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ABSTRACTS

Videos

Video Session 1_Case Reports

V1_1

Abdominal pregnancy by laparoscopy

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Abdominal pregnancy is an entity often associated with catastrophic results. Its presentation carries a high risk to the mother and fetus and represents a management challenge. Low incidence of the disease renders impossible standardize management and compare results. Laparoscopic management is limited to isolated case reports. We report the case of a 20-year-old woman who complained of abdominal pain and vaginal bleeding. She was diagnosed as having a 13 weeks pregnancy with a live fetus and the placenta attached to the back wall of the uterus. She was referred to our center (Clínica del Prado, Medellín, Colombia), arriving in stable conditions and admitted to high dependency Unit because of continuous bleeding. A second ultrasound showed a death fetus and blood in pelvic cavity. Laparoscopy was carried and a gestational sac located at the bottom of posterior sac displacing the uterus anteriorly was found. The placenta was attached to the back of the uterus to the appendix and to the right fornix and 300 cc of free blood were also seen. Resection of abdominal pregnancy was done with bipolar energy and scissors, excising both tube and ovary. Fetus and placenta were placed in endobag and removed through a posterior culdotomy. The patient was discharged the day after surgery uneventfully. The laparoscopic approach is possible and should be considered as an alternative for the management of abdominal pregnancy in its early stages, with the benefits of minimal invasion.
Key-words: abdominal pregnancy, laparoscopy, posterior culdotomy.

V1_2

Caesarean scar dehiscence managed by combination of laparoscopic and transvaginal approach

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We present a case of 33 year old woman who underwent uncomplicated Caesarean delivery and presented 6 years later with uterine scar dehiscence confirmed by 3D ultrasound. Ultrasound examination showed defect encompassing the whole region of hysterotomy with above located capsula 36×15×28 mm, filled with menstrual blood. We performed laparoscopy and found defect of the myometrium 20×20 mm in the isthmicocervical region, covered with a pouch of insufficient tissue. We dilated the cervix and inserted 8 mm suction curette and we disected the pouch and entered the uterine cavity. We switched to vaginal approach which seemed to grant better access, we disected the vesicouterine excavation, excided the tissue of the pouch and performed suture of the uterine wall. Laparoscopic look showed good effect with only minor sights of bleeding stopped with bipolar coagulation. Hysteroscopy also showed intact uterine wall. Histological examination of the excided material confirmed presence of fibrous tissue and endometrial tissue from the area of junction of uterine isthmus and cervix. Ultrasound examination 3 days after the procedure showed intact uterine wall, thickness in the area of the suture was 14 mm. Patient was released in good clinical condition.
Key-words: dehiscence, caesarean section, laparoscopy.

V1_3

Prophylactic laparoscopic ligation of hypogastric arteries in 2 cases of retained placenta with invasive placentation

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We present two cases in which delayed laparoscopic ligation of hypogastric arteries was used to diminish uterine perfusion and enabled to perform uterine cavity evacuation for retained placental tissue. First patient was a 35 year old primipara with history of several unsuccessful IVF cycles, ectopic pregnancy and induced abortion in 22nd gestational week. She delivered spontaneously, immediately postpartum we suspected retained placental tissue and performed evacuation of uterine cavity. Total blood loss was 1000 ml, Hb level was 56 g/l and she received several blood transfusions. Ultrasound examination 3 days postpartum showed retained placental tissue, 58×48×62 mm in size, it invaded myometrium and had substantial blood perfusion. Patient remained stable, 7 days postpartum laparoscopy was performed with bilateral ligation of hypogastric arteries, followed by evacuation of uterine cavity. The perioperative blood loss was minimal. Patient was released in good clinical condition. Second patient was a 33 year old primipara, she delivered in regional hospital with substantial PPH and 2 consecutive evacuations of uterine cavity for suspected retained placental tissue. Ultrasound examination showed placental tissue inside the cavity and thinning of uterine wall. We performed laparoscopic ligation of hypogastric arteries and evacuated placental tissue by ultrasound guided curettage. Patient remained stable and was released 3 days after the procedure.
Key-words: hypogastric artery ligation, retained placenta.

V1_4

Fibrous solitary tumor of the great omentum

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The fibrous solitary tumor of the great omentum is rare. This video shows the find and the laparoscopic management of this tumor. This big pelvic intraperitonal lesion was looking like a solid ovarian tumor

at the imaging. It was hypervascularized with a big pedicle coming from the great omentum. It was also vascularized by a rich aberrant neovascularization coming through adhesions between the tumor and the pelvic side walls. These tumors can be considered as low grade sarcoma, they have an undeterminated prognosis.
Key-words: laparoscopy, solitary fibrous tumor, great omentum.

V1_5

Hysteroscopic treatment of cervical pregnancy resulting from intrauterine insemination. Case report
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Introduction: Cervical pregnancy is a rare condition representing <1 percent of all ectopic gestations. We present you the case of a thirty-two- year-old patient who had the history of primary infertility and underwent intrauterine insemination (IUI) in a stimulated cycle with low doses of gonadotrophins. The pregnancy was verified by the serum β-hCG levels which were 4 320 mIU/mL and by the ultrasonographic devices which confirmed the presence of a gestational sac with a six-week-old viable embryo that was implanted in cervix. Positive fetal heart action was registered. In her history of infertility the same patient went through the procedure of transvaginal endoscopy three months before. At that time she had multiple polipectiomies and more than 10 polyps were removed from the uterine cavum and the transvaginal laparoscopy showed normal findings. After those procedures she started the treatment with contraceptive pills in order to avoid new polyps.
Material & Methods: Transvaginal ultrasonographic devices are used adequately for precise diagnosis. Hysteroscopy was performed under generel intravenous anesthesia using a continuous flow 5,2 mm and rod lens operative office Bettocchi hysteroscope (Karl Storz, Tuttlingen, Germany). Distension of the uterine cavity was obtained by using normal saline solution and the intrauterine pressure was automatically controlled by an electronic irrigation and suction device (Endomat, Karl Storz, Tuttlingen, Germany). The intrauterine pressure was set at 120 mm Hg, being the balance of an irrigation flow around 120 mL/minute and a vacuum of 0.2 bars.
Results: For resection of the cervical pregnancy at its base we used the Versapoint Bipolar Electrosurgical System (Gynecare. Ethicon) and a 5Fr bipolar Twizzle bipolar electrode. No bleeding was observed during the procedure. For removing the gestational sac in toto we used a crocodile biopsy forceps and we sent a sample for histological verification. The histological findings confirmed the diagnosis of the the cervical pregnancy. One month later we performed a second-look hysteroscopy and saw the normal endometrium of the cavity and cervix. Also, the serum β-hCG levels were checked and they showed negative value after one month.
Discussion: Minimally invasive hysteroscopic resection of the ectopic gestational mass in the cervix without complications appears to be an alternative therapeutic approach with minimal morbidity and preservation of future fertility.
Key-words: cervical pregnancy, hysteroscopic treatment, intrauterine insemination.

V1_6

Robotic-assisted anterior pelvic excentration for adenocarcinoma of the urinary bladder with uterine metastasis
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A 63-year-old woman was admitted to our hospital and whose chief complaints were dysuria and severe hematuria. The results of physical examination, tissue biopsy and imaging studies suggested adenocarcinoma of the urinary bladder with uterine metastasis. Robotic-assisted anterior pelvic excentration was performed. At 30 months after the operation, the patient is tolerated well. This procedure is a safe and effective way to relieve urinary symptoms and no adverse effects have been observed.
Key-words: robotic surgery, pelvic exenteration, adenocarcinoma.

V1_7

Laparoscopic management of recurrent mucinous cystadenoma of ovary in second trimester of two subsequent pregnancies
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In this video presentation, we present laparoscopic management of a large recurrent mucinous cystadenoma in the ovarian remnant during the second trimester of pregnancy. The patient previously had laparoscopic left oophorectomy for large mucinous cystadenoma with suspicious area in the second trimester of pregnancy. The recurrence of mucinous ovarian tumour is rare after oophorectomy. Although 5 cases of recurrence after cystectomy have been reported. Laparoscopic surgery during pregnancy has been reported to be safe. *Case report*: Mrs CE presented at 18 weeks pregnancy with 15×14 cm cyst on ultrasound. Laparoscopic left oophorectomy was performed (because of a suspicious area) after aspirating 1500 ml mucinous fluid. She subsequently delivered at term. Eighteen months later she presented with 12×10 cm ovarian cyst which was aspirated under ultrasound guidance. One year later she presented with 17 weeks pregnancy with 20×10 cm cyst on the left side of the uterus. At laparoscopy, there was large cyst originating from the left adnexa, possibly from the remains of the left ovary. Mucinous fluid (2500 ml) was aspirated and the cyst was excised completely. Right ovary was normal. Her subsequent antenatal care has been uneventful. The histology confirmed mucinous cystadenoma on both occasions. The video presentation will demonstrate that 20 cm ovarian cyst in pregnancy can be approached with laparoscope safely in subsequent pregnancies even in the second trimester. The pedicle of the left oophorectomy at first laparoscopy can be clearly seen in the video to accomplish oophorectomy with EndoGIA stapler. However, subsequent laparoscopy in next pregnancy demonstrated recurrent ovarian cyst originating from the same pedicle.
Key-words: recurrent mucinous cystadenoma of ovary, second trimester of pregnancy, operative laparoscopy.

V1_8

Tuberculosis pelvica

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Thirty four year old patient, without any prior pregnancies, who is being taken care of in the Clinica del Country in Bogota for symptoms of pain on the pelvis of a 4 year evolution, has had history of laparoscopy three years ago with a diagnostic of endometriosis.
Transvaginal ultrasound was performed, it reads normal, the patient has no known history of any pathologies, has no priors of much importance and the physical exam was normal, the patient went through surgery in July of 2009. In the hysteroscopy where the uterine cavity in a normal state, and in the laparoscopy there was evidence of a severe adherencial process in the perihepatic region, and bilateral tubal obstruction. Where a fimbrial *dilatation was performed* on the left side with an adequate permeable showed with *methylene blue*, and on the right fallopian tube there is evidence of process of distal tubal adhesion, when trying to dilatate there is a yellowish fibrotic tissue found, there was samples taken to the pathology lab and the results was a chronic Granulomatous Inflammation with *caseation* necrosis. The patient went through PCR at the biopsy of the tube with a results positive for MYCOBACTERIUM TUBERCULOSIS.
She was evaluated in conjunction with infectious diseases and pneumology, a tuberculin test is performed the result was positive, HIV negative, and nutritional state is normal, the patient was no known history of pulmonary symptoms. The patients started to get treated with Isoniazid Rifampicin, Ethambutol and Pyrazinamide, for a period of 6 months. Is valued by other specialties, the patient shows an excellent tolerance from the treatments.
7 months later Hysteroscopy was performed to take an endometrial biopsy, it was found normal. And, the samples were taken to the lab of the National Institute of Health and to anatomy pathology, and the results were also normal. There is no evidence of infection, and right now there is a progress towards the patient is feeling better from the pelvis pains. A hysteron-salpingography was performed for control purposes it showed an adequate uterine cavity, and the left fallopian tube was permeable and it looked good when the medium contrast runs through. At the moment the patient is in a planning to get impregnated.

