



Society of Robotic Gynecologic Surgery



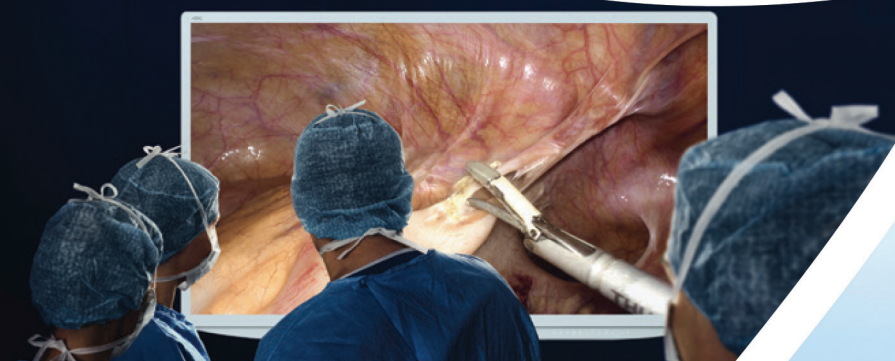
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# 1<sup>st</sup> GynOncoMIS and Robotic Surgery Congress

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*5th SEERSS 1st GynoOncoMIS and Robotic  
Surgery Congress Abstracts*

*Oral Presentation*

**OP-01**

## Robotic-assisted sacrohysteropexy for pelvic organ prolapse: Initial experience and literature review

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**Objective:** To declare our initial results of robotic-assisted sacrohysteropexy for pelvic organ prolapse and compare with the present literature.

**Material and Methods:** The results of 15 patients with apical vault prolapse those underwent robotic-assisted sacrohysteropexy were included.

**Results:** The mean gravidy was  $3.87 \pm 1.62$  (range 1-8) and the mean parity was  $3.25 \pm 1.61$  (range 1-8). The mean age of the study population was  $50.94 \pm 5.1$  (range 43-61) years. The mean duration of surgical procedure was  $163.13 \pm 43.77$  (range 120-270) minutes. The mean postoperative hospital stay was  $3.81 \pm 0.98$  (range 2-5) days. There was no identified failure of the surgeries after 6 months follow up.

**Conclusion:** According to recent data, the robotic-assisted sacrohysteropexy surgery had shorter operating time (120.2 min), less operative bleeding (50 mL; mean hemoglobin drop 1.4 g/dL), and fewer postoperative symptoms. Patients' overall satisfaction and required reoperation due to postoperative complications were the same with open sacrohysteropexy technic. As a initial reports of our department, we also have observed better patients postoperative satisfaction results with the literature. By improvement in experience, we will have shorter operation durations.

**Keywords:** Pelvic organ prolapse, robotic surgery, sacrohysteropexy

**OP-02**

## Technique of robotic hysterectomy: TIPS and TRICKS

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Robotic hysterectomy has been popularly preferred after 2005 FDA gave confirmation for operation (1). Compared with laparoscopy it has same results, equal intraoperative and short term postoperative outcomes so that is widely accepted as an alternative surgical approach in appropriately selected gynecologic patients. Main advantages are the wrist-like motion of the robotic arms, allowing difficult movements deep in the pelvis, a three-dimensional view, lower blood loss (even <60 mL), fewer wound complications, fewer urinary tract injuries,

minimal rates of conversion to open, reduction of tremor interference, a reduced length of hospital stay (same day discharge) and a faster return to normal activities, improved quality of life, surgeons' fatigue is minimized and decreased learning curve for intracorporeal suturing (2). However the economic feasibility of robotic surgery still remains as another obstacle to be solved. Our aim is to explain the surgical techniques of robotic hysterectomy. The standardization of the technique using tips and tricks and recognition of critical anatomical landmarks can shorten the leaning curve in such a way that the surgeon can achieve cost effective use of the equipment.

**Keywords:** Robotics, hysterectomy, minimal invasive surgery

**OP-03**

## Laparoscopic single port surgery (SPLS) for management of ruptured ovarian ectopic pregnancy

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**Objective:** Ovarian pregnancy is a rare entity but incidence is on rise (1/2100-1/7000 pregnancies) often overlooked and associated with higher maternal morbidity and mortality. The aim of this presentation is to assess the management of ruptured ovarian ectopic pregnancy that is a life threatening gynecological emergency.

**Case:** 28 year-old G3P2 woman presented with lower abdominal pain. Tachycardia (108 bpm), blood pressure 90/60 mmHg, with abdominal guarding and the presence of cervical excitation were noted on examination. Transvaginal sonography showed only significant intraabdominal bleeding. Haemoglobin was 8,8 and b-hCG was 17232. Ruptured ectopic pregnancy was diagnosed and immediately SPLS was performed. Unilateral salpingo-oophorectomy was performed on the left side.

**Discussion:** Spiegelberg described diagnostic criteria (1878) for ovarian pregnancy; the fallopian tubes, including fimbria, must be intact and separate from the ovary; the gestational sac must occupy the normal position of the ovary; the ovary must be attached to the uterus through the utero-ovarian ligament and there must be ovarian tissue attached to the pregnancy in the specimen. Our case fulfills all of these criteria. Ovarian pregnancy had been treated by ipsilateral oophorectomy, but the trend has been shifted toward conservative surgery such as cystectomy or wedge resection performed at either laparotomy or laparoscopy. Management options like medical therapy have been tried with various success rate. In our case oophorectomy had to be resorted because of uncontrolled hemorrhage.

**Conclusion:** Practitioners should be aware of non-tubal pregnancies to aid more efficient diagnosis, optimise management and increase patient safety. As more innovations of surgical instruments occur, the technical challenges of the procedure will be reduced and it is likely that single port gynecologic surgery will be adopted even further.

**Keywords:** Ectopic pregnancy, SPLS, laparoscopic

## OP-04

## Results of surgery for women with apical vaginal prolapse during robotic surgery adoption process

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**Objective:** We evaluated patients underwent surgery for apical vaginal prolapse from July 2015 to November 2016. First year efficacy and safety of laparoscopic/robot assisted sacrocolpopexy compared with vaginal surgery (SSF and colpocleisis).

