**Plenary 6: Hysteroscopy**
*(3:15 PM — 4:15 PM)*

**3:33 PM**

**Hystero-Embryoscopy: Evaluation and Evacuation of Spontaneous Missed Abortions**

*Hincapie M., 1, 4 Nezhat C.H., 1 Atlanta Center for Minimally Invasive Surgery and Reproductive Medicine, Atlanta; 2 Atlanta Center for Minimally Invasive Surgery, Atlanta, GA*

*Corresponding author:

**Stud Objective:** To demonstrate the steps for hystero-embryoscopy evaluation of a 7-week spontaneous missed abortion and evacuation of the products of conception. Illustrate the surgical technique and highlight its advantages in improving the evaluation of spontaneous missed abortions.

**Design:** Video case presentation and demonstration of surgical technique.

**Setting:** Video-hysteroscopy.

**Patients or Participants:** Patient provided consent for the video and publication.

**Interventions:** Following vaginoscopy, the cervix is approached without prior blind cervical dilation. Using a 2.9 mm diameter hysteroscope, navigation from the endocervix to the endometrial cavity is performed. The endometrial cavity is thoroughly inspected revealing an intact gestational sac and submucosal fibroids. The operative grasper is introduced, the chorion and amnion are penetrated and embryoscopy is performed. In-flow in reduced for external morphological inspection of the embryo; it is then grasped and retrieved. The procedure is continued by introducing of a 26-french bipolar resectoscope. The products of conception are excised without electricity and sent for histologic and genetic studies.

**Measurements and Main Results:** Cytogenic analysis for this case revealed a female embryo with trisomy 15. No maternal and fetal cell admixture was noted in the analysis, allowing a precise diagnosis.

**Conclusion:** Hystero-embryoscopy is a valuable diagnostic and therapeutic procedure for cases of missed abortion. It may reveal embryonic morphological abnormalities, expand the diagnostic spectrum in the evaluation of pregnancy loss and avoid potential complications from blind curettage.

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**Plenary 6: Hysteroscopy**
*(3:15 PM — 4:15 PM)*

**3:47 PM**

**Hysteroscopy for Retained Products of Conception**

*Jago C.A., 1, 6 MacGregor B.K., 2 Nguyen D.B., 1, 3 Singh S.S., 1 University of Ottawa, Ottawa, ON, Canada; 2 Kingston General Hospital, Kingston ON, Canada; 3 Department of Obstetrics, Gynecology, and Newborn Care, The Ottawa Hospital, Ottawa, ON, Canada*

*Corresponding author:

**Study Objective:** To compare the success rate of hysteroscopic resection vs dilation and curettage (D&C) for treatment of cesarean scar pregnancy (CSP).

**Design:** Parallel-group randomized clinical trial conducted from February 2020 to February 2021 (Clinicaltrials.gov NCT04205292)

**Setting:** Women admitted with diagnosis of CSP at a single center in Italy.

**Patients or Participants:** Inclusion criteria were women with singleton CSP and positive embryonic/fetal heart activity, gestational age <8 weeks and 6 days at the time of randomization, and thickness of myometrial layer ≥1mm. Patients were randomized 1:1 to receive either hysteroscopic resection or D&C. A sample size of 54 women was planned. After one year of enrollment an interim analysis was performed, and 17 women were included.

**Interventions:** In both groups, 50mg/m2 (based on DuBois formula for body surface area) of methotrexate (MTX) was injected intramuscularly at the time of randomization (day 1) and another dose at day 3. A third dose of MTX was planned in case of persistence of positive fetal heart activity at day 5. Women received D&C or hysteroscopic resection using 15 Fr bipolar mini resectoscope from 3 to 7 days after the second or third dose of MTX. Ultrasound guidance was used in both groups, if needed.

**Measurements and Main Results:** The primary outcome was the success rate of the treatment protocol, defined as no further treatment required until the complete resolution of the CSP. Success rate was 100% in the hysteroscopic resection group and 75.0% in the D&C group (OR 7.31, 95% CI 3.03-178.57) (Table).

**Conclusion:** Hysteroscopic resection was associated with increase in success rate of treatment of CSP, even if the statistical significance was not reached in this preliminary analysis.

