to the 1st trimester ($p < 0.03$), and the presence of ovarian teratoma was more common in the 2nd and 3rd trimesters, compared to the 1st ($p = 0.05$).

Duration from admission to surgery was significantly longer in the 2nd and 3rd trimesters ($p = 0.002$).

Conclusions

We found differences in the clinical, sonographic and laboratory manifestations of adnexal torsion in each trimester of pregnancy. When assessing pregnant patients with suspected adnexal torsion, these differences may assist in ameliorating an accurate diagnosis.

ES2020-0029

Oncology

Surgical Approach for Endometrial Cancer: open versus total laparoscopic hysterectomy

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Background

Endometrial cancer (EC) is the most common gynecological malignancy in developed countries. It's frequently diagnosed at an early stage, allowing great outcomes after surgical treatment. Previous studies demonstrated several advantages of minimal invasive approach like less hospital stay, better visualization or less post-operative complications, with the same oncological outcomes.

The aim of this study was to compare two different surgical approaches for total hysterectomy in endometrial cancer patients.

Methods

Retrospective study of EC patients who underwent total hysterectomy and bilateral salpingo-oophorectomy by laparoscopy or open surgery, between 2017 and 2019 in an oncological center. Demographic variables and surgical outcomes were compared.

Results

91 patients were included, 54 were managed by laparotomy (LPT) and 37 by laparoscopy (LPS). Both groups were comparable in: mean age (69 years in LPT vs 64 years in LPS, $p=NS$); BMI [33 (24-46) kg/m² in LPT vs 32 (20-51) kg/m² in LPS, $p=NS$]; parity (median – 2 in both approaches); number of previous abdominal surgeries (median of 0 in both approaches); number of comorbidities [median of 2 (0-5) in both groups]. Laparoscopy was preferred in patients with better Performance Status (PS): PS=0 in 92 % vs 70% ($p=0.016$).

Uterine weight and diameters from pathology reports were significantly greater for open surgery than for laparoscopy (164.02 vs 97.73g, $p=0.03$; and 9.60 vs 8.09cm, respectively $p=0.030$). Mean operating time was longer for laparoscopic group: 167.57 vs. 118.65min ($p = 0.019$). Hospital stay was significantly higher for open surgery (4.30 vs 2.43 days, $p<0.001$).

There was 1 intraoperative complication in the laparotomy group (bladder laceration). Five (5.5%) patients initially evaluated by laparoscopy were converted into laparotomy due to difficult surgical exposure. There were more post-operative complications in patients managed by laparotomy (9 cases; 16.67% - 3 abdominal infections, 4 wound dehiscences, 1 rectovaginal fistulae, 1 pulmonary thromboembolism), than by laparoscopy (1 case; 2.7% - 1 port-site infection, $p= 0.037$). Hospital readmission was recorded in 5 patients, all of them treated by laparotomy (9.26%, $p= 0.021$): abdominal abscess (3), correction of the rectovaginal fistulae (1) and correction of wound dehiscence (1).

Laparoscopic surgery was performed in 35% of EC cases in 2017 and 58% in 2019 ($p = 0.059$).

Conclusions

EC patients were typically obese with several comorbidities that difficult surgical treatment. In our study open surgery was preferred in bigger uterus, with less operative time. On the other hand, laparoscopy take advantage in hospital stay and peri-operative complications. Assuming the same oncological outcome, described in several previous studies, laparoscopy should be the preferential surgical approach in endometrial cancer patients.

ES2020-0004

Reproductive medicine and surgery

The role of laparoscopy in the diagnosis and treatment of ectopic pregnancy in tubal remnant stump after IVF/ET: a case report

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Background

Ectopic pregnancy (EP) is defined as the implantation and development of an embryo outside the uterus and it is a major gynecologic emergency occurring in 1% to 2% of all pregnancies. The incidence of EP has increased over recent decades, which is partly due to the increased prevalence of sexually transmitted infections and the use of assisted reproductive technique (ART). EP occurring in the remnant tube after bilateral salpingectomy is assumed to be rare and usually associated with reproductive techniques. The unique anatomic location of the tubal stump pregnancy sometimes results in delayed diagnosis. We present the case of a patient with tubal stump pregnancy.

Methods

A 30-years-old woman (gravida-2, para-0) was followed in our hospital after she underwent assisted reproductive technology, in vitro fertilization/embryo transfer (IVF/ET). She admitted in our hospital to see success of the treatment. She had medical history with experienced of two EP. The first one was 4 years ago, on the right Fallopian tube (FT) after intrauterine insemination (IUI) and the treatment was incision right tube and expression ovum by laparoscopy. The second EP was located in the left FT, one year later, after IUI. We performed left salpingectomy by laparoscopy. Between this two EP she had conization of cervix uteri because of cervical epithelial neoplasm III. The third laparoscopy was because of hydrosalpinx on right FT and we performed right salpingectomy. One year later she underwent IVF/ET.