**Material and Methods:** We performed 11 robotic, 12 laparoscopic SCP and 15 vaginal operation (5 colpocleisis, 10 SSF). Robotic assisted patients were younger, had lower parity and ASA grade, had lower stage of prolapse compared to vaginal surgery group but not LS group.

**Results:** Duration of operation is less in patients in the vaginal surgery group (65±24) compared with the LS group (160±40) and robotic surgery group (254±65 min). Intraoperative blood loss and length of hospital stay is similar in all groups. But complications were more common in laparoscopic and robotic surgery groups. Anatomic cure

wasn't different between robotic and LS group, but one women developed recurrent apical prolapse in SSF group. Symptomatic cure was high for all groups. Mesh exposure occurred in one robotic SHP patient.

**Conclusion:** Laparoscopic/robotic SCP and vaginal procedures had similar short term cure rates and high satisfaction. Higher recurrence rate in vaginal approach and higher thromboembolic events in endoscopic surgery take in account during determining type of surgery.

**Keywords:** Uterine prolapse, apical prolapse, sacrocolpopexy, robotic surgery

**Table 1. Baseline characteristics**

Mean ± SD median (IQR)	Robot assisted n=11	Laparoscopic n=12	Vaginal n=15	p value
Age	55.6±7.3	62.9±5.7	69.6±8.2	0.021
Parity	3 (2)	3 (3)	4 (3)	0.123
BMI	27.2±3.4	25.8±2.8	26.8±5.0	0.307
ASA grade	1 (1)	2 (0.5)	2 (2)	0.087
Prior gynecologic operation				
Colporrhaphy	1	-	2	
TAH	2	2	2	
Abdominal SCP	1	-	1	
VH	-	2	1	
POP_Q stage	3 (0)	3 (1)	4 (1)	0.053
Point C	3.6±1.2	3.0±1.4	3.6±2.0	0.580

**Table 2. Peri-post operative findings**

Finding	Robot assisted n=11	Laparoscopic n=12	Vaginal n=15
Length of stay (day)	3 (2)	3 (0)	2 (0)
Length of procedure (min)	254±65	160±40	65±24
Change in Hct	-4.5±2.6	-5.0±1.7	-4.9±2.4
Types of surgery	SCP=9 SHP=2	SCP=9 SHP=1 Lateral suspension=2	SSF=10 Colpocleisis=5
Conversions LS-SCP to lateral suspension	0	2	0
Concomitant procedures			
Colporrhaphy	2	3	4
TOT	2	1	3
Anterior vaginal mesh	-	-	3
Adhesiolysis	2	1	-
Vaginal hysterectomy	-	1	2
Complications			
Embolism	1 (pulmonary)	1 (venous)	-
Cuff cellulitis	2	-	-
Bladder perforation	-	-	1
Mesh erosion	1	-	-
Postoperative findings			
POP-Q points	n=8	n=8	n=2
C	-7 (2)	-7 (2)	-6 and +3
Aa	-1 (1.7)	-1 (1)	-2 and +3
Ab	-1 (1.7)	-2 (2.7)	-1 and +4
De novo SUI	1	2	1
Apical prolapsus	-	-	1
Anatomic cure	6/8 (85.7%)	8/8 (100%)	½
Symptomatic cure	n=10 9 (90%)	n=9 8/9 (88.9%)	n=8 7/8 (87.5%)



## OP-05

## Cystoscopic evaluation of ureteral patency and bladder with indigo carmine vital dye

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**Objective:** Ureteral injuries is not common but could be life threatening injuries in gynecological surgeries. Detecting injury intraoperatively is very important. Because, indigo carmine has been using for several years as a vital dye for detecting ureteral injuries at the meantime of the gynecological and laparoscopic surgeries. As a routine, we have been performing intraoperative cystoscopy in vaginal, abdominal and laparoscopic surgeries if necessary. We want to present our experience with indigo carmine vital dye for ureteral patency and bladder consistency in urogynecological surgeries.

**Material and Methods:** This was a retrospective study of all women who underwent cystoscopic evaluation of ureteral patency at the time of urogynecological surgery from 2013 January to 2016 January at a tertiary care referral center. We investigated patients who received indigo carmine vital dye for detecting possible ureteral injuries intraoperatively in vaginal, laparoscopic or abdominal surgeries.

**Results:** 250 patient was included into the study. Two patients had delayed indigo carmine ureteral pass and supposed ureteral kinking and one patient had not visible ureteral patency with indigo carmine. There was no allergic reaction and there was no complication because of indigo carmine. All these patients were evaluated intraoperatively.

**Conclusion:** Intraoperative cystoscopy with indigo carmine vital dye is an easy way to detect ureteral patency easily with low cost and without complication.

**Keywords:** Cystoscopy, indigo carmine, laparoscopy, vaginal surgery

## OP-06

## Single-port laparoscopy for treatment of concomitant adnexal masses and cholecystectomy or appendectomy

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**Objective:** To report our experience treating adnexal masses concomitant with appendectomy or cholecystectomy using a combination of the SILS TM port and straight non-roticulating laparoscopic instruments.

**Material and Methods:** The study included 9 women with symptomatic and persistent adnexal masses with appendicitis or cholecystitis. Removal of adnexal masses and performed appendectomy or cholecystectomy via single-incision laparoscopic surgery using a combination of the SILSTM port and straight non-roticulating laparoscopic instruments.

**Results:** Six patients had symptomatic complex adnexal masses and 3 patients had symptomatic myoma uteri. In 2 of the patients had myoma uteri, appendectomy (hysterectomy+BSO+appendectomy) were performed concomitantly and in 1 of patients had myoma uteri cholecystectomy (hysterectomy+BSO+cholecystectomy) were performed concomitantly. In 4 of the patients had symptomatic adnexal masses appendectomy (hysterectomy+bso or uso or cystectomy+appendectomy) were performed concomitantly and in 2 of patients had complex adnexal masses cholecystectomy (hysterectomy+USO or USO+cholecystectomy) were performed concomitantly. Mean age of the patients was 47.1 years and mean duration of surgery was 128 min. All patients were treated using straight, non-roticulating laparoscopic instruments. Mean tumor diameter was 5.5 cm (range: 3-9 cm) at patients with adnexal masses. All patient pathology reports were benign. None of the patients converted to laparotomy. All patients were discharged on postoperative d 1. None of the patients required readmission to hospital. Post surgery all patients reported that they were satisfied with their incision and cosmetic results.