Video Session 4_Endometriosis: Surgery

V4_1

Laparoscopic excision of sacrouterine ligament and posterior vaginal fornix in the treatment of patients with deep endometriosis without aggressive rectum involvement: standardization of surgical technique and 3 years follow-up

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Endometriosis is one of the most common gynecologic disorders and is found in about 70% of patients with pelvic pain. Deep endometriosis of Cul-de-sac is an important gynecological condition because this condition is closely related to severe pelvic pain. Complete excision of the endometriotic tissue provides the best long-term results in terms of recurrence, pain relief, and infertility. Deep infiltrating endometriosis is less frequent than peritoneal endometriosis, it can cause hyperalgesia. Although the feasibility and effectiveness of laparoscopic colorectal resection for deep infiltrating endometriosis was reported, Darai observed rectovaginal fistulae in 10.3% of postoperative cases. We perform partial or segmental colorectal resection only for the severe types of endometriosis that include intestinal and colorectal symptoms such as rectorrhagia, melena, and ileus. In the rectovaginal endometriosis, if the rectum is only superficially infiltrated, surgical intervention of our institute is laparoscopic excision of bilateral sacrouterine ligament, posterior vaginal fornix, with or without shaving of rectum. After we standardized the surgical technique, visual analog scale(VAS) and verbal rating scale(VRS) for several gynecologic symptoms were recorded for three years. A significant improvement in dysmenorrhoea ($p<0.01$) and dyspareuna($p<0.01$) was observed. The recurrence of dysmenorrhea was related with adenomyosis.
Key-words: endometoriosis, deep endometriosis, pelvic pain.

V4_2

Treatment of deep endometriosis—our surgical strategy

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S. Barata (France)

Deep endometriosis is characterized by infiltrated lesions in the retroperitoneal space or in pelvic organs wall. Usually it gives anatomical distortion of the pelvis, retraction and adhesions. Surgical treatment of deep endometriosis is not an easy procedure and should be performed by surgeons which know all the disease and how to deal with it. For a good surgical treatment of deep endometriosis, we think that we must have a surgical strategy in order to remove all the endometriotic lesions as possible to obtain the relief of the symptoms. In this video we show our surgical strategy for the treatment of deep endometriosis. We present all our surgical steps and the reasons of each one.
Key-words: deep endometriosis, surgical strategy.

V4_3

Surgical treatment of bladder and rectosigmoid endometriosis

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Introduction: Occurrence of endometriosis of the rectosigmoid and bladder is uncommon. Laparoscopic cystoscopic approach presents one way to treat the disease.

Materials and Methods: A young patient was admitted in our department with dysmenorrhoe. She had two laparoscopic procedures with GnRH-treatment. Pretreatment mri shown an involvement of bladder and rectosigmoid. The cystoscopy and rectoscopy were negative.
Results: 21.10.2009 laparoscopic adhesiolysis with rectosigmoidre-section were performed. The anastomosis was prepared through the vagina in a hybrid notes technik, the final step laparoscopically. A bladder nodule was resected under cystoscopic view. The specimen margins were free.
Discussion: The laparoscopic cystoscopic approach is a usefull tool to treatment a multi organ involvement of endometrisois in the pelvis.
Key-words: endometriosis of bladder and rectosigmoid, laparoscopic cystoscopic approach, hybrid NOTES technique.

V4_4

A new surgical technique of excision of a rectovaginal endometriotic nodule

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This is a video presentation, demonstrating a new technique of excising a rectovaginal nodule that is palpable or even visible vaginally. After excising the pelvic peritoneum over the ovarian fossae on both sides according to Redwine technique aiming to leave the disease on the side of the rectum, the uterosacral ligaments are incised and the posterior vaginal wall is entered above the nodule. Then the incision in the vagina is continued from each side towards the midline at a level below the nodule, thus leaving the vaginal nodule attached to the rectum. The rectovaginal septum (RVS) is then easily opened at a level below the disease. This allow complete excision of the disease and mobilization of the anterior rectal wall. Finally, the vagina is closed with continuous or interrupted polyglactin suture vaginally or laparoscopically. The operation is then continued routinely with either shaving, disc excision or a small segmental resection of the rectum. This method we believe allows better visualization of the pathology, ensures complete excision and facilitates the opening of the RVS.
Key-words: rectovaginal endometriosis, vaginal nodule, surgical excision.

V4_5

Systematic anatomic approach to the obliterated *cul de sac* and rectovaginal endometriosis

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Summary: The Objective of this video is to present a systematic and anatomic approach to the surgical approach to the obliterated *cul de sac* and rectovaginal endometriosis. We will present a brief overview of the pathologic progression of endometriosis and review the avascular spaces and their relevance during the systematic dissection of the obliterated cul de sac and rectovaginal endometriosis.
Introduction: The presence of an obliterated cul de sac and rectovaginal endometriosis and the resulting alteration of anatomic planes results in some of the most challenging cases that many gynecologist encounter. A detailed understanding of pelvic anatomy and surgical fundamentals are crucial for the successful surgical treatment of these pathologies. This video will present a review of the relevant pelvic anatomy and a systematic approach to dissection of the obliterated cul de sac and the excision of rectovaginal endometriosis.
Materials and Methods: We have divided our systematic approach to the surgical dissection into four parts which are ureterolysis, dissection of the rectovaginal septum, excision of the nodule, and reconstruction.
Results: The videos of three surgical cases will be reviewed in this video which will highlight the pathologic progression of the disease, the dissection of the obliterated cul de sac and the excision of rectovaginal endometriosis.
Discussion: We feel that by following this systematic and anatomic approach to the laparoscopic approach to the obliterated cul de sac and rectovaginal endometriosis allows for more effective and efficient surgical treatment of the disease.
Key-words: endometrisosis, obliterated cul de sac, anatomy

V4_6

Laparoscopic wedge resection of adenomyosis

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Introduction: adenomyosis is a smooth muscle cells and endometriosic tissue, typically originating within the uterus.
Methods: These patients usually present with monthly pain due to embedded blood in the adenomyotic cyst.
Results: Diagnosis is established on transvaginal ultrasound and this also will guide you choosing the correct management approach. This video shows ultrasound pictures MRI and present laparoscopic wedge resection.
Conclusion: Adenomyomis uteri is rare, however ultrasound detect the clinical situation and guide the endoscopic approach.
Key-words: adenomyosis, laparoscopy, pain.

V4_7

Infiltrative endometriosis of the right pelvic sciatic nerve

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The location of endometriosis at the sciatic nerve is one the rarest topographic variations of this condition. We describe the case of a 29-year-old nulligravid woman who presented to the gynecological department at Hospital Arnau de Vilanova (Valencia, Spain) with a six-month history of progressive, painful right foot drop with cyclical sciatica. The MRI showed an hyperintense cystic 2,5 cm lesion over the right sciatic nerve at the level of the sciatic spine. Electromyography showed partial denervation of the muscles dependant of the sciatic innervation. The patient subsequently received monthly leuprolide acetate over 12 months, obtaining a partial reduction of symptoms that worsened progresively with recurrence of painful foot drop. After discussing risks and benefits of surgical laparoscopic approach a laparoscopic neurolysis was planned. Wide opening of the right retroperitoneal space was performed in order to locate the anatomical vascular and neural landmarks. The sciatic nerve was dissected from the entrance to the pelvis to the sciatic spine, where a cystic endometriotic lesion was encountered and a neurolysis was therefore performed. The patient postoperatory period was uneventful and the motor

function was progresively recovered with a partial sensitive dysfunction at the proximal and medial area of the right leg.
Key-words: sciatic nerve endometriosis, laparoscopic neurolysis.

V4_8

Pathologic change of adenomyosis of uterus by the levonorgestrel-releasing intrauterine system (LNG-IUS)

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The use of the levonorgestrel-releasing intrauterine system (LNG-IUS) has gained as a new drug delivery system (DDS) of contraception. It has also been used to control chronic pelvic pain in patients with adenomyosis. However, it is difficult to observe the change of adenomyotic lesions. In addition, the uterine volume wasn't showed remarkable change in MRI. The aim of our study was to observe the pathologic change of adenomyotic lesions and endometrium, during 9–12 months of treatment. Methods: We performed total laparoscopic hysterectomy (TLH) to 2 women with recurrent menorrhagia associated with adenomyosis diagnosed at MRI. They had used the LNG-IUS for 9 to 12 months but menorrhagia was not improved. We examined the pathologic change of adenomyosis and endometrium by smooth muscle stain and Hematoxylin eosin stain. And we compared the change of adenomyotic lesion by LNG-IUS to by GN-RH agonist. Results: Endometrium of a LNG-IUS user changed very thinly, and functional layer was completely missing, and only basal layer was kept. As for the adenomyotic lesion, endosporium glandula disappeared, and remarkable invasion of eosinophil was observed. This change was not observed for an adenomyotic lesion of a Gn-RH agonist user. Conclusion: the treatment with LNG-IUS may do direct action for adenomyosis. However when menorrhagia is not improved, surgical treatment should be choosed.
Key-words: the levonorgestrel-releasing intrauterine system (LNG-IUS), total laparoscopic hysterectomy (TLH), pathologic change.

V4_9

A new technique to preserve the uterus—"Convex lens resection" for adenomyotic cysts

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Background: Cystic adenomyosis is an extremely rare form of adenomyosis, particularly found in the juvenile population. However, it also occurs in young women. Patients suffer from severe menorrhalgia and resist pharmacotherapy. We think the most effective therapy is surgical resection of cystic adenomyosis, however some surgical techniques are necessary to preserve fertility and avoids the risk of rupture of the uterus at delivery. We have devised a new technique called "convex lens resection". We will present an operative video of 2 cases.
Methods: We have performed "convex lens resection" on seven women suffering from cystic adenomyosis who wanted to preserve their fertility (29.9±7.0 ys). In "convex lens resection" we excise the focal lesion in a convex lens shape by laparoscopic surgery. We confirmed the lesion to be cystic adenomyosis by pathology and examined the marginal pathologic evaluation. We compared subjective preoperative pain to postoperative pain (after 6 months) by VAS (Visual analogue scale).
Results: In all 7 cases, there were no postoperative complications and the pathological margins were negative. According to the VAS data, all patients immediately recorded less pain after surgery and no recurrent lesions found in postoperative MRI examinations.
Conclusion: "Convex lens resection" is very effective for adenomyotic cysts. This technique allows for wide abscission of the focal lesion and excellent suture-ability for a more secure and sound result.
Key-words: cystic adenomyosis, adenomyotic cyst, convex lens resection.