Results

On the 14th day after embryo transfer the serum level of human chorionic gonadotropin (beta HCG) was 6,0 IU/ml. The repeated value were; 30 IU/ml 25 days; 127 IU /ml 30 days; 900 IU/ml; 33 days and 1500 IU/ml; 40 days of ET. Transvaginal ultrasound examination revealed no sign of intrauterine pregnancy without free fluid in the sac of Douglas. The endometrium was thick and patients had no vaginal bleeding and abdominal pain. The full blood count and vital signs were normal. Her vital signs were stable and a physical examination revealed diffuse lower abdominal tenderness with no signs of peritoneal irritation. Her hemoglobin level was 11.8 mg/ml. We suspected on corneal pregnancy and performed laparoscopy which showed intact EP on the left side in the tubal remnant sump. We removed residual stump with EP. Pathologist confirmed present of trophoblastic tissue.

Conclusions

The prevalence of EU ranges from 6 to 16% in general population. Most of them are in FT (95%). Medical assisted procreation techniques increased risk for EU. Thus the possibility of EU should be considered even after bilateral salpingectomy. This rare case showed a big role of laparoscopy because our patient underwent successful repeated laparoscopic surgeries, and experienced an uneventful recovery with minimal scars. Nowadays, our patient has a child after eight attempts of IVF/ET with only one laparotomy of Cesarean Section.

ES2020-0045

Reproductive medicine and surgery

Algorithm for overcoming infertility in endometriosis ovarian cysts: a view of a reproductologist and surgeon

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Background

To develop an algorithm for the infertility overcoming in women with endometriosis ovarian cysts.

Methods

532 patients with endometriosis cysts under the infertility treatment by IVF method for 2016 - 2019 were analyzed. Tasks of the research were to characterize and develop classification of endometriosis ovarian cysts that should be considered for the infertility treatment in patients with the ovarian cysts. The optimal method for the infertility overcoming must be developed in this group of patients and reproductive prognosis must be determined depending on characteristics of endometriosis cysts, according to the elaborated classification.

Results

The reproductive prognosis, oocyte quality, pregnancy rate and reproductive outcomes for the patients with endometriosis cysts depend on various factors. The patients' analysis with endometriosis cysts showed heterogeneity for given group, thus the endometriosis cysts classification was developed, according to which they are characterized by its localization (in one or two ovaries), size (more than 4 cm, less than 4 cm), number (single, multiple), first detected or recurrent. Among 532 patients, undergoing IVF infertility treatment, the share of unilateral ovarian cysts account for 62%, bilateral cysts are found in 38% of cases, single endometriosis cysts were observed in 64% of women, multiple in 36%. The recurrence of the endometriosis cysts (after surgical treatment) was observed in 73% of patients; in 27% of women endometriosis cysts were detected for the first time. Based on characteristics of endometriosis cysts according to the elaborated classification, as well as in consideration of the age and the infertility factors, we have identified three main ways to deal with the infertility in this group of patients.

1. The surgical treatment, possible expectation of spontaneous pregnancy
2. The surgical treatment as stage of preparation for the urgent IVF program
3. The IVF program without prior surgical treatment of the endometriosis cysts.

The pregnancy rate was highest when using algorithm №1 and was 86.7% and № 2 - 93.4%. In the group where used algorithm №3 pregnancy rate only 36.4%

Conclusions

The treatment tactics and reproductive prognosis of patients with the endometriosis cysts, in addition to age, ovarian reserve and infertility factors, must consider characteristics of endometriosis cysts, which include localization, size, number and process of recurrence.

ES2020-0100

Reproductive medicine and surgery

Prevalence and reproductive outcome of adenomyosis in Omani women

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Background

Adenomyosis is one of the common benign gynecological conditions that is characterized by enlargement of uterus due to growth of endometrial stroma and glands toward the myometrium. This condition is associated with hypertrophy and hyperplasia of surrounding myometrium. However its diagnosis and treatment are challenging to physicians. The prevalence varies widely due to the lack of a standardized definition and diagnostic criteria for the condition. There is also increasing evidence to show an association between infertility and adenomyosis. Adenomyosis has also been reported to be associated with increased incidence of preterm delivery, preeclampsia, and second trimester miscarriage. This project aims to report the prevalence as well as the reproductive outcome of adenomyosis among Omani women since to our knowledge it has never been reported before.