**Conclusion:** SILS with classical laparoscopic instrument is more cost effective than standard SILS and can result in better aesthetic result, improve the time of recovery, and less postoperative pain than classical laparoscopy for the treatment of adnexal masses concomitant appendectomy or cholecystectomy.

**Keywords:** Single port, single incision laparoscopic surgery, cholecystectomy, adnexal mass, appendectomy

**Table 1. Characteristics of the patients**

Patients no	Age (Years)	Type of adnexal masses	Concomitant operation	Type of operation	Pathology
1	44	Myoma uteri	Appendectomy	Myomectomy + appendectomy	Myoma uteri, appendicitis
2	66	4 cm complex ovarian cysts	Cholecystectomy	USO + cholecystectomy	Mucinous cystadenoma + cholecystitis
3	48	Myoma uteri	Appendectomy	Hysterectomy + BSO + appendectomy	Myoma uteri, appendicitis
4	30	6 cm complex ovarian cysts	Appendectomy	USO + appendectomy	Mucinous cystadenoma + appendicitis
5	54	Myoma uteri + Ovarian cysts	Cholecystectomy	Hysterectomy + BSO + cholecystectomy	Myoma uteri, cholecystitis
6	45	9 cm ovarian cysts	Cholecystectomy	USO + Cholecystectomy	Torsione cysts + cholecystitis
7	48	6 cm ovarian cysts	Appendectomy	Hysterectomy + BSO + appendectomy	Mature cystic teratome, appendicitis
8	63	Myoma uteri + Ovarian cysts	Cholecystectomy	Hysterectomy + USO + cholecystectomy	Myoma uteri, cholecystitis
9	26	Ovarian cysts	Appendectomy	Cystectomy + appendectomy	Appendicitis

**OP-07**

## Laparoscopic management of an ovarian torsion in a woman with 7 weeks' gestation

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**Objective:** Ovarian torsion (OT) is one of the most common gynecologic surgical emergencies. All age groups can be affected, but ovarian stimulation, as found during early pregnancy or infertility treatment, is a major risk factor. Diagnosing OT in early pregnancy can be challenging. Patients frequently present with abdominal pain and non-specific symptoms. Missed diagnosis of OT could lead not only to ovarian necrosis and sepsis, but also threaten the pregnancy. The objective of this article is to present a case of OT in early pregnancy and its laparoscopic management.

**Case:** A 40-year-old woman at 7 weeks gestational age presented to the Emergency Department (ED) with 2 h duration of abdominal pain, nausea, and vomiting. The patient was not on ovarian stimulation treatments. A bedside ED ultrasound showed an enlarged edematous right ovary with a large cyst, but without flow on color Doppler. The patient underwent emergent laparoscopic surgery. Right ovarian cystectomy was performed without using any energy modalities after detorsion of the right ovary. She was placed on progesterone therapy upon hospital discharge and eventually delivered a healthy term infant.

**Conclusion:** Laparoscopic surgery can be safely performed in pregnant patients for ovarian torsion, in first trimester.

**Keywords:** Adnexal mass, ovarian torsion, ultrasonography, pregnancy

**OP-08**

## An initial experience with Da Vinci XI<sup>®</sup> robotic-assisted system

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**Objective:** Major improvements in endoscopic surgery in gynecology over the last 40 years have changed the management of gynecologic procedures. In 1998, the first robotic procedures were performed in gynecology. Since then, several studies have been published about robotic hysterectomy demonstrating the feasibility and safety of this new procedure. We present herein an initial experience with robotic-assisted surgeries for benign and malignant gynecological diseases.

**Material and Methods:** Between May 2015 and November 2016, 26 procedures were performed with support of the Da Vinci XI<sup>®</sup> robotic system. Demographic and perioperative findings of the patients were collected from robotic surgery form of our clinic.

**Results:** Twenty-two patients underwent operations for benign and 2 for malignant lesions. The median age of patients was 49 years (range 29-69 years) and median BMI was 26.4 kg/m<sup>2</sup> (19.5-35.5 kg/m<sup>2</sup>). Procedure time (174 vs 64 minutes, p<.0001) and total operating time was 190 min (120-430 min) and consol time 20 min (15-30 min). Estimated blood loss was 50 mL (15-210 mL). Change in hemoglobin (Hb) was 1.6 gr/dL (0.8-3.8 gr/dL) and length of hospital stay was 2 days (2-8 days). Intra-operative data of the patients are summarized in Table 2. No intraoperative complication was observed and conversion to an open procedure was not necessary in any patient.

**Conclusion:** We present our initial experience with robot-assisted surgery. Robot-assisted gynecologic surgery is associated with longer operating time but decreased blood loss, and tolerable complication rates.

**Keywords:** Robotic surgery, gynecology, initial experience

**Table 1. Patient characteristics**

Case	Age (years)	Parity	BMI	Medical history	Prior abdominal surgery
1	47	3	24.4	None	None
2	48	2	27.3	None	Cesarean
3	50	5	27.5	DM	None
4	50	4	27.2	DM+HT	None
5	36	2	21.4	None	None
6	47	2	19.5	None	Cesarean
7	53	2	22	HT	Unilateral salpingoophorectomy
8	54	2	23.4	HT	None
9	48	3	30.4	None	None
10	69	3	28.1	DM+HT	Abdominal hysterectomy + salpingoophorectomy
11	33	3	28	None	Cesarean
12	50	2	25.5	None	None
13	50	2	26.6	HT	None
14	63	3	35.5	HT	Appendectomy
15	47	4	26.3	HT	None
16	53	2	33.6	DM	Cholecystectomy
17	51	2	28.8	None	None
18	46	2	23.3	None	None
19	40	4	24.8	None	Cesarean
20	65	1	24.4	HT	Cholecystectomy
21	52	1	33.6	HT	Cesarean
22	35	3	22.5	None	None
23	39	0	24.9	None	Appendectomy
24	29	0	21.5	None	None
25	46	3	29	None	None
26	50	3	34.1	None	None