V4_10

Full thickness excision of mid and low rectal endometriosis using the transanal STAR stapler device

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We report the surgical procedure usually performed by our team in the conservative management of mid and low rectal endometriosis. In our department, rectal encometriosis are mainly managed by shaving and full thickness excision (80% of cases) and less frequently by colorectal resection (20%), thus we are concerned by the safety and continuous improvement of surgical procedures allowing rectum conservation. This is the case of a 23 year-old nullipara, presenting with deep posterior endometriosis nodule infiltrating the muscular layer of the mid rectum, located at 6 cm above the dentate line and measuring 3 cm in size. The procedure starts by the dissection and identification of lateral and inferior limits of the rectal nodule, until the elevator muscles of the rectum, toward the rectovaginal space under the nodule. Then, the rectal shaving is carried out and the main part of the nodule is separated from the rectum. Deep endometriosis nodule is removed along with the adjacent infiltrated vaginal fornix and uterosacral ligaments, then vagina is sutured. A transanal speculum is inserted by the digestive surgeon, allowing the exposure of the inner wall of the rectum. The limits of the rectal site of endometriosis are laparoscopically located by two stitches and the digestive surgeon performs intrarectal invagination of the site to be excised. The transanal STAR stapler device safely allows both excision and suture of anterior rectal wall surrounding the nodule site. Epiploplasty is used to separate vaginal and rectal wounds and a defunctioning ileostomy is performed to protect low rectal suture. In our experience, bowel functional outcomes following full thickness rectal excision are excellent, consequently we believe that this technique may interest those surgeons who do not intend systematically performing colorectal resection in deep infiltrating mid and low rectal endometriosis.
Key-words: rectal endometriosis, full thickness esxcision, disc excision

V4_11

Vaporisation of ovarian endometrioma using plasma energy

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We present the technique of laparoscopic vaporization of ovarian endometriomas using plasma energy, which is routinely performed in

our department in women seeking to get pregnant. This surgical procedure takes into account physiopathologic theories of the development of ovarian endometriomas, thus the vaporization of inner wall of ovarian endometriomas is performed through a small area of original invagination of the cyst, free of ovarian tissue. The point of cyst invagination is usually revealed by lyses of adhesions between the ovary and the adjacent broad ligament, leading to the characteristic "chocolate fluid" evacuating from the cyst. Once the cyst is free from adhesions, the surgeon attempts to turn it completely inside out via the site of its original invagination, of diameter averaging 1 to 2 cm. Vaporisation of the inner surface of the cyst is then performed using plasma energy in coagulation mode set at 40, at a distance averaging 5 mm from the tip of the handpiece, and with an exposure time limited to 1 to 2 seconds on each site. Care should be taken not to leave any untreated sites and to vaporise around the edges of the invagination site and the corresponding peritoneal implants on the adjacent broad ligament. Where cyst inversion is not feasible, the surgeon progressively exposed the cyst interior in order to guide the plasma beam at an angle perpendicular to the inner surface of the cyst. In selected cases, where cyst inversion is feasible, endometriomas vaporisation can be performed using a single port access.

Key-words: ovarian endometrioma, vaporization, plasma energy.

V4_12

Odd presentation of endometriosis: case report

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Xanthogranuloma peritonealis is a very rare presentation of peritoneal endometriosis. A case has been diagnosed by laparoscopy and histological examination in a 23 y. old young lady. She presented as a case of ascitis of unknown origin and proved later on to be endometriosis.

Key-words: endometriosis, xanthogranuoloma, ascitis.

V4_13

Intestinal resection in a patient with deeply infiltrating endometriosis of the digestive tract. Case report

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Introduction: The endometriosis is classified in three types: superficial endometriosis, ovarian endometrioma and deeply infiltrating endometriosis (DIE). In 1991 Koninckx reported that DIE is histologically defined as endometriotic lessions extend more than 5 mm underneath the peritoneum. In 2006 Chapron reported a study of 425 patients with DIE and 65.7% of lessions were located in the rectosigmoid junction and rectum.

Material and Methods: We present the case of a 36 years old female who was evaluated in the laparoscopy unit for severe dismenorrhea, rectal bleeding, cyclic and concomitant with menstruations and pain with defecation and expulsion of increasingly thinner stools, also primary infetility. The gynecological examination showed no evidence of vaginal endometriosic lession, at the rectovaginal examination there was a 3-cm painful mass, located above the cervix at the level of the rectosigmoid junction. The MRI showed a 4 cm nodule that retract rectum and no signs of adenomyosis. The intestinal biopsy by colonoscopy reported intestinal endometriosis. We made laparoscopic dissection and resection of 7 cm of sigmoid colon. Extension of the incision of 10 mm trocar in the left lower quadrant for intestinal auto suture placement and finally laparoscopic intestinal anastomosis.. Histopathology study reported intestinal endometriosis including submucosa.

Results: The patient was hospitalized 9 days, tolerance began 5 days after surgery, at the discharge she was afebrile, with normal vital signs, normal intestinal function. In the one month follow up visit she refered constipation. The control colonoscopy and manometry showed normal anastomosis and normal intestinal function. The patient improved with dietary measures. At 2 months she presented spontaneous pregnancy.

Conclusion: Laparoscopy is being increasingly chosen to excise deep vaginal and rectal endometriotic lesions. Rectal endometriosis can be dealt with using three different modalities: superficial thickness excision, fullthickness discoid resection/anterior rectal wall excision, and segmental colorectal resection. The support of an experienced colorectal surgeon increases the possibility of radical excision of deep endometriotic lesions, reducing at the same time the risk of major intra and postoperative complications.

Key-words: intestinal endometriosis, intestinal resection, deeply infiltrating endometriosis.

V4_14

Laparoscopic excision of a deep uterosacral ligament nodule and total peritonectomy of the pouch of Douglas and ovarian fossae

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Summary: Laparoscopic complete excision of the pelvic peritoneum is sometimes necessary to achieve symptom relief in cases with deep endometriosis.

Introduction: Deeply infiltrating endometriosis (DIE) frequently affects the peritoneum of the ovarian fossae and Pouch of Douglas (POD), resulting in fibrosis and severe distortion of pelvic anatomy. Laparoscopy has become the method of choice to treat such cases due to its andvantages of magnification and careful hemostasis.

Materials and Methods: We present the case o f a 36 year-old woman, who presented with symptoms of severe dyspareunia and dysmenorrhea who had bilateral adnexal cystic enlargement and complete obliteration of the POD.

Results: The patient was treated with laparoscopic excision of a deep uterosacral ligament nodule and total peritonectomy of the pouch of Douglas and ovarian fossae. One year after surgery she reported complete resolution of deep dyspareynia and considerable improvement of her dysmenorrhea.

Discussion: In cases with DIE it is frequently necessary to extensively excise the pelvic peritoneum that is affected in order achieve improvement of pain symptoms. Such operations require a high level of laparoscopic skills.

Key-words: deep endometriosis, infiltrating, laparoscopy.

Video Session 5_Hysterectomy

V5_1

The hybrid NOTES hysterectomy

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Introduction: Hysterectomy is traditionally performed vaginally or abdominally. The vaginal approach is the least invasive but has limitations. Laparoscopic four-puncture technique increases applicability but also the number of wounds. To reduce the size and number of ports we have developed a minimal abdominal access hysterectomy using transvaginal laparoscopy; our hybrid NOTES hysterectomy.
Materials and Methods: 2 small ports (5 mm umbilical trocar and 3 mm left lower quadrant trocar) were placed. A 5 mm distal-chip flexible videoendoscope was introduced into the vaginal-port and flexed 180 degrees. The camera image is reversed so an image converter was used to obtain an image similar to umbilical laparoscopy. The adnexal ligament, uterine tube and round ligament are coagulated and transected. The cardinal ligament was then suture ligated and then transected medial to the suture, the same as in our standard TLH technique. After the specimen was retrieved vaginally, the vaginal cuff was sutured intracoropreally via transvaginal laparoscopy.
Results: No complications were recorded. All patients resumed a regular diet the day after surgery.
Discussion: The advantage of introducing hybrid NOTES into hysterectomy is the possible expandability, however a disadvantage of this procedure is that Douglas Pouch obliteration cases cannot undergo the hybrid NOTES hysterectomy. In any case, the hybrid NOTES hysterectomy is a new option for patients who desire an almost scarless procedure.
Key-words: hybrid NOTES, total laparoscopic hysterectomy, transvaginal laparoscopy.

V5_2

Laparoscopic hysterectomy by use of harmonic ace

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Laparoscopic hysterectomy is a minimally invasive procedure, but nevertheless performed in only 6 percent of all patiens undergoing hysterectomy. In Roskilde, this percentage is significantly higher. We perform approximately 100 laparoscopic hysterectomies per year, constituting one third of all hysterectomies in Roskilde and 39 percent of all laparoscopic hysterectomies in Denmark. The procedure involves a complete laparoscopic separation of the uterus from its vessel and ligaments and removal of the uterus through the vaginal route. DHD data from the last 2 years show that 90 percent of the uteri had a weight of less than 300 gram. Bleeding complications were rare, ranging between 3 and 6 percent. Only 1 percent underwent a reoperation. Most patients were dismissed either the same day or the day after the operation. In recognition of this we have initiated a project where laparoscopic hysterectomy is performed on an outpatient basis. Prelliminary data suggest that outpatient management is possible without loss of patient satisfaction or clinical outcome. In conclusion, our experiences show that laparoscopic hysterectomy is a safe procedure with few complications and rapid postoperative recovery.
Key-words: laparoscopic hysterectomy, harmonic ace, outpatient management.

V5_3

Laparoscopic supracervical hysterectomy without transabdominal morcellation

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Supracervical hysterectomy is less invasive in comparison with uterus exterpation. The least invasive laparoscopic version of this operation usually requires the use of morcellation. In order to reduce the cost of the operation we used surgical technique without the use of electromechanical morcellator. We have performed 25 laparoscopic supracervical hysterectomies. In 16 cases we performed laparoscopic mobilization of the uterus to the ascending branch of a. uterina, posterior colpotomy, then uterine body was mobilized through colpotomic wound. In 12 patients with myomas more than 5 cm in diameter we performed hysterotomy for fragmentation. In 7 cases, hysterotomy was performed laparoscopically, in 5 - transvaginaly. Closure of the stump in 11 cases performed laparoscopically, in 5 cases through vagina. In 9 cases full laparoscopic supracervical hysterectomy with suturing of the stump was performed. Macropreparations evacuation was done through colpotomic cut. Duration of surgery was 55±11 (40–91) minutes. We did not observed any serious complications during hospital stay or follow-up. Absence of electromechanical morcellator should not deter surgeons from performing laparoscopic supracervical hysterectomy if the patient wants to preserve the cervix.
Key-words: supracervical hysterectomy, morcellation.

V5_4

A technique for delivering the uterus during Doderlein laparoscopically assisted vaginal hysterectomy

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Background: One of the recognised risks of laparoscopically assisted vaginal hysterectomy (LAVH) is damage to the ureter, particularly when the uterine vessels are being taken. One strategy to reduce the incidence of this complication is use the Doderlein approach, as the uterine vessels are controlled vaginally rather than laparoscopically. Arguably the most difficult part of this technique is delivery of the uterus through the anterior colpotomy during the vaginal phase. We describe a simple technique which greatly facilitates this manoeuvre.
Video Presentation: The hysterectomy starts in the traditional manner, and the upper pedicles are taken laparoscopically. We routinely open the uterovesical fold of peritoneum laparoscopically. When the laparoscopic dissection is complete, we insert a prolene suture mounted on a large curved needle, and pass it through the

uterine fundus, taking a large a bite as possible. The needle is cut off, and the two ends of the suture tied together to produce a loop which is placed back into the peritoneal cavity over the anterior surface of the uterus. The cervix is infiltrated and a semicircular incision is made at the cervico-vaginal junction anteriorly and the bladder dissected cephalad. The uterine suture is brought out, and the uterine body is pulled through the vaginal incision. After delivering the uterus, the operation is continued with ligation of the uterine vessels, division of the uterosacral and cardinal ligaments, and finally the posterior vagina. The vaginal vault is closed at the end of surgery in the usual fashion.
Key-words: uterine suture, LAVH, colpotomy.