Methods

This research was conducted as a retrospective cohort study of 216 adenomyosis suspected cases who were in reproductive age from 18 to 50 years, and followed at the Obstetrics and Gynecology department in Sultan Qaboos University Hospital (SQUH) from the beginning of 2012 until the end of 2019. We used Ultrasound or MRI as criteria as confirmatory tests for the diagnosis of adenomyosis. We collected the demographic data and clinical data for symptoms and signs of adenomyosis as well as the presence of associated diseases like endometriosis and fibroids and infertility and the management used. The reproductive outcome variables were pregnancy, miscarriage, preterm delivery and cesarean delivery.

Results

Out of 216 suspected adenomyosis cases only 43 women had a confirmed diagnosis of adenomyosis with ultrasound or MRI. Adenomyosis Prevalence among reproductive aged Omani women attending SQUH was found to be 0.12% (43 confirmed cases out of 34865 attending Obstetrics and Gynecology department at SQUH). 81.4% of adenomyosis patients' age was above 40 years. 5.6% of adenomyosis patients have infertility and 7% of infertile women with adenomyosis had IVF implantation failure. 58.1% (25 cases) had uterine fibroids and Endometriosis in 20.9% (9 cases). 50% of adenomyosis patients had a history of miscarriage, with the maximum number of miscarriages in a patient being 7 and the mean number of miscarriages was two. 0.046% of cases had a history of ectopic pregnancy, 20% had preterm delivery (at 36 weeks) with <2 kg childbirth weight and 20% of patients had delivery by cesarean section. The surgical procedures performed were curettage (32%), hysteroscopy (28%), laparoscopy (23%), myomectomy (14%), hysterectomy (9%). Polyps were found in 14% of cases. Medical management included Mirena (23%), GnRH analog (14%) and OCP (5%).

Conclusions

Our research revealed a low prevalence of adenomyosis in Omani women followed at SQUH. It was accompanied by a significant number of reproductive outcomes. The commonest surgical procedure performed among cases was curettage followed by hysteroscopy and laparoscopy.

ES2020-0097

Technical innovation in minimal invasive surgery

Evaluation of the learning curve observed during the implementation of the magnetic resonance image guided high intensity focused ultrasound treatment for uterine fibroids

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Background

Although the Magnetic Resonance imaging guided High Intensity Focused Ultrasound (MR-HIFU) treatment for uterine fibroids has shown promising results, it is still not widely implemented in clinical practice. Implementation of new complex innovative therapies inherently comes with a learning curve. Previous studies reported a learning curve for the MR-HIFU treatment of uterine fibroids but did not define the learning curve in detail. The aim of this study was to analyze the learning curve observed while implementing MR-HIFU treatment of uterine fibroids to provide more insight in the number of treatments needed to reach clinical and technical relevant improvement of outcomes.

Methods

Women with uterine fibroids were counseled for MR-HIFU at the gynecologist outpatient clinic. After a screening-MRI, eligibility was determined by a multidisciplinary team consisting of radiologists and gynecologists. Clinical outcomes of the treatment were assessed by the Uterine Fibroid Symptoms – Quality of Life (UFS-QoL) questionnaire at baseline and 3, 6 and 12 months post-treatment. The % non-perfused volume (NPV%) was calculated directly after treatment using MRI-images. Treatment outcome is usually considered clinically relevant when the NPV% is >70% and/or a difference between baseline and follow-up of at least 10 points on the 0-100 scale of the UFS-QoL is found. In addition, treatment failures, adverse events and reinterventions were collected.

Results

76 MR-HIFU treatments were performed on the V1 Sonalleve (Profound Medical Inc.) system between June 2016 and January 2019. Overall, 25%(19/76) of treatments were considered a failed treatment. Of these failed treatments, 68%(13/19) were a result of problems during treatment, which could be resolved while gaining more experience. The solutions included better manipulation techniques to overcome obstruction of the sonication pathway by surrounding organs, breathing instructions and sedation protocol alterations. 92%(12/13) of these failures occurred in the first 25 treatments, which we considered our learning curve. After the first 25 treatments, another type of failure appeared because when gaining experience, inclusion criteria were broadened. As a result of this overconfidence in treatment capability, additional failures appeared (6/19). The median NPV% of the first 25 treatments was 29,5%[range 0-99], whereas the median NPV% of the remaining treatments was 74,7%[0-120] directly after treatment. At 6 months follow-up both the decrease of symptoms and improvement of quality of life were lower in the first 25 treatments compared to the subsequent 51 treatments (Δ -16,6 vs. Δ -17,8 and Δ 19,5 vs. Δ 24,9). Three adverse events took place: two urinary tract infections and one third degree skin burn. The reintervention rate dropped after the learning curve from 52,0%(13/25) to 17,6%(9/51).

Conclusions

Clinically and technically successful MR-HIFU treatment of patients with uterine fibroids can be reached after 25 treatments. Once competence is achieved, caution should be taken in order to prevent failures as a result of overconfidence.