**Table 2. Operative outcomes of patients**

Case	Diagnosis	Procedure	Total operation time (skin to skin) (min)	Blood loss (mL)	Change in Hb (g/dL)	Length of stay (day)
1	Uterine desensus	Hysterectomy + salpingoophorectomy+sacrocolpopexy	170	180	2.9	2
2	Ovarian cyst	Hysterectomy + salpingoophorectomy	140	25	0.8	2
3	Myoma	Hysterectomy + salpingoophorectomy	190	70	1.8	2
4	Myoma	Hysterectomy + salpingoophorectomy	130	40	1.1	3
5	Myoma	Myomectomy	160	75	1.8	2
6	Myoma	Hysterectomy + salpingoophorectomy	190	210	3.8	2
7	Uterine desensus	Hysterectomy + unilateral salpingoophorectomy + sacrocolpopexy	220	50	1.1	2
8	Myoma	Hysterectomy + salpingoophorectomy	130	50	0.8	3
9	Myoma	Hysterectomy + salpingoophorectomy	120	110	2	4
10	Desensus	Sacrocolpopexy	220	40	1	8
11	Cervical cancer	Pelvic lymphadenectomy + bilateral ovarian transposition + bilateral salpingectomy	270	90	1.6	5
12	Myoma	Hysterectomy + salpingoophorectomy	220	130	2.6	2
13	Myoma	Hysterectomy + salpingoophorectomy	220	20	0.8	3
14	Uterine desensus	Hysterectomy + salpingoophorectomy+sacrocolpopexy	250	85	2.1	3

Table 2. Continued

Case	Diagnosis	Procedure	Total operation time (skin to skin) (min)	Blood loss (mL)	Change in Hb (g/dL)	Length of stay (day)
15	Uterine desensus	Sacruteropexy	140	15	1.2	3
16	Myoma	Hysterectomy + salpingoophorectomy	240	140	2.8	2
17	Myoma	Hysterectomy + salpingoophorectomy	120	50	1.8	2
18	Myoma	Hysterectomy + salpingoophorectomy	190	35	1.8	2
19	Myoma	Hysterectomy	170	100	2.9	2
20	Uterine desensus	Hysterectomy + salpingoophorectomy + sacrocolpopexy	240	15	0.9	4
21	Uterine desensus	Sacruteropexy	170	50	1.6	2
22	Cervical cancer	Hysterectomy + pelvic lymphadenectomy + bilateral ovarian transposition	430	100	1	7
23	Myoma	Myomectomy	140	95	1.8	2
24	Sex reassignment surgery (female-to-male)	Hysterectomy + salpingoophorectomy	150	15	0.8	2
25	Myoma	Hysterectomy + salpingoophorectomy	240	20	1.1	5
26	Uterine desensus	Hysterectomy + salpingoophorectomy + sacrocolpopexy	220	20	1.3	2

## OP-09

## Laparoscopic approach to adnexal masses

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About 5% of women are admitted to the surgery due to adnexal masses (1). 4-24% of the adnexal masses diagnosed in the premenopausal period and 39-63% in the postmenopausal period were reported as malignant (2). Patients with adnexal masses can be evaluated preoperatively with clinical findings, comorbidities and laboratory results, and different approaches can be made. In this presentation, we will describe the approach to different medical and operative difficulty levels on three different patients who were diagnosed with adnexal mass.

**Keywords:** Adnexal mass, laparoscopy, gynecology

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## OP-10

## Laparoscopic hysterectomy: As a surgical approach for women with benign gynaecological conditions

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**Case:** A 49-year-old multiparous woman presented with abnormal uterine bleeding (G4P3). In examination, uterus was founded 10w sizes and palpable 4x5 cm leiomyoma at posterior side. In ultrasound scanning, uterus size was 12x6 cm, endometrial line regular 4mm, bilateral adnexes was normal. Laparoscopic hysterectomy and bilateral salpingoophorectomy has been planned and performed. Pathological evaluation revealed leiomyoma uteri and benign endometrial changes.

**Results:** Hysterectomy is one of the most frequently performed the gynaecologic surgical procedure and can be carried out vaginally, abdominally, laparoscopically, or with robot-assisted laparoscopy. The most common indications for hysterectomy are symptomatic uterine leiomyomas (40.7%), endometriosis (17.7%), and uterine prolapse (14.5%). Abdominal hysterectomy is performed in 66% of cases, vaginal hysterectomy in 22% of cases, and laparoscopic hysterectomy in 12% of cases (1). Although vaginal hysterectomy is offered as the safest and most cost-effective route by which to remove the uterus, laparoscopic hysterectomies have greatly increased within the last few decades and even exceed the number of vaginal hysterectomies. Laparoscopic hysterectomy is particularly useful in patients with limited vaginal access, a fixed immobile uterus, and in those women who desire supracervical hysterectomy (2, 3).



**Keywords:** Hysterectomy, benign gynaecological disease, laparoscopic hysterectomy

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## OP-11

### Mini-laparoscopy setting in total laparoscopic hysterectomy: Single institution experience

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**Objective:** To evaluate the feasibility of mini-laparoscopy (M-LPS) by using percutaneous endoscopic instrument in total laparoscopic hysterectomy (TLH).

**Material and Methods:** Prospective observational study. Tertiary-care university-based teaching hospital and academic affiliated private hospital. Twenty-one women who underwent mini-laparoscopic hysterectomy, between December 2015 and November 2016. M-LPS was performed through one optical transumbilical 5-mm trocar, one 5-mm ancillary port on the right side, one 3-mm ancillary port on left and one 2-mm percutaneous endoscopic instrument (MiniGrip® Handle, Teleflex Inc. Wayne, USA) (Figure 1). A 5-mm 0-degree endoscope, 3 mm laparoscopic instruments and integrated bipolar and ultrasonic technology (Thunderbeat, Olympus Medical Systems Corp, Tokyo, Japan) were used. All operations were performed by the same surgeon.