Video Session 8_Innovation in Surgery

V8_1

Single incision hysterectomy: European experience
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The efforts in laparoscopic surgery, started by surgeons in '70 (1), led to the improvement of the technology and to the extension of the same one to almost of the surgical fields in gynecology, from the functional one to no malignant pathology until the malignant patology. At present the gynecological percentage of interventions performed by laparoscopic is almost around 70%. The improvement of the laparoscopic surgery carried us in the years 2000 to the develop the robot, that recent studies would seem to retain more suitable to the oncologic surgery than to the functional surgery), as the times of installation, are superior to the duration of some interventions in traditional laparoscopic surgery for benign pathologies. But for sure the development and the enhancement of the robotic surgery, will give it back also to the most simple procedures of gynecologic surgery. It still remains to investigate the advantages for the patient of the robotic surgery, we know that the blood losses are inferior and that the surgery nerve sparing is given back optimal by this technology. It is proposed an enhancement of the laparoscopic technique to decrease symptoms, hospitalization and administration of drugs during and after the surgery. In our service of surgery hospital Layne of Mont Marsan in France, like first national experience we experimented, and that we now use for almost whole patients, the single incision laparoscopic surgery (SILS) in totally hysterectomy. This technology taken from the United States and proposed at first for simple procedures, has been analyzed and crossed in gynecology for the conventional surgery of the ovary and in general surgery for the cholecystectomy. From June 2009 to February were carried out 83 laparoscopic hysterectomies; group A 36 laparoscopic hysterectomies with classic procedures, group B 40 laparoscopic hysterectomies by SILS with device SILS of "Covidien". The aim of this study was to check if the SILS surgery, technically more' difficult, puts to comparison with the traditional surgery, can bring some benefits to the patient. *Materials and Methods*: From June 2009 to today were chosen 83 patients with BMI included between 25 and 36, of age included between 38 and 70 years, with ultrasound measured dimensions of: Length 7 and 16 cm, transversal 3,5 and 6 cm, back to front 2,5 and 5. In 70% of cases the pathology was constituted by uterus fibrosis and bleeding resistant to medical therapy, in 10% of the cases recurrent CIN 3, in 20% of the cases urogenital prolapsus, treated by laparosocpic surgery and vaginal mesch. The classic laparoscopy is been performed according to the typical technology, trocart from 10 mm for the optical road well-known on the umbilical scar, a secondary road from 10 mm in middle suprarapubic region and two maidservant's roads from 5 mm in right and left iliac regions with the aid of the manipulator womb. Hysterectomy performed according to a common technology with the utilization of a pliers "ligasure" from 10 mm. and sutures of vagina for vaginal road sutures of band on the openings from 10 mm and application of naropina on the orifices of the trocar. *Results*: 40 patients of group A, that were candidate to classic laparoscopy, 36 operations were been operated trough laparoscopic surgery, 2 cases were been converted in laparotomic surgery for positive extemporary of suspect macroscopic ovaries, 1 for technical difficulty caused by visceral and perivescical fat, 1 for damage of colic loop that was joined to abdominal wall. The meddle endurance of laparoscopic hysterectomy was been 55 minutes, according to dates reported in literature, from introduction of last trocart to skin closure of last foramen. The endurance of installation of patient was been 20 minutes, 12 minutes for the creation of pneumoperitoneum and the introduction of 4 trocart. The bleeding was been average 130 cc, no intestinal and bladder lesions in group A. The endurance of hospitalization was been 66 hours, with average pain score, calculate with SNV (verbal dial scale), of 7/10 from 12 hours of operation, 5/10 from 24 hours, 5/10 from 36 hours, 4/10 from 48 hours, 3/10 at the discharge from 12 hours of operation, 5/10 from 24 hours, 5/10 from 36 hours, 4/10 from 48 hours. The analgesics used were been: Ketoprofene (during induction) 200 mg, during and post surgery, paracetamol 1 g every 6 hours and elastomeric pump with 300 gamma of tramadolo cloridrate. The post surgery complications were been: hematoma of umbilical incision, that did not request drainage and urinary retention that was been solved after 24 hours. No infections of surgical site and surgical wound. The 43 patients of group B, were been selected and submitted at laparoscopic hysterectomy with monotrocar technique, using SILS trocart provided by "Covidien". 40 operations were started and terminated with this technique. 3 cases were been excluded from group B: 1 was been converted in laparotomic surgery caused by fortuitous comparison of uterine mass classified like rhabdomiosarcoma, 2 cases have request the addiction of another trocart of 5 mm on right or left iliac region, (1 caused by technical difficult of intestinal loops positioning and 1 caused by the technical difficult of bladder suture). The meddle endurance of laparoscopic hysterectomy mono trocart was been 70 minutes, the first operations request more time. For all 36 patients of group B, the laparoscopic approach was been made with umbilical incision of 3 cm (picture 1), 1 open laparoscopy and the introduction of SILS device through curve clamp and the creation of pneumoperitoneum through specific trocart devices. Was been introduced 2 trocart of 5 mm that were enveloped and we have do a sostitution of 10 mm trocart with our trocart of 10 mm with tap used for fume evacuation. We used the optics of 10 mm zero grades and traditional laparoscopic instruments of 5 mm and pliers Ligasure Advance of 5 mm. The hysterectomy was effected with the same technique of group A with manipulator and vaginal suture through vagina. The suture of open laparoscopy, was been effectuated with detached points with thread not resorbable 0" and intradermic on skin with monofilament 3/00 and tissue glue. The endurance of patients installation was been somewhere about 23 minutes, 9 minutes meddle for open laparoscopic and creation of pneumoperitoneum and the introduction of 3 trocart. The bleeding was been average 150 cc, no intestinal lesions in group B and 1 bladder lesion that caused the exclusion from the group. The endurance of

hospitalization was been 42 hours, with average pain score, calculate with SNV (verbal dial scale), of 4/10 from 12 hours of operation, 3/10 from 24 hours, 2/10 from 36 hours, 2/10 at the discharge. The analgesics used were been: paracetamol 1 g every 6 hours and elastomeric pump with 200 gamma of tramadolo cloridrate.. No infections of surgical site and surgical wound after surgery. *Discussion*: The laparoscopy has known from its birth many difficulties and many progresses. It is got through to the hands of surgeons for be accepted for its difficult of learning and sometimes for its prolixity of execution, but it is always gone on and it is improved with the aim to reduce mortality for patients. In this improvement's process, surely we have gratitude to robotic surgery, that seems to be more adapt to oncologic surgery in our discipline. The our pilot experience in France, of using SILS trocart provides by Covidien for hysterectomy operation, brought us to go back compared to robotic surgery for most practical surgery, less health costs and less morbidity for patients. In this study the result is a reduction of 33% of hospitalization with average 66 hours for patients of group A and 42 for patients of group B. The pain score, calculate by SNV scale, was been average 7/10 at 12 hour after surgery for the group A and 4/10 for the group B. We used the traditional instruments of 5 mm to make this surgery less expensive. We have inserted only one trocart of 10 mm in the original kit instead off the original trocart because we needed the gas recirculation caused by fume product by Ligasure Advance. The choose using Ligasure of 5 mm is caused by necessity to have an instrument of 5 mm with parallel grip at the axis with monopolar instrument incorporated with the aim to reduce the time for introduction and stereoscopic positioning of instruments. This technique results more difficult than the classic technique. We report a leaming curve of 4 histerectomy, the principal problem for the surgeon is the instruments proximity, and for the second surgeon to move the camera, in fact the time of first operations are average 90 minutes, from the fifth hysterectomy the endurance become similar to classic laparoscopic surgery. The principal complication was the accidental bladder opening during dissection of bladder-uterine plica. The dissection, that we do in no traumatic way with use of aspirator, is one of the most difficult thing of this technique, caused by high parallelism of strength relative to the axis of dissection. We think that this technique can cause more risk of umbilical hernia, for this reason it is important to do a good suture of band. We have done change of instruments for improve this technique like the trocar and Ligasure of 5 mm with axial grip but we think that can be done another improvement, for example the reduction of trocar 10 mm valves. We don't think that 5 mm optics or 30 grade angle optics, like reported in literature, can be improve this technique. We think that these technique advantages are the reduction of hospitalization time and the reduction of analgesics administration. The effective cost of this technique is 40% more expensive than classic surgery, but considering the costs of medicine and hospitalization the full cost is less than classic surgery. We do not think that the reduction of post-surgery pain is caused only by reduction of surgical incision, we think that the divergent strength on ancillary and suprapubic trocart that we cause during operation can cause the band stretch, that is already stimulated by gas pressure. The mono trocart technique instead do not cause any traction of aponevrotic structure and the result is the less post surgery pain score. We think that this technique can replace the classic laparoscopic surgery in the most part of gynecologic operations of no malignant surgery and in the future it can be used for simple oncologic surgery.

Key-words: Single incision hysterectomy, single trocar gynaecologic surgery, mini invasive surgery

V8_2

Laparoscopic excision of endometriotic nodule of the bladder

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In this video presentation, we demonstrate the technique of laparoscopic excision of endometriotic nodule of bladder which invaded the full thickness of the muscularis without breaching the mucosal layer of the bladder. Careful shaving of the nodule without breaching the mucosa of the bladder is achievable. Endometriosis of the bladder is rare. The patients with bladder endometriosis are more likely to have advanced endometriosis with rectovaginal lesions1–3. *Case report*: A 33 years nulliparous, woman presented with dysuria, suprapubic pain and frequency. She also had complaints of dysmenorrhoea, dyschezia and dyspareunia. Ultrasound and MRI revealed hypoechoic nodule between bladder and uterus which was indenting the bladder. Cystoscopy revealed extravesical lesion pushing into the bladder. At laparoscopy, there was a 3 cm endometriotic nodule with deep scarring in the uretrovasical pouch and advanced deep endometriosis with rectovaginal nodules. Two stage operation was planned. Laparoscopic excision of retroperitoneal endometriosis mass in the Uterovsical pouch (stage 1) and Laparoscopic radical excision of endometriosis, rectal shaving and excision of rectovaginal nodule (stage 2) was performed. At follow-up, she had no urinary symptoms and she made significant improvement in pain scores. The video (stage 1) demonstrate sharp dissection of vesicouterine space with separation of the bladder from the uterus. Bladder nodule of 3 cm was reaching upto the mucosa. Methylene Blue dye in the bladder helped to delineate the musculrais from the bladder mucosa. We will demonstrate excision of the nodule from the muscularis of bladder sparing the unaffected mucosa. The muscularis was then stitched with vicryl 2/0 in two layers.

Key-words: bladder endometriosis, laparoscopy, excision.

V8_3

Transumbilical laparoscopy for gynaecological interventions—current status

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Introduction: Currently, the minimally invasive surgery has imposingly changed the surgical conception. Recent acquisitions in this domain have made it possible to perform gynaecological interventions entirely through umbilical incisions, either through a multi-port (MPUS—multi port umbilical surgery), or through a single-port (OPUS—one port umbilical surgery). The present paper describes our initial experience in the field of transumbilical laparoscopic surgery for gynecological interventions and should prove the possibility of extending it from LASH (laparoscopic supracervical hysterectomy) and LTH (laparoscopic total hysterectomy) to sacral cervicopexy.

Material and Methods: At the beginning, we applied the method mainly for hysterectomies (supracervical or total) and also for the management of adnexal tumors suspected to be benign. During 01.04.2009 and 30.04.2010 we performed 28 laparoscopic hysterectomies through transumbilical endoscopic surgery (TUES), in the Gynecological Department of St. Joseph-Hospital Bremerhaven. There were used 2 new single—port techniques: SILS (Single Incision

Laparoscopic Surgery) in 11 cases and LESS (Laparoscopic Endoscopic Single Site Surgery) in 2 cases. In 15 patients multi-port technique was used. Out of 28 cases 15 LASH (laparoscopic supracervical hysterectomy) were performed, 7 as SILS, 2 as LEES and 6 as MPUS. Currently we are also using the transumbilical sacral cervicopexy method for the treatment of pelvic organ prolapse, and we try to demonstrate the technical feasibility also for this type of intervention.

Results: The average operating-time of the LASH interventions was 111± 24 minutes (minimum 75 min. and maximum 140 min.). The blood loss, defined as the drop of preoperatively hemoglobin to day 1 postoperatively hemoglobin was 1.14±0.85 g/dl. The average weight of the uterus was 108±39 grams (66–190 grams). There have been no intra- or postoperative complications. Compared to LTH (laparoscopic total hysterectomy), the morcellation of the uterus was the most difficult operation-step. For this step, we used the vaginal trocar in 12 cases and the paraombilical trocar in 3 cases.

Conclusions: In conclusion, transumbilical surgery represents a challenging miniinvasive surgical technique, which may offer many advantages over conventional laparoscopy. The results of our study can be added to the current literature, arguing towards the applicability of transumbilical surgery for gynecological interventions. However, further comparative prospective studies are necessary in order to demonstrate the superiority of transumbilical surgery over conventional laparoscopy.

Key-words: MPUS—multi port umbilical surgery, OPUS—one port umbilical surgery, sacral cervicopexy.

Video Session 9_Myomectomy

V9_1

Laparoscopic myomectomy in surgical treatment of uterine myomas: endosuturing techniques

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Objective: Uterine myomas are the most common uterine neoplasm. The traditional conservative method for uterine myomas is the open myomectomy. However, since 1979, laparoscopic surgery has also been proposed to reduce postoperative morbidity. The endosuturing is the most difficult part of the surgery. We would like to present a video with examples of endosuturing techniques and their difficulties.

Materials and Methods: We have revised the surgical videos of 30 women who underwent laparoscopic treatment of uterine myomas during the past two years in our centre. Our suturing technique was a one layer technique for most of the pediculated subserous myomas and a multi-layer technique for all intramural and some of the subserous myomas.

Results: The mean number of excised fibroids per patient ranged 1–3 (mean: 1.5) and the mean size of biggest myoma ranged 20–140 mm (mean: 61 mm). Just in one case of large fibroid, laparoconversion was necessary since laparoscopical suturing was impossible. We had no major complications.

Conclusions: It is important to choose the most adequate myomas surgical approach. The endosuturing is the constraining factor when choosing between laparoscopy and laparotomy. The size, location and number of myomas, as well as the experience of the surgeon, determine the election of the surgical approach since these also determine the difficulty and duration of the endosuturing. In our series, the only case of laparoconversion was due to suturing problems. Laparoscopic myomectomy is a safe and minimally invasive technique for subserous and intramural myomas of average size and few in number. When the surgeon is experienced enough, the risk of surgical complications is low.

Key-words: endosuturing, myomectomy, laparoscopy.

V9_2

Novel instrumentation and minimal abdominal incisions—the new transvaginal laparoscopic myomectomy

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Introduction: Desire for no, or minimal scar surgery promoted endoluminal surgical techniques such as "NOTES". Difficulty in manipulation and immaturity of instrumentation prompted approaches like hybrid NOTES—a combination of transluminal endoscopy and abdominal ports. We have developed a new ultra-minimally invasive myomectomy via transvaginal laparoscopy.

Materials and Methods: Only 2 small ports (5 mm umbilical trocar and 3 mm trocar- left lower quadrant) are placed. A 10 mm distal chip flexible videoendoscope is introduced into the vaginal port and flexed 180 degrees. A similar image to umbilical laparoscopy is obtained with an image converter. The presented case had a 7 cm intramural fibroid. The defect after the removal the fibroid was sutured in three layers intracorporeally. The specimen was retrieved transvaginally by extending the vaginal port site.

Results: No post-operative complications were recorded and all patients could resume a regular diet the day after surgery. Patients had almost no scars after the procedure and recorded les post-operative pain.

Discussion: To move to the next step in minimally invasive surgery we need some kind of breakthrough. Hybrid NOTES techniques represent a step towards the future of ultra-minimally invasive myomectomy.

Key-words: ultra-minimally invasive myomectomy, hybrid NOTES, ransvaginal laparoscopy.

V9_3

How locate and clipping the uterine artery during laparoscopic myomectomy?

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Laparoscopic myomectomy can be a hemorrhagic procedure. The control with transient or definitive clipping of the uterine artery can be realized to limit the operative bleeding. This video shows, through two cases, the technique to locate, dissect and clipping the uterine artery before laparoscopic myomectomy.

Key-words: laparoscopic myomectomy, uterine artery, clipping.

V9_4

Multiple fibroids treated with laparoscopic occlusion and myomectomy

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Introduction: Multiple fibroids in the child bearing age is an challenging clinical situation, and since more women postpone their first pregnancy, gynecologist will see more of these patients.
Methods: In this video I present a patient with more than 20 smaller and bigger fibroid s suffering from pain bleeding and infertility. Together with laparoscopic myomectomy uterine artery occlusion are performed and 3 months later a hysteroscopic myomectomy are performed.
Results: Less peri and postoperative bleeding occurs. The residual fibroid shrinks and they decrease in vascularity. Hysteroscopic myomectomy can be performed after 3 months with less damage to the endometrium.
Conclusion: Multistep approach with laparoscopic uterine artery occlusion combined with myomectomy can be an approach in these difficult patients
Key-words: fibroid, uterine artery, laparoscopy.

V9_5

Laparoscopic myomectomy of cervical fibroid

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Summary: This video demonstrates laparoscopic myomectomy of an 8 cm cervical fibroid on a 46 year old lady with symptoms of voiding difficulties. The procedure was performed without any complications. Blood loss was less than 50 mls and this was aided by the use of Vasopressin.
Introduction: This video shows laparoscopic excision of a large cervical fibroid in a 42 year old patient. *Patient and Methods*: A 42 year lady with two previous normal deliveries presented to us with voiding difficulty and incomplete emptying of bladder. Examination showed a 12 week size fibroid uterus and scan confirmed the fibroid to be in the cervix located subserosally. The size of fibroid was 8× 7.5 cm. She was given 2 doses of GnRh analogues prior to surgery.
Results: Laparoscopy revealed a "cottage loaf " fibroid with the uterus sitting on top of the fibroid. Laparoscopic myomectomy of the cervical fibroid was performed with the use of vasopressin and harmonic scalpel. The morcellated specimen weighed 235 gms. Blood loss was minimal (<50 mls). Patient made an uneventful recovery and was discharged home the next day.
Discussion: About 2% of fibroids occur in the cervical region and most of these arise in the anterior part of the cervix. Surgical stratergy in such cases is important due to relationship of uterine arteries and ureters to the cervix. Vasopressin is used commonly to reduce bleeding along with temporary ligation or clipping of the uterine vessels. In our case the fibroid was centrally located and carefull dissection and retraction of the uterine vessels was performed prior to enucleating the fibroid. We use vasopressin regularly in myomectomies and have found it to be safe. With regards to future pregnancies, Caesarean section is probably safer due to weakening of the isthmic region of cervix. References; 1. Strategy of cervical myomectomy under laparoscopyFertil Steril. 2010 Apr 6. [Epub ahead of print] Chang WC, Chen SY, Huang SC, Chang DY, Chou LY, Sheu BC.
Key-words: laparoscopy, myomectomy, cervical fibroids.

V9_6

The use of bidirectional barbed suture in laparoscopic myomectomy

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Myomectomy, as an alternative treatment for symptomatic uterine fibroids, can avoid hysterectomy and preserve fertility. Although laparoscopic myomectomy technique for subserous and even intramural fibroids has been validated, it is a challenging surgical procedure for gynecologists. We present a new suture, not only by the type of material, but the design. We think it may be useful to improve surgical outcomes. This is a self-anchoring suture, consisting on bi-directional barbs formed on a conventional monofilament. Compared to traditional technique, the benefits of the bidirectional self-retaining sutures for tissue approximation relate to the ease, speed and cost effectiveness. No knot tying is required, and no third hand is needed. As a result, suture deployment is easier and faster. The barbed filament has been shown to possess satisfactory profiles in wound holding strength and tissue reaction. Greenberg et al in 2008 published their first series of cases of laparoscopic myomectomy, and despite being a small number, the results were promising. According to our experience (Baulies et al, 2009), laparoscopic myomectomy has a lower rate of blood loss and fewer adhesions compared to abdominal route, keeping the results in terms of fertility. Our results encourage us to focus on laparoscopical approach and adopt new tips and tricks to improve our outcomes. Our recent experience with this new suture has been encouraging. We presume we may be able to reduce surgical time, cost, and blood loss. Despite being more expensive product, we assume that the use of this single suture will be more efficient than multiple conventional sutures. Our experience is promising, even if we need more cases to draw definitive conclusions.
Key-words: laparoscopic myomectomy, barbed suture, suture technique/instrumentation.

V9_7

Laparoscopic myomectomy "tips and tricks"

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P. Trompoukis (France)

Summary: We present a video presentation of a laparoscopic myomectomy, with some useful tips that we believe that are valuable for this kind of procedure. These include adequate exposure, temporary clipping of the uterine arteries and infundilopelvic

ligaments, enucleation of myoma and finally an alternative way of extracting the myomas from the *cul de sac*.
Introduction: Myomectomy is a procedure that is extremely common in gynecologic surgery. The laparoscopic way offers advantages, however there are also difficulties. Most common problems are the size of the fibroid, not enough space, hemorrhage especially with big fibroids, entrance to the uterine cavity and sometimes difficulties for extracting the big fibroids from the abdominal cavity.
Materials and Methods: We present a 10 min video presentation. The procedure starts with adequate exposure together with adhesiolysis. Then we dissect the uterine arteries bilaterally at the lateral pelvic wall and we place hemostatic clips. The same we do for the infundilopelvic ligaments. We proceed and we analyze the type of incision that we perform depending on the localization and orientation of the myoma. We dissect the myoma, test the integrity of the uterine mucosa, and finally we extract the myoma from the abdominal cavity, from the *cul de sac*. We present the instruments that we use for this alternative way when the use of a morcellator is not feasible.
Results and Discussion: The final result of the operation is presented during the video presentation. There are some useful tips and tricks, especially the clipping of the uterine arteries and IP ligaments that we find that reduces the hemorrhage, for making laparoscopic myomectomy an easier procedure.
Key-words: myomectomy, tips and tricks, clipping of uterine arteries.

V9_8

Laparoscopic myomectomy—tips and tricks
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Laparoscopic myomectomy is a commonly performed procedure with good outcomes and low complication rates. However, many gynecologists find this procedure challenging to perform with common problems cited being risk of bleeding, difficulty extracting fibroids and limitations of laparoscopic suturing. We present tips and tricks for performing a laparoscopic myomectomy that have served us well in a high volume clinical practice. Among the tips and tricks presented include the use of high volume subserosal injection of dilute vasopressin to create a "water tourniquet", the proper method of fibroid extraction as well as a detailed description of our usage of bidirectional barbed suture for myometrial closure. This includes our method of closing the serosal layer in a baseball configuration. We will also show footage of a case of a single incision myomectomy.
Key-words: laparoscopic, myomectomy, barbed.