**Results:** A total of 21 patients were included. The median age was 50 years (range, 41-56 years); body-mass index was 29 kg/m<sup>2</sup> (range, 25-33 kg/m<sup>2</sup>), and uterine weight was 250 gr (range, 80-290 gr). Of the 21 patients, 15 had uterine myomas; 4 had endometrial hyperplasia; and 2 had adnexal mass. The median operating time was 110 minutes (range, 80-185 min), and estimated blood loss was 85 mL (range, 60-180 mL). Conversion to laparotomy and blood transfusion was not required. Recovery of gastrointestinal activity and spontaneous urination started at median 18 hours (range, 12-24 hour) and 6 hours (range, 4-8 hour), respectively. The median amount of carbondioxide usage is 250 mL (range, 100-400 mL). Intra- and postoperative complications were not observed.

**Conclusion:** Mini-laparoscopy by using percutaneous instrument is feasible and nearly “scar-free” procedure that promotes quick recovery and acceptable operation time with minimal blood loss and excellent post-operative pain scores.

**Keywords:** Mini-laparoscopy, percutaneous instrument, hysterectomy



## Right ipsilateral technique

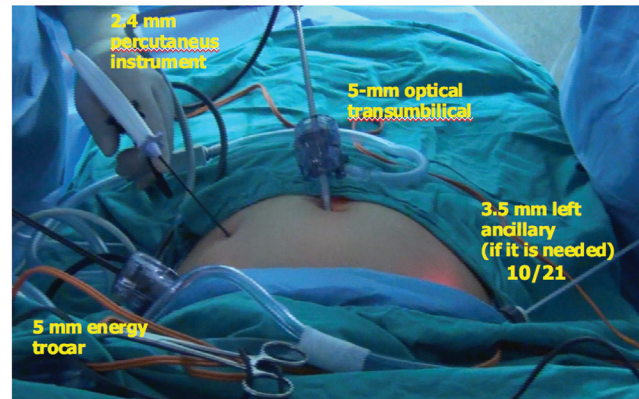


Figure 1. Configuration of trochars

Table 1. Patient characteristics



## Patient characteristics

	TLH* (n=21)
Age, years	50 (41-56)
BMI, kg/m <sup>2</sup>	29 (25-33)
Uterine weight, grams	250 (80-290)
Operation time, minutes	110 (80-185)
Estimated blood loss, mL	85 (60-180)
Indication of hysterectomy, n(%)	
Uterine fibroids	15 (71)
Endometrial hyperplasia	4 (19)
Adnexal mass	2 (10)

\* data are given as median (range) or No.(%), as appropriate

## OP-12

### Safety and efficacy comparison of two different uterine manipulators in total laparoscopic hysterectomy

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**Objective:** To evaluate the safety and efficacy of two different uterine manipulators in total laparoscopic hysterectomy (TLH).

**Material and Methods:** One-hundred and twenty-five women who underwent TLH, between January 2014 and January 2016 in tertiary-care university-based teaching hospital and private hospital. All operations were performed by two expert endoscopic surgeons using one of the following two uterine manipulators: (1) Clermont-Ferrand (CF) (Karl Storz, GmbH and Co, Tuttlingen, Germany) and VECTEC (VT) (VECTEC, Hauterive, France). Lateral movement and elevation of the uterus, visualization of the vaginal fornix, difficulty of insertion, maintenance of pneumoperitoneum and handling were evaluated using visual analog scale (VAS) and graded as either good, fair or poor. Number of insertion attempts, need for switching to an alternative uterine manipulator, and colpotomy time were recorded. The data were re-analyzed by re-watching unedited videos of the operations and reviewing special laparoscopic hysterectomy files.

**Results:** A total of 125 patients were included. The CF was used in 62 patients, and the VT was used in 63. The baseline characteristics of two groups were comparable (Table 1). There were no differences in surgery related outcomes between two groups (Table 2). Compared with the CF group, the VT group had better visualization for vaginal fornices ( $p < 0.001$ ) and maintenance of pneumoperitoneum ( $p < 0.001$ ). On logistic regression analysis, lateral movement and elevation of the uterus between two groups were not significant, after adjusting for uterine weight (adjusted  $p$  value = 0.27). Re-attempt for placement or need for switching to an alternative instrument was not required in any of the groups. As an intraoperative complication, two patients (1.2) had uterine perforation during placement of VT.

**Conclusion:** VT is associated with better visualization and pneumoperitoneum maintenance while other parameters were similar for both uterine manipulators.

**Keywords:** Laparoscopy, total hysterectomy, uterine manipulators

**Table 1. Qualitative assessment**

### Qualitative assessment of the use of uterine manipulators

Visualization of vaginal fornices, %				
Poor	0	0	<0.001	0.008
Fair	18	0		
Good	82	100		
Handling, %				
Poor	0	0	0.07	
Fair	8	19		
Good	92	81		
Placement of uterine manipulator, %				
Poor	18	2	0.002	<0.001
Fair	13	29		0.001
Good	69	69		
Requirement for additional tool, %	73	6	<0.001	
Uterine trauma, %	0	2	0.24	
Adequate pneumoperitoneum, %				
Poor	22	0	<0.001	
Fair	68	3		
Good	10	97		

data are given as median (range) or No.(%), as appropriate



**Figure 1. Uterine manipulators**

## OP-13

### Multimodality approach is essential for reversible paraneoplastic limbic encephalitis caused by ovarian teratoma with autoantibodies to NMDAR (N-methyl-D-aspartate receptor)

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**Objective:** Paraneoplastic encephalitis (PLE) associated with various tumors and in only 3-4% it is associated with ovarian teratomas derived from the primordial germ cells of the ovary. The pathogenesis of PLE is incompletely understood, but it is believed to be associated with antibody and T-cell responses against the expression of shared epitopes in the nervous system and the tumors. So resection of the tumour appears significant in achieving sustained neurological recovery. PLE can even lead to death when treatment for the occult tumor is delayed or inappropriate. This case report emphasizes the crucial role of the gynecologist in these remote nonmetastatic complications of a PLE associated with teratoma in a multimodality approach.

**Case:** A 33 year-old woman who presented with 15 days of mental and behavior change. Physical and neurological examination revealed no cause for these symptoms; extensive metabolic and imaging studies were normal, serum anti-neuronal antibodies were negative and an EEG done was unremarkable. CSF examination was within normal range and MRI scans of the brain was suspicious for limbic encephalitis. Immunological characterisation of her serum and CSF demonstrated the presence of anti-NMDA receptor autoantibodies. CT scan of her pelvis revealed a 2 cm unilateral left ovarian mass. The gynecologic oncologist was consulted to exclude ovarian pathology as origin of this possible paraneoplastic syndrome. Diagnostic laparoscopic surgery was planned for our patient, but she had died unexpectedly before surgery.

**Conclusion:** In the rare case a teratoma is associated with PE most women are not aware of having gynecological pathology just like in our patient. Therefore the psychiatrist, neurologist as well as the

gynecologist ought to be aware of these paraneoplastic syndromes. Further reports may be helpful to determine ideal treatment modalities.

**Keywords:** Paraneoplastic encephalitis, NMDAR, ovarian teratoma

## OP-14

### Metastatic epithelioid trophoblastic tumor: Case report

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**Objective:** Epithelioid trophoblastic tumor (ETT) is an extremely infrequent tumor, seen mostly in the reproductive age. ETT is one of the most curable gynecologic malignancies; however, its correct diagnosis requires a high level of suspicion. Elevated serum b-human chorionic gonadotropin (hCG) may give a useful clue to the clinical diagnosis of ETT, genetic fingerprinting and immunohistochemistry (to recognize dual cell population, keratin pearls, intercellular bridges, Ki-67 labelling index, inhibin, hCG, hPL, CK-18) are potentially valuable tools to confirm the diagnosis of ETT. This is critical for the appropriate treatment and complete excision is the cornerstone of the treatment due to the apparent relative chemoresistance of ETT.

**Case:** We describe a 73 year old G6P6 postmenopausal patient with ETT who was initially misinterpreted and treated as metastatic squamous carcinoma of unknown origin which was characterized by the patient's advanced age at the time of diagnosis and the longest latency period between the prior gestational event and the diagnosis of ETT. ETT may present as metastatic disease in up to %35 of patients, like as in our case who presented to our hospital complaining of inguinal mass. Inguinal biopsy specimens simulated keratinizing squamous cell carcinoma. Serum hCG level was not determined preoperatively. She was treated with concurrent intravenous carboplatin/taxol salvage therapy. After an unsuccessful treatment excisional procedure was done to inguinal mass. The final pathology report showed ETT. EMA/CO (etoposide, methotrexate and actinomycin/cyclophosphamide and vincristine) was administered. However no further treatment was given because the patient refused.

**Conclusion:** Accurate differential diagnosis would properly guide therapy and change prognosis. Both gynecologists and pathologists should be alert to the potential misdiagnosis of squamous cell carcinoma and avoidance of undertreatment and overtreatment are emphasized.

**Keywords:** Epithelioid trophoblastic tumor, squamous cell carcinoma of cervix, gestational trophoblastic disease

## OP-15

### Laparoscopic myomectomy versus robotic myomectomy: A comparison for bleeding and operation time

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**Objective:** Comparison of laparoscopic myomectomy (LM) and robotic assisted LM (RALM) in terms of the operation time and the estimated blood loss.

**Material and Methods:** The medical records of the patients who underwent LM or RALM between June 2014 and January 2016 at Acıbadem University Maslak Hospital, in the Department of Gynecology were extracted from the hospital's database. Total 44 RALM and 38 LM patients have met the criteria. Of total 44 RALM cases, 17 were operated with da Vinci (Intuitive Surgical, Inc., Sunnyvale, C) Si platform, and 27 with da Vinci Xi platform. For all robotic cases, patient card was docked centrally, and three robotic arms and smoke evacuator were used. For LM cases, a 10 mm 00 scope and 3 ancillary ports were inserted. We utilised the integrated ultrasonic and bipolar energy instrument to perform uterine incision and myoma enucleation. In all cases, myomas were removed with the help of 12 mm automatic power morcellator.

**Results:** The means of EBL for LM and RALM groups were 165 30 cc and 178 69 cc, respectively. The difference in EBL between LM and RALM was not statistically significant (p=0.22). The operation times' means were 130 45 min for LM and 176 51 min for RALM. A significantly higher operation time was determined in RALM group compared with LM (p=0.000).

**Conclusion:** Although robotic assisted myomectomy increases feasibility of suturing and provides better visualisation of the operative field when compared with conventional laparoscopy, some disadvantages such as longer operation time and higher costs are still being challenges. In our study, the mean operation time was significantly longer in RALM group, whereas EBL were comparable between the groups. Even though previous studies have shown similar results in terms of longer operation times with RALM, some studies claimed no difference between RALM and LM. Further studies are needed to evaluate early surgical outcomes of RALM and LM.

**Keywords:** Robotic myomectomy, laparoscopic myomectomy, estimated blood loss

**Table 1. Characteristics of groups and early surgical parameters**

	LM (n=38)	RALM (n=44)	p
Age	36.2±6.5	36.5±5.8	0.20
BMI (kg/m <sup>2</sup> )	22.6±2.7	22.9±2.5	0.52
Myoma size (cm)	6.5±1.5	7.2±1.8	0.10
EBL (cc)	165.6±30	178±69	0.22
Operation time (min)	130±45	176±51	0.00



**OP-16****Laparoscopic detection of sentinel lymph node in obese patient with endometrial cancer: A case report**

Derya Sivri Aydın, Behiye Pınar Göksedef, Ahmet Çetin

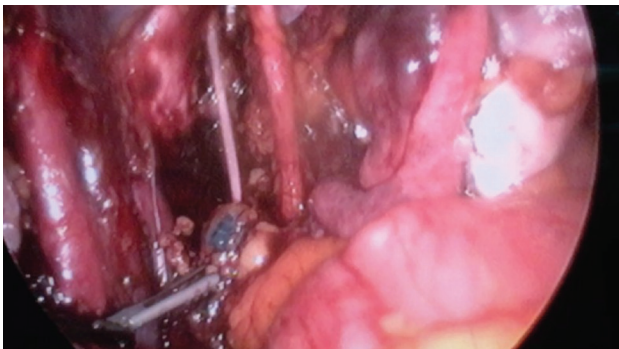
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**Objective:** Endometrial cancer (EC) is the most common gynecological malignancy in Turkey, with an estimated 4427 new cases in 2015. The role of comprehensive surgical staging in early stage of EC remains controversial. Complete systemic pelvic and para-aortic lymphadenectomy may not result in additional survival outcome benefit, and may produce additional morbidity. Laparoscopic SLN mapping provide the prognostic information while avoiding the morbidity associated with a complete lymphadenectomy. We report our experience of laparoscopic SNL detection in obese patient with EC.