V9_9

Laparoscopic management of a large subserous cervical myoma
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Myoma of the uterine cervix is rare, accounting for about 5% of all myomas. Cervical myoma increases surgical difficulties such as poor operative field, difficult suture repairs, and blood loss. Compared with myomas that occur in the uterine corpus, cervical myomas are closer to other organs such as the bladder, ureter, and rectum, and the approach needs to be modified because the organs that have to be considered differ depending on the location of the myoma. The treatment of cervical myomas by laparoscopy remains crucial. In this presentation, the surgical procedure for laparoscopic myomectomy of a large subserous cervical myoma is described. Laparoscopic cervical myomectomy is a minimally invasive and technically safe procedure.
Key-words: laparoscopy, cervical myoma.

Video Session 10_Office & Diagnostic Hysteroscopy

V10_1

Hysteroscopic aspects of the endometrium
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This video shows the normal and pathologic findings of the endometrium during diagnostic hysteroscopy. First, physiological variations are showed. Then, the impacts of hormonal therapies are illustrated. Finally, the different pathologies of the endometrium (hyperplasia, polyps, endometrial cancer, chronic endometritis, osteoid metaplasia) are pointed out.
Key-words: diagnostic hysteroscopy, endometrium, normal and pathological findings.

Video Session 11_Oncology

V11_1

SILS- ultra-minimally invasive oncologic surgery
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Introduction: The recent trend to make surgery less invasive prompted new approaches such as single port access surgery in benign disease. We have introduced single incision laparoscopic surgery (SILS) into gynecologic malignancy. 3 cases are presented.
Materials and Methods: Case 1: A suspected normal sized ovarian carcinoma syndrome case—we performed ascitic fluid sampling, bilateral salpingo-oophorectomy (BSO), biopsy of peritoneum and omentum. Case 2: Transperitoneal pelvic lymphadenectomy + LAVH-BSO were performed for endometrial cancer stage IA G1. Case 3: A stage IB G1 endometrial cancer case—we introduced a SILS port TM into the retroperitoneal space. Para-aortic and pelvic lymphadenecomy is performed extraperitoneally with LAVH-BSO.
Results: Retroperitoneal lymphadenectomy is possible via the single port approach. There were no conversions to laparotomy or multiple-port laparoscopy, transfusions or complications.
Discussion: The advantages to surgeons wanting to introduce minimally invasive techniques into malignancies is the larger retrieval route allowing en-bloc extraction of tumors up to 5 cm and even the omentum. Infracolic omentectomy is possible after extraction of the omentum via the umbilical port site. The advantage to the patients who undergo single/double port oncologic surgery are good cosmesis and less recorded pain and fast recovery and return to normal daily

activities. Ultra-minimally invasive SILS represents a new path in the future of malignancy management.
Key-words: single port access surgery, para-aortic and pelvic lymphadenecomy, minimally invasive techniques.

V11_2

Technique of laparoscopic sentinel lymphnodectomy in early stages of cervical cancer

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D. Sarlos (Switzerland)

Introduction: Although no international accepted therapeutic strategy for cervical cancer exists there is a trend to operate the early stages up to FIGO IIA to IIB and to manage advanced stages with combined radio-chemo therapy. The consequences of a positive sentinel lymph node vary in different centers. Whereas some authors stop surgery in case of a positive lymph node and continue with radio-chemo therapy, others interpret as an indication for para-aortal lymphnodectomy. In case of a negative sentinel lymph node usually an abdominal or laparoscopic radical hysterectomy (Piver II–III) with a pelvic lymphnodectomy is performed.
Materials and Methods- Results: The video shows a 51 year old patient with a poorly differentiated squamous cell carcinoma of the cervix uteri, FIGO Ib, diagnosed via conisation specimen after continuous pathological PAP smear. Preoperative diagnostics (PET, pelvic MRI) are presented with no parmetrial infiltration and hydronephrosis in the MRI; PET gives no evidence of positive pelvic or para-aortal lymph nodes or systemic metastases. Technique of injecting Technetium 99 m marked Nanocoll (4 injections in all 4 quadrants of the cervix with 30 MBq each) and the subsequent SPECT CT with evidence of a pelvic sentinel lymph node on both sides. Intra-operatively the application of blue dye on to the cervix and finding of the sentinel lymph node via a laparoscopic gamma detector are demonstrated. The video illustrates surgical set-up, position of trocars and laparoscopic preparation technique. It especially points out how accurate the sentinel lymph node can be depicted and excised.
Discussion: With this video we show that laparoscopic sentinel lymphadenectomy is a feasible techniques for staging of cervical cancer.
Key-words: laparoscopic sentinel lymphnodectomy, cervical cancer, staging of cervical cancer.

V11_3

Laparoscopic ovarian transposition

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Laparoscopic ovarian transposition is realized to preserve the ovarian function in youg women with pelvic cancer before radiotherapy. This video shows the procedure steps by steps: opening of the broad ligament and pediculization of annexal vessels, stapling and section of the utero-annexial ligament, placement of a loop to ensure hemostasis and traction, creation of a tunnel under the parieto-colic peritoneum, traction of the adnexa under the peritoneum, closure of the peritoneal window and fixation of the ovary.
Key-words: laparoscopy, ovarian transposition, radiotherapy.

V11_4

Technique of laparoscopic radical hysterectomy (Piver II) in cervical cancer FIGO 1B1 and 1B2

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Introduction: Although no international accepted therapeutic consensus in the management of cervical cancer exists there is a trend to operate the early stages up to FIGO IIA to IIB and to manage advanced stages with combined radio-chemo therapy. During the last 15 years there was a tendency in radical hysterectomy to lower the morbidity without compromising oncological outcome. This was achieved by implementing new concepts like sentinel node biopsy, nerve sparing surgery and minimal invasive surgical procedures like laparoscopic or robotic surgery.
Materials and Methods- Results: The video shows a case of a laparoscopic radical hysterectomy and pelvic lymphadenectomy in a 36 years old woman with a low grade squamous cell carcinoma of the cervix FIGO IB2. First the preoperative MRI and PET scans are shown demonstrating a 4.5 cm tumor of the cervix without Infiltration of the lateral parametrium and without tracer uptake in the pelvic and paraaortic lymphnodes. Stepwise the video shows the dissection of the pelvic lymphnodes, the isolation of the ureter from the ureteric canal, the opening of the paravesical and pararectal space and the transsection of the cardinal ligament performing a PIVER II resection. Finally the uterine specimen and the definitive histological results are demonstrated.
Discussion: With this video we show that laparoscopic radical hysterectomy and pelvic lymphadenectomy are safe and feasible techniques for early stages of cervical cancer up to FIGO IIA to IIB. Therefore we hope to further encourage the application of minimal invasive methods in oncology with this video.
Key-words: cervical cancer, minimal invasive surgical procedures, pelvic lymphadenectomy.

V11_5

Cancer of the endometrium Stage I: technique of total laparoscopic hysterectomy and pelvic lymphadenectomy

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Summary: Laparoscopic surgery is a feasible and safe alternative to laparotomy for the surgical treatment of early endometrial cancer. Introduction: Total abdominal hysterectomy and bilateral adnexectomy with or without lymphadenectomy remains the gold standard for the treatment cancer of the endometium stage I. Several recent studies have demonstrated that laparoscopy is a feasible and safe alternative to laparotomy for the treatment of cases with endometrial cancer confined to the uterus.

Materials and Methods: We present our technique of total laparoscopic hysterectomy and systematic pelvic lymphadenectomy, using mainly reusable instruments, and an advanced bipolar system which we applied in 6 cases with cancer of the endometrium stage I.
Results: All cases were completed lapararoscopically. The median operative time was 196.5 minutes (range: 170–245). Mean blood loss was 45 mls (range: 25–120), and the mean number of removed lymph nodes was 27 (range: 19–31). We had no intraoperative complications. One patient developed a bilateral asymptomatic pelvic lymphocyst that was treated conservatively. At 3–12 months follow-up all patients were well.
Discussion: Laparoscopy is safe for the treatment of patients with cancer of the endometrium confined to the uterus. A good and reproducible technique is necessary to avoid complications and safeguard a good oncological outcome.
Key-words: cancer, endometrium, laparoscopy.

Video Session 12_Operative Hysteroscopy

V12_1

Synechia of the uterine cavity (Asherman´s syndrome)
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This is a case of synechia of the uterine cavity who admitted to our infertility clinic. The patient underwent operative hysteroscopy. The video record of the operation is presented here.
Key-words: uterine cavity, synechia, Asherman´s syndrome.

V12_2

Hysteroscopic metroplasty of the complete uterine septum, duplicate cervix and vaginal septum
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Summary: We report our technique for hysteroscopy metroplasty of the complete uterine septum, duplicate cervix and vaginal septum performing a blind incision of the septum using waveform current in expertise hands under laparoscopic guidance.
Introduction: Hysteroscopic metroplasty (HMP) is the treatment of choice for the septate uterus but when the complete septate uterus has two separate cervices many operative techniques are proposed, basically differing in the conservation of the cervical septum. It is our intention to describe the endoscopic technique we use to treat this cases.
Materials and Methods: We present 9 patients with complete uterine septum, two separate cervices and longitudinal vaginal septum. The diagnosis were made at two centers: Pereyra Rossel Hospital (Montevideo-Uruguay) and Tornú Hospital (Buenos Aires-Argentina). The same expertised surgeon performed the surgery using a monopolar resectoscope under laparoscopic guidance. The procedures were made without separating both cervices and with no referral device on the other hemicavity.
Results: All the procedures were successfull and safe. Unique uterine cavities were obtained without any intraoperative complications. Patients didn´t receive any aditional treatment. One month after the procedures we performed a diagnostic hysteroscopy. No intrauterine adhesions were found.
Discussion: In all our cases the uterine septum was removed with the conservation of the cervical septum. We found this procedure safe, easy and successfull in expertised hands. Other advantages proposed for this technique are less intraoperative bleeding, shorter surgery time and good reproductive outcome.
Key-words1: metroplasty, septate uterus, Duplicate cervix.

V12_3

Hysteroscopic technique for the management of severe Asherman´s syndrome: miometrial scoring
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Background: Severe Asherman´s syndrome is easy to diagnose but difficult to treat, particularly if there is dense peripheral fibrosis with narrowing of the uterine cavity. Any treatment has essentially three aims: to restore the size and shape of the cavity, to return normal endometrium function and to make pregnancy possible. Hysteroscopic myometrial scoring, a technique which we first described in 1998, can address these aims to some extent.
Video Presentation: Myometrial scoring is performed under general anesthesia with a standard 26 F continuous flow resectoscope fitted with a Collins knife electrode at a power setting of 100 watts of pure cutting current. We use sterile 1.5% glycine solution for uterine distention. The cervix is dilated to Hegar no. 10 under ultrasound control in cases of cervical stenosis. Scoring involves making six to eight, 4-mm-deep longitudinal incisions into the myometrium extending from the uterine fundus to the isthmus. Surgery can be monitored by simultaneous abdominal ultrasound. At the end of the procedure, the cervix is dilated up to Hegar no 12–18 to reduce the likehood of postoperative cervical stenosis. An intrauterine contraceptive device can be inserted whenever there is severe conglutination of the uterine walls, with cyclical oral oestrogens prescribed for 3 months postoperatively.
Key-words: Asherman´s syndrome, hysteroscopic surgery, miometrial scoring.

Video Session 13_Operative Risk Management

V13_1

Prophylactic laparoscopic ligation of hypogastric arteries in 2 cases of retained placenta with invasive placentation
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We present two cases in which delayed laparoscopic ligation of hypogastric arteries was used to diminish uterine perfusion and enabled to perform uterine cavity evacuation for retained placental tissue. First patient was a 35 year old primipara with history of several unsuccessful IVF cycles, ectopic pregnancy and induced abortion in 22nd gestational week. She delivered spontaneously, immediately postpartum we suspected retained placental tissue and performed evacuation of uterine cavity. Total blood loss was 1000 ml, Hb level was 56 g/l and she received several blood transfusions. Ultrasound examination 3 days postpartum showed retained placental tissue, 58×48×62 mm in size, it invaded

myometrium and had substantial blood perfusion. Patient remained stable, 7 days postpartum laparoscopy was performed with bilateral ligation of hypogastric arteries, followed by evacuation of uterine cavity. The perioperative blood loss was minimal. Patient was released in good clinical condition. Second patient was a 33 year old primipara, she delivered in regional hospital with substantial PPH and 2 consecutive evacuations of uterine cavity for suspected retained placental tissue. Ultrasound examination showed placental tissue inside the cavity and thinning of uterine wall. We performed laparoscopic ligation of hypogastric arteries and evacuated placental tissue by ultrasound guided curettage. Patient remained stable and was released 3 days after the procedure.
Key-words: laparoscopic hypogastric artery ligation, retained placenta.

Video Session 14_Robotics

V14_1

Robotic surgery in the treatment of endometriosis

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Summary: In this preliminary study, we were able to demonstrate that robotics could be useful in the management of large ovarian endometriomas and deep infiltrating endometriosis. The results are encouraging in terms of fertility and improvement of pelvic pain but have to be confirmed in large series.
Introduction: Surgical treatment of endometriosis requiring adhesiolysis, ovarian cystectomy and removal of deep lesions is usually performed by laparoscopy. But in cases of large ovarian cysts, complete removal of the cyst wall in one step could be difficult as well as adhesiolysis in cases of Cul-de-sac obliteration. In the Department of Gynecology of CHR Citadelle, University of Liège, we evaluated the feasability of the robotic-assisted treatment of endometriosis.
Materials and Methods: Between January 2010 and June 2010, 11 patients underwent robotic surgery for the treatment of endometriosis. In 2 patients of more than 50 years old, hysterectomy was performed due to the presence of ovarian endometrioma associated with deep infiltrating endometriosis (DIE). In 9 patients, conservative surgery was performed: ovarian cystectomy for ovarian cysts of 3 to 9 cm of diameter in 3 patients and DIE resection in 6 patients. No rectal resection was made during the present sutdy. Adhesiolysis was performed either with the monopolar scissors (n=9) or with a laser fibre introduced through one arm of the da Vinci robot (n=2). In all cases, surgery was completed by robotics. No post-operative complications were registered in this preliminary series.
Results: Preliminary post-operative results are encouraging as pregnancy occurred very quickly after the ovarian cystectomy of 9 cm. In patients with DIE removal, improvement of pain was observed in all patients and no vaginal scar were felt at gynaecological examination 6 weeks after posterior vaginal removal.
Discussion: The advantages of robotic-assisted surgery of endometriosis are the following:

- the possibility to perform cystectomy of large ovarian endometrioma as the plane of clivage is easily seen and meticulous hemostasis can be obtained;
- the possibility to suture the posterior vaginal fornix by laparoscopy in cases Douglas obliteration and posterior vaginal fornix resection.

These preliminary results have to be confirmed in large series and by using validated questionnaires evaluating the quality of life pre and post-operatively.
Key-words: robotics, endometriosis, endoscopy.

Video Session 15_Single Access Surgery

V15_1

Single port access laparoscopic myomectomy

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Summary: We describe our preliminary experience providing tips and tricks to perform surgical treatment of myoma with single access laparoscopic approach.The present experience seems to provide evidence that myomectomy can be done with SPAL approach. Nonetheless, further reports are needed to better define the feasibility and the best technique.
Introduction: Leiomyomas represent the most common pelvic tumors, affecting between 25% to 45% of women in reproductive age. They are almost always benign and frequently asymptomatic. When symptomatic, however, uterine leiomyomas may cause heavy menstrual bleeding, pelvic pressure or pain, dyspaurenia, urinary frequency, incontinence, urgency or constipation. After myomectomy, successful pregnancy rates occur in 53% to 70% for submucous fibroids and 58% to 65% for intramural and subserosal fibroids (1). The removal of leiomyomas with preservation of the uterus is indicated in symptomatic women who wish to preserve their reproductive function and anatomic integrity. Once the decision is made to proceed with the myomectomy, the surgeon must decide the most appropriate approach for the given case among h hysteroscopy, laparoscopic or laparotomic. This decision is based on several factors, including size, number, and location of the fibroids on the uterus and the experience of the surgeon (1). The latest advancements in term of technical expertise and surgical instrumentation have allowed minimal access surgery to become even more minimal with the development of single access laparoscopic surgery (SALS). Reducing the number of working ports decreases the risk of bleeding, infection, concomitant iatrogenic visceral injury, hernia formation with better pain control and cosmetic outcome. After first applications on animal models, the subsequent developments of specialized purpose built instrumentation led to the successful application of single port access laparoscopy (SPAL) in human patients. Minilaparoscopic procedure has emerged as viable, feasible, and widely applicable minimally invasive procedures. Preliminary advances in SPAL have been realized as applied to urologic (2) and gastrointestinal surgery(3). More recently papers have been published on application of SPAL also in gynecology (4–7). At present there are not data in the literature in relation to more complex surgery as myomectomy where the intrinsic ergonomic limitation of the single port approach could obstacle and make very difficult the laparoscopic suturing. We present our first experience in SPAL myomectomy describing tips and tricks that we used during the surgery.
Materials and Methods: We present a case of SPAL myomectomy. A 38- year-old girl, nulliparous woman with a previous story of 2-years

of infertility. In 2004 the patient had undergone surgery appendicectomy. In 2009 a diagnostic laparoscopy evidenced bilateral sactosalpinx and intramural-subserosal myoma of 4-cm. She had a regular menstrual cycle. Regular pelvic examination was normal and a normal hormonal profile indicating an ovulatory cycle. The ultrasound evaluation underlined a 4 cm intramural myoma in an antiverted uterus with apparently normal adnexae. A single port access laparoscopy was performed. We used a reusable single site trocar with 4 integrated access ports (S-Portal X-Cone; Karl Storz, Tuttlingen, Germany). This new device consists of two symmetrical metal half shells that are connected and sealed by one large silicon caps containing the access ports. Once in the peritoneal cavity the two half shells fit together to form an X shape and the final access portal. The silicon cap comprising three 5-mm and one 12-mm port is connected on top of the X-Cone, which forms an airtight seal. The external and internal diameters are respectively at the level of the X 25 mm and 20 mm, r. Under general anesthesia each patient was positioned in the dorsal lithotomic position with both legs supported in Allen stirrups with the arms resting alongside the body. An intrauterine device was used to mobilize the uterus. A 2-cm intraumbilical vertical skin incision and a 2–2,5 cm rectus fasciotomy were performed to enter the peritoneal cavity. The single port trocar and the abdomen was insufflated to 12 mmHg. The patient was then put in a Trendelemburg position. Following placement of the X-Cone, the surgeon stood behind the patient's left shoulder at the level of the patient's right shoulder, and the monitor was positioned between the patient's legs. We routinely used a rigid 30°, 5 mm diameter, 50-cm length Hopkins high definition laparoscope in combination with a high definition 3-chip camera (Karl Storz). For the bilateral salpingectomy a rigid single curved forceps or scissor (S Portal; Karl Storz) and a standard straight bipolar dissector or device with grasping, coagulating, and transecting functions (En Seal; Ethicon) were used simultaneously. A 10 mm endobag through the 12 mm X-Cone access was used to remove the specimens. The myometrium overlying the fibroids was injected with a 1:20 diluted solution of vasopressin using a laparoscopic needle. After the injection of 40 to 60 mL of solution the uterus blanches indicating diminished blood flow. The myometrial incision was made with flexible monopolar hook (Karl Storz) and was deep enough to the dissection plane between the myoma and the myometrium. Enucleating of the myoma was performed with 10 mm myoma drill. Intracorporeal double layer suture of myometrium was performed by 2–0 absorbable barbed monofilament (V-Loc 180, Covidien). For stitching a straight needleholder and a curved Kelly forceps as contra-needleholder were used. Removal of the specimen was obtained by morcellation through umbilical trocar. Removal of the specimen was obtained by morcellation through umbilical trocar.

Results: No intraoperative and postoperative complications were detected. Estimated blood loss was less than 20 ml and total operative time (skin to skin) was 94 minutes. Patient was discharged after 1 days of hospitalization with a complete satisfaction in term of pain and cosmetic outcome. The postoperative control after one month reveled a complete restoration of the umbilical scar at the clinical exploration and of the uterus at the ultrasound-

Discussion: We describe a new surgical technique for transumbilical single port access in patients with uterine leiomyomas. SPAL provides an opportunity to further enhance the cosmetic benefits of minimally invasive surgery while minimizing the potential morbidity associated with multiple incisions.However, it has to be bear in mind that SPAL approach has intrinsic limits namnely absence of triangulation, inline vision and instruments crowding. To facilitate the correct ergonomy, the monitor should be placed between the patient's legs and the first surgeon should stand by the left shoulder (lateral to the head of the patient) to recreate the correct axis for eyes- hands -monitor; the assistant should stand at the level of the patient's right shoulder. Given that a third assistant's hand is not required in single port procedures, an intrauterine device should be placed to aid manipulation of the uterus and exposition of the surgical field. Use of a 5-mm, 30° telescope is mandatory for both avoid inline view and a constant fight between the operating instruments and the optic. In our experience, a 50-cm extended length scope is useful since it allows the assistant to move the scope without hindering the surgeon's movements outsi the abdominal cavity Instrument triangulation allows proper tissue retraction, which is essential for proper dissection along anatomical tissue planes and helps to avoid crossing between the instruments and the camera. Using at least one flexible or curved instrument off sets the shafts sufficiently to accomplish some degree of triangulation. The use of dedicated curved instruments (single or double curve) consent the mobilization and traction of the organs using rotating, forward and backward movements. To reduce crowding instruments the profile should be as slim as possible. Using instruments of differential overall lengths is also helpful. If one camera and two instruments occupy the multichannel port, varying lengths prevent the bulkiest portion of each instrument (the external handle) from overlapping extracorporeally. A straight rotating handle is preferable. In addition, multifunctional devices capable of grasping, dissecting, coagulating, and cutting overcome the limitation imposed by the reduced numbers of ports. Stitching and suturing remain among the most difficult skills in laparoscopy and even more in the single port approach. Standard rules have to be follow to simplify as much as possible the technique. To overcome the difficulty of intracorporeal knot we decided to use a barbed monofilament able to safely fixed the tissue with a constant tension along the wound. A double layer suture was needed to correctly close the myometrium and to reduce adhesions a intra-flexion suture at the level of the perimetrium was performed. Continuous suturing technique and absence of tying knots permit to considerably reduce the operating time. A good rule to keep in mind, to perform laparoscopic stitching is that the suture axe should be parallel to our needleholder and perpendicular to the needle axe. In single port approach this means that the uterine incision, at the level of the anterior or posterior wall, should be always longitudinal. Even if the cosmetic advantage of the SPAL is realistic and more patients start to request this particular approach, it is important to define correct indications and to standardize the techniques. With this report we describe the feasibility of SPAL myomectomy. Nonetheless, further experiences and studies need to be carried out in order to correctly define the best reproducible technique.