**Case:** A 56-year-old woman with well-differentiated EC. MRI of the pelvis showed a 3×2 cm lesion in the endometrial cavity with superficial myometrial invasion without any enlarged pelvic or paraaortic nodes. The patient's height, weight and BMI were 1.62 cm, 98 kg, 37.3 kg/sqm, respectively. Four mL blue dye (1 mL per injection) was injected into the cervix at 3,6,9 and 12 o'clock positions to identify sentinel lymph nodes before the procedure. After complete inspection of peritoneal cavity and collecting pelvic washings, she underwent laparoscopic pelvic SLN detection plus extrafascial total hysterectomy and bilateral salpingo-oophorectomy. SNL, stained with blue color, was observed in the upper part of the left obturator fossa and removal of the identified node was achieved through meticulous dissection. SNL was not found on the right pelvic area and total right pelvic lymphadenectomy was performed followed by TLH-BSO. The operative time was 110 min, and the estimated blood loss was 150 mL. No postoperative complications were registered, and the patient was discharged 30 h after surgery. The SLN ultra staging exam was negative, and the final pathology showed FIGO stage IA G1 EC with a 6/25-mm myometrial invasion.

**Conclusion:** Laparoscopic SLN detection plus TLH-BSO is a feasible procedure with minimal surgical trauma in obese patients with early EC.

**Keywords:** Endometrial cancer, sentinel lymph node, laparoscopic



**Figure 1. Sentinel lymph node mapping**  
SNL, stained with blue color, is observed in the upper part of the left obturator fossa

**OP-17****Laparoscopic approach for adnexal masses**

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We will present as a video form.

**Keywords:** Laparoscopy, adnex, mass

**OP-18****Single port laparoscopic hysterectomy**

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**Keywords:** Laparoscopy, hysterectomy, single port

**OP-19****Minimal invasive and uterus preserving surgery for uterine prolapse-laparoscopic sacrohysteropexy**

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Numerous methods have been discussed in literature for the treatment of apical prolapse of uterus via the abdominal, vaginal or laparoscopic approach. With recent advances in laparoscopic surgery, uterine suspension via the laparoscopic technique has become more popular. There are variations in practice of laparoscopic uterine suspension and the best surgical technique is not yet to be decided. In this report, we present a case of 47-year old women presented with symptomatic, POP [pelvic organ prolapse quantification system (POP-Q)] - stage II uterine prolapse and a history of vaginal prolapse surgery. Under general anaesthesia, the peritoneum over the sacral promontory was incised and extended inferiorly along the right lateral aspect of the rectum. A non-absorbable synthetic type one monofilament, polypropylene mesh (Ethicon Inc., Somerville, NJ) wrapped around the cervix either through openings in the broad ligaments. The front arms of mesh were sutured



to the anterior aspect of cervix with 2.0 absorbable polyglactin 910 violet bladed sutures (Vicryl; Ethicon Inc., Somerville, NJ) and the sum up of two arms (continuing with body of mesh) was sutured to the posterior cervix at the level of uterosacral ligaments. After folding the mesh through the retroperitoneal tunnel without tension, the head of the mesh was attached to sacral promontorium by using 3-5, 5 mm helical fasteners (Protack; United States Surgical, Tyco Healthcare, Norwalk, CT). In conclusion, the peritoneum over the mesh closed using the 2.0 absorbable polydioxanone knotless tissue device (Stratafix; Ethicon Inc., Somerville, NJ). At third-months follow-up, she was POP stage 0 and had no symptoms. Minimal invasive approach, preservation of the uterus and vaginal length, and reinforcing the natural uterine support are the main advantages of laparoscopic sacrocolpopexy and so it might be considered as a good alternative for patient with uterine prolapse.

**Keywords:** Sacrohysteropexy, uterus, prolapse

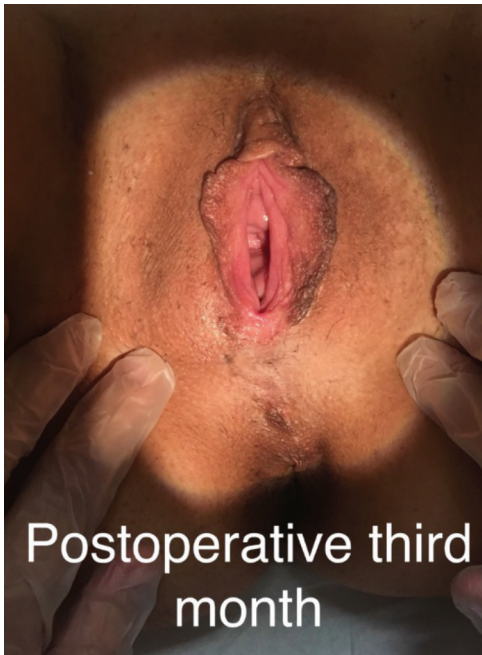


Figure 1. Sacrocolpopexy-postoperative third month

## OP-20

### Safe cystectomy technique

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**Objective:** To make the cyst excision procedure used in routine endoscopic surgery more safe.

**Material and Methods:** In the complicated cyst we routinely performed laparoscopic surgery to define the manipulation of the ovary in a safe bag to prevent the spread.

**Results:** Although we routinely perform this procedure in endoscopic surgery, we can prevent the loss of time for chemical peritonitis and peritoneal lavage due to the dissemination of the cyst content in cases like dermoid cyst, although we can not change the disease state in case of an unexpected malignancy.

**Keywords:** Complicated cyst, cystectomy, safety, chemical peritonitis

## OP-21

### Laparoscopic hysterectomy plus sacrocolpopexy

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**Objective:** Describe to laparoscopic hysterectomy plus sacropexy is a valid option women presenting with genital prolapse.

**Material and Methods:** We performed firstly laparoscopic hysterectomy after sacrocolpopexy for vaginal vault prolapse using a permanent polypropylene Y- mesh. Standard operative technique for sacrocolpopexy was used. Three sutures were placed on the anterior leaflet of the mesh, and three sutures were placed posteriorly. Two sutures were placed in the presacral ligament. Mesh was retroperitonealized with a running 2-0 monocryl suture.

**Results:** Traditional laparoscopic hysterectomy plus sacrocolpopexy should be considered a primary therapy for total uterine prolapse for patients without fertility expectancy.

**Keywords:** Laparoscopic sacrocolpopexy, hysterectomy, uterine prolapse

## OP-22

### Laparoscopic myomectomy clamping uterine artery for giant myoma

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**Objective:** We describe an alternative technique for giant myoma.

**Material and Methods:** We performed clamping bilaterally uterine arteries for giant myoma on laparoscopic surgery.

**Results:** With this technique, hemorrhage can be reduced to ensure adequate monitoring of the surgical field and reduced patient blood transfusion requirements.

**Keywords:** Uterine artery clamping, laparoscopic myomectomy, technique

**OP-23**

## How to pass the needle through the loop of unidirectional barbed suture in an easier and faster way?

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The purpose of this educational video article is to demonstrate the easier and faster passing of the needle through loop of unidirectional barbed suture.

**Keywords:** Barbed suture, unidirectional, laparoscopy

**OP-24**

## An alternative colpotomy technique at total laparoscopic hysterectomy

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**Objective:** The purpose of this video article is to demonstrate an alternative colpotomy technique that enables maximal protection of the cervical ring, helps to prevent the ureteral injury by distancing, and avoids shortening of the vagina at total laparoscopic hysterectomy.

**Design:** Step-by-step explanation of the alternative colpotomy technique using educational video setting: University-affiliated private hospital.

**Interventions:** The operation was performed under general anesthesia in dorsal lithotomy position. A malleable Sims uterine curette was inserted into the cavity to manipulate the uterus until it was replaced with a uterine manipulator before starting the colpotomy. The abdominal cavity was insufflated, and a 5 mm primary trocar was placed through the umbilicus. A 30-degree telescope was used for visualization of the peritoneal cavity. A 2,4 mm percutaneous instrument (MINILAP® SYSTEM WITH MINIGRIP® HANDLE) to the upper right quadrant, a 3 mm port to the left lower quadrant, and a 5 mm port to the right lower quadrant were placed. Round ligaments were cut, and retroperitoneal space was opened. Bilateral ureters were exposed and identified by

the gentle and careful dissection along the posterior leaflet of the broad ligament. The uterovesical fold was dissected from the anterior wall of the uterus to clarify the colpotomy area. After that, the infundibulopelvic ligament was grasped, coagulated and transected on both sides. Before coagulation and transection of the uterine arteries, the safety of ureters was confirmed again. Uterine arteries were grasped and coagulated, and then cut bilaterally. After the uterine artery transection, a VECTEC surgical uterine manipulator (VECTEC, Hauterive, France) was inserted into the vagina in place of the sharp curette. The plastic rotating blade of uterine manipulator was strongly pushed forward into the anterior vaginal fornix. Colpotomy incision was started from the uppermost middle point of an anterior vagina, and extended to both sides with a monopolar L-hook electrocautery at 40 watts cutting mode. Then the manipulator's blade was maneuvered into the right lateral fornix, and THUNDERBEAT platform (Olympus Medical Systems Corp, Tokyo, Japan) was chosen as the modality of energy for the transection of the rest of the vagina. After rotating the blade of manipulator into the lateral fornix, it was pushed forward delineating the connection between vagina and cervix and then retracted backward to give place to THUNDERBEAT. One jaw of THUNDERBEAT was inserted into the fornix. The vagina was cut from the uppermost part leaving cardinal ligaments maximally on the vaginal side. At the posterior part of colpotomy, the vaginal wall was cut from the uppermost part of uterosacral ligaments, as well.

Finally, the left lateral fornix was cut by the same principles, and colpotomy was completed circumferentially. By using the manipulator's blade, at the uppermost margin of the vagina, ureters remained apart from the transection area, uterosacral and cardinal ligaments were protected, and the vaginal length was preserved maximally. After the detachment of uterus, the specimen was removed vaginally. The vaginal cuff was closed by using unidirectional barbed suture. Our technique is included 7 steps: (1) After transecting the uterine arteries, there is no need to cut more paracervical tissue (2) push the anatomical rotating blade of uterine manipulator strongly forward into the anterior vaginal fornix while forcing the manipulator's shaft cranially (3) start the colpotomy incision from the uppermost margin of anterior cervicovaginal junction (4) rotate the blade to the lateral fornix (5) push the blade again to the cranial direction in order to expose the attachment of lateral vaginal wall to the cervix (6) retract the blade gently to give place to the energy device in transecting vagina (7) cut carefully above the manipulator's blade.

**Conclusion:** In our technique, colpotomy starts immediately after the transection of the bilateral uterine artery. In the absence of unnecessary paracervical tissue dissection below this level, the possibility of ureteral injury could be minimized, and the sacrouterine and cardinal ligaments could be maximally preserved.

Colpotomy is carefully performed above the blade of uterine manipulator after accessing the anterior vaginal fornix. Transection of cervicovaginal connection from the uppermost part warrants maximal preservation of the cervical ring. A detachment of vagina above cervical ring can be accomplished via effective uterine manipulation. Stretching tissues by applying enormous pressure on uterine manipulator are pivotal for exposure of vaginal fornices that allows easy transection of the uppermost vagina. Maximal preservation of paracervical ligaments with this technique preserve the apical support of vagina, and avoids shortening of vaginal length. The technique also minimizes the ureteral injury by distancing.

**Keywords:** Colpotomy, uterine support preservation, laparoscopy