Key-words: myomectomy, laparo-endoscopic single site surgery, single port access.

V15_2

Single-port access laparoscopic resection of bladder endometriomas and vaporization of an enlarged ovarian endometrioma

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We report the single-port access laparoscopic management of deep endometriosis infiltrating the bladder, associated with enlarged ovarian endometrioma in a young nullipara. We used an umbilical single site trocar with 3 integrated access ports, two S-curved grasping forceps and scissors, one multifunctional laparoscopic device using ultrasound energy (grasping, coagulation and section) and one multifunctional

plasma energy device (vaporisation, coagulation and section). The resection of bladder endometriotic nodule using ultrasound scalpel did not encountered major difficulties, however bladder suture by resorbable stitches represented the most difficult step of the procedure and finally required a supplementary access port in the left iliac quadrant. Complete vaporisation of ovarian endometrioma using plasma energy was performed through the umbilical single port access. In our experience, single port access devices allow safely performing numerous surgical gynaecologic procedures, however technical improvement of available instruments are required in order to correctly perform laparoscopic sutures.
Key-words: single port access, deep endometriosis, plasma energy.

V15_3

Laparoscopic dermoid cyst extirpation using single ancillary trochar
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Objective: We present a new technique of laparoscopic dermoid cyst extirpation using single ancillary trochar.
Method: Under general anaesthesia, one trochar of 10 mm was introduced through the umbilicus for the optic trochar and visualisation of the abdominal cavity. Another trochar of 5 mm was introduced from above the symphysis pubis. The content of the cyst was aspirated by a wide bore needle. The abdominal cavity was washed, a grasper was introduced from the suprapubic port, the dermoid cyst was grasped by the grasper and pulled outside the abdominal cavity. The content of the dermoid cyst was emptied by a kocher. Hair, fat and bone tissues was extracted from the cyst. After control of hemostasis, the abdominal cavity was washed. A drain tube was placed inside the abdominal cavity. We performed this operation on 88 cases over 10 years period, no complications were encountered.
Conclusion: Dermoid cyst extirpation can be done successfully utilising minimal invasive surgery with better cosmetic results.
Key-words: dermoid cyst, laparoscopy, single trochar.

Video Session 16_Teaching & Training

V16_1

Pearls of laparoscopic surgery—a fine selection of intra-operative sequences
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Introduction: Over and over again we fall apon intraoperative findings that differ from the daily routine. We would like to present and comment take-outs from laparoscopic recordings of such special situations.
Materials and Methods: Laparoscopic surgery recordings were processed and merged in short didactic sequences. Thereby intraoperative findings such as laparoscopic neurolysis, ovarian lymphoma, Robertson's uterus, and other surprising findings are shown.
Results: With sequences ranging from rare intraoperative findings to the technical handling of special situations the film resembles a potpourri of laparoscopic situations.
Discussion: Due to consistent recording of all endoscopic operations it is possible to retain exceptional laparoscopic findings, unexpected intraoperative situations and prospects of laparoscopic management. Recordings allow circulation of this information. This advantage of endoscopic surgery should more extensively be used in university studies, CME and training.
Key-words: intraoperative findings, neurolysis, ovarian lymphoma.

Video Session 17_Technical Tricks and New Instrumentations

V17_1

Improvement of operative conditions during laparoscopic sacrocolpopexy. How to avoid large peritonisation
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Laparoscopic sacrocolpopexy requires skilled surgeons and is characterized by a long operative duration. Peritoneal closure is achieved by the end of this long procedure. Peritonisation has been demonstrated to protect against the risk of bowel obstruction. We propose a film showing an alternative technique to avoid long peritoneal closure and to improve operative conditions of laparoscopic sacrocolpopexy associated or not to subtotal hysterectomy. The creation of a subperitoneal tunnel between the pre-sacral area and the right uterosacral ligament avoids the longitudinal incision of the peritoneum. The time of peritoneal closure is thus reduced to a low (anterior and posterior) and high peritonisation using a knotless barbed suture (V-Loc), further shortening the operative time. More than 25 procedures were performed by our team using this alternative technique. Its feasibility and safety has now been demonstrated.
Key-words: laparoscopic sacrocolpopexy, peritoneal closure, knotless barbed suture.

V17_2

Disposable rectal probe for specific laparoscopic gynaecological surgeries
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Laparoscopy is often criticised for the quality of feedback from tissues and lack of exposure methods. Pelvic surgical interventions that involve rectal dissection such as in endometriosis surgery, oncology procedures or adhesiolysis necessitate rectal identification. This can be done through trans anal introduction of a rectal probe to manipulate the rectum and identify its location.
Rectal safety testing to check rectal parietal integrity is mandatory to diagnose rectosigmoid perforation and minimize the risk of fistula formation. These tests require air and coloured solution (blue dye or betadine) injection in the rectum through a transanal rectal catheter. Sterile manipulation and minimizing leakage of air and fluid through the anus are challenging issues in performing this procedure.
We developed a disposable rectal probe that can be used for exposure and testing purposes paying attention to reduce manipulation in non sterile environment.
This video shows the use of this probe with some tips and tricks to optimise its use compared to the classical rectal probe and rectal catheter.
Key-words: laparoscopy, rectal probe, exposure.

V17_3

Laparoscopic management of large benign adnexal masses. Surgical procedure

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Laparoscopic management of large adnexal masses is still a matter of debate because of the risk of spillage from an unexpected ovarian cancer or border-line tumor. However, a laparoscopic approach should be considered if the pre and per operative assessment for suspicious lesion is negative. The laparoscopic procedure should be done to avoid spillage anyway according to a strict surgical protocol.
Surgical procedure: Placement of 10-mm trocar above the umbilicus and the upper part of the mass by open technique and creation of pneumoperitoneum. Exploration of the pelvis and the abdomen (cyst, peritoneal surfaces, paracolic gutters, diaphragm, omentum and liver). Insertion under direct visualisation of three 5-mm trocars laterally and supra-pubic. Peritoneal cytology after abundant peritoneal washing. Intra-abdominal puncture of the cyst using the supra-pubic 5-mm trocar with a sleeve inserted as close as possible to the dome of the mass. Removal of the sleeve and drainage with a suction-washing system through the trocar inside the cyst. Closing of the puncture site with an endoscopic loop tie (Endoloop®) in order to avoid spillage. Cystectomy or oophorectomy, according to the classical technic, depending of the patient's age and mass size. Removal of the cyst or the adnexa through one of the trocars, using an endoscopic bag in which the surgical piece can possibly be morcellated.
Key-words: laparoscopy, ovarian cyst, surgical procedure.

V17_4

Precision-drive articulating instruments system

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Laparoscopic suturing and knot tying is an advanced skill set that can limit the capabilities of a surgeon in minimally invasive surgery. It is limited by the design of rigid instrumentation compounded with small working spaces and fixed angles at the trocar level. The Terumo "Precision-Drive Articulating Instruments" System is designed to limit the stress and technological challenges of laparoscopic surgery by providing the ability to control movements which will facilitate grasping, suturing, manipulation of tissue and knot tying. These instruments provide an additional 2 degrees of freedom to the standard 4 degrees of freedom in traditional laparoscopic instruments. The yaw feature handles movement of left and right and is 70 degrees each way for a total of 140 degrees of movement. The roll allows 160 degree of movement each way and both these features allow efficiency while maintaining ergonomic hand positioning. This enables surgeons' the advantages of articulating instruments without the complexity of new learning curves. The features of the Terumo articulating instruments provide techniques that are easier to adopt and faster to perform. The Terumo "Precision-Drive Articulating Instruments" System ™ consists of three components, a console, a handle and individual instruments. The instruments are used under direct surgeon control at the OR table, are hand held, and can be used in conjunction with conventional laparoscopic instruments. Some of the highlights of these instruments include; 1. Approach to the uterine vessels for coagulation in hysterectomies 2. Contralateral approach to the vesicovaginal junction and uterine vessels in the single incision procedures 3. Ability to suture mesh in sacrocolpopexies to the posterior aspect of the cervix 4. Ease with handling extreme horizontal and vertical planes in myomectomy defects for suturing 5. Increased precision to perform adhesiolysis due to the articulation of the instruments.
The advancement of laparoscopic surgery is indisputable and continues to rise to new levels. With this new advanced instrumentation it will help to gain optimal access in minimally invasive surgery. It will also assist with the learning curve of complex skill sets and procedures while maintaining patient safety.
Key-words: articulation, suturing, knot tying.

V17_5

Argon neutral plasma energy in laparoscopic surgery

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The video shows the versatility of a new energy source, argon neutral plasma energy, in treating superficial endometriosis by coagulation and deeper endometriosis by vaporisation. The Plasma-Jet is safe and easy to use and has significant advantages over the carbon dioxide laser with no over-shoot, little lateral thermal spread, no problems with beam alignment and can act as an additional probe through a 5 mm port. Nevertheless, as the video shows the tissue effects are very similar allowing precise destruction of different types of endometriosis.
The video ends by using the cutting mode of the PlasmaJet to sever a large subserous fibroid by cutting through a thick pedicel.
Key-words: Argon neutral plasma energy, Endometriosis surgery, myomectomy.

V17_6

Entirely laparoscopic management of very large benign ovarian masses using Rotocut morcellator

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Introduction: Laparoscopic management of benign large ovarian cysts has now been well established. But huge ovarian masses containing several liters of fluid usually require either a mini-laparotomy or vaginal incision to be removed.
Materials and Methods: We have had a series of 10 cases of very large benign ovarian masses entirely treated by laparoscopy (either oophorectomy or cystectomy) with a three trocars technique using the Rotocut morcellator (Storz).We report here a laparoscopic oophorectomy in a 53 years old patient presenting with an abdominal mass diagnosed as ovarian cystadenoma containing 6 liters fluid.
Conclusions: Mechanical morcellators allows safe and minimal invasive management of benign large adnexal masses by resolving the challenging issue of cyst removal.
Key-words: large ovarian cyst, laparoscopy, morcellator.

Video Session 18_Urogynaecology

V18_1

Laparoscopic sacrocolpopexy with uterine preservation

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Introduction: Laparoscopic sacrocolpopexy now is established as a successful and safe procedure for pelvic floor prolapse. In most cases with uterine prolapse the procedure is combined with a supracervical hysterectomy, but sometimes especially in young women uterine preservation is desired. Laparoscopic uterine sparing sacrocolpopexy is an interesting option for these type of patients.

Materials and Methods- Results (Video Description): In this video we present a 37-year-old patient with a subtotal prolapse of the uterus. Uterus preservation is desired. The video shows all steps of preparation and suturing of 2 separate meshes fixated dorsally on the levator ani muscle and ventrally through a window in the broad ligament to the cervico-vaginal fascia. Both meshes are than attached without tension onto the promontory.

Conclusions: Uterus sparing laparoscopic sacrocolpopexy is a feasible method to treat pelvic organ prolapse when uterine preservation is desired.

Key-words: laparoscopic sacrocolpopexy, uterine preservation, pelvic floor prolapse.