<table>
<thead>
<tr>
<th></th>
<th>Hysteroscopic resection N=9</th>
<th>D&amp;C N=8</th>
</tr>
</thead>
<tbody>
<tr>
<td>Success rate</td>
<td>9(100%)</td>
<td>6(75.0%)</td>
</tr>
<tr>
<td>Failure rate</td>
<td>0</td>
<td>2(25.0%)*</td>
</tr>
<tr>
<td>Hysterectiony</td>
<td>0</td>
<td>1(12.5%)</td>
</tr>
<tr>
<td>Intraoperative complications</td>
<td>1 (11.1%)**</td>
<td>0</td>
</tr>
<tr>
<td>Length of stay (days)</td>
<td>11.5±3.6</td>
<td>10.8±2.7</td>
</tr>
</tbody>
</table>

* One hysterectomy, and one laparoscopic uterine segmental resection
** Hemorrhage >500 mL.

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Study Objective: To describe benefits of hysteroscopy over blind D&C in management of retained products of conception (RPOC), identify the role of hysteroscopy in managing RPOC in special populations, and differentiate various hysteroscopic techniques (resectoscopes, cold loop, mechanical tissue removal systems) for management of RPOC.

Design: Surgical video.

Setting: Academic tertiary care hospital.

Patients or Participants: Surgical footage was obtained from four patients who underwent surgery for retained products of conception.

Interventions: Hysteroscopic resection of retained products of conception in complex patient populations using different techniques.

Measurements and Main Results: Hysteroscopy allows direct visualization with targeted removal of RPOC to minimize trauma to the endometrium, resulting in significantly less likelihood of developing intrauterine adhesions compared to blind D&C. It can also be performed in an inpatient or outpatient setting, improving patient access to care.

Conclusion: Advantages of hysteroscopic management of retained products of conception include reduced risk of persistent RPOC, reduced incidence of intrauterine adhesions and other complications, and utility in an inpatient or outpatient setting.

Plenary 6: Hysteroscopy
(3:15 PM — 4:15 PM)

3:54 PM

Ultrasound-Guided Hysteroscopy in the Complex Uterine Isthmus
Dave A. †, Carondelet St. Joseph Hospital, Tucson, AZ
*Corresponding author:

Study Objective: Demonstrate clinical consideration, operative setup and techniques for safe hysteroscopic navigation through the complex uterine isthmus.

Design: Video.

Setting: Operative hysteroscopy under general anesthesia with simultaneous ultrasound and hysteroscopic guidance.

Patients or Participants: 33-year-old G1P1 with history of cesarean delivery, chorioamnionitis, multiple D&C, endometriosis presents for management of secondary infertility with cervical stenosis and isthmocele obstructing embryo transfer.

Interventions: Ultrasound-guided hysteroscopic cervical dilation.

Measurements and Main Results: Despite simultaneous stenosis and isthmocele, cervical dilation and access to the uterine cavity was obtained safely without perforation, permitting planned embryo transfer.

Conclusion: Advanced hysteroscopy requires care pre- and intraoperative planning, use of simultaneous multi-modal imaging and knowledge of safety parameters of all available instrumentation.

Plenary 7: New Instrumentation & Technology
WEDNESDAY, NOVEMBER 17, 2021
(11:00 AM — 12:30 PM)

11:04 AM

Comparison between Robotic Single-Port Myomectomy Using New da Vinci SP® Surgical System and Robotic Multi-Site Myomectomy
Park S.Y., †, ‡ Yoo H., † Cho E.H., † Lee J.H., † Jeong K., † Moon H.S. †.
1Department of Obstetrics and Gynecology, Ewha Womans University Seoul Hospital, College of Medicine, Ewha Womans University, Seoul, Korea, Republic of (South); 2Department of Obstetrics and Gynecology, Ewha Womans University Mokdong Hospital, College of Medicine, Ewha Womans University, Seoul, Korea, Republic of (South)
*Corresponding author:

Study Objective: To compare the perioperative outcomes of the robotic single-port myomectomy (RSPM) using the new da Vinci SP® surgical system with those of the robotic multi-site myomectomy (RM) using the da Vinci Xi® surgical system.

Design: Multicenter retrospective case-controlled study.

Setting: A university tertiary care hospital.

Patients or Participants: A total of 101 patients were enrolled. 67 patients underwent RSPM and 34 patients underwent RM at November 2018 to May 2020 were included.

Interventions: All patients underwent robotic myomectomy who diagnosed uterine myoma with target size that the instrument could operate by entering the umbilicus. The choice of surgical modality was not influenced by the patient’s history of previous abdominal surgery, body mass index, uterus size, location or type of myoma, or myoma size.

Measurements and Main Results: RSPM vs. RM patients demographics had no difference significantly in mean age, BMI, maximal diameter of myoma and total number of myomas. In terms of surgical outcomes, RSPM and RM has comparable in EBL (50 mL vs. 150 mL, p<0.05), Hemoglobin change (2.2±0.8 g/dl vs. 2.6±1.1 g/dl, p=0.046), operative time (105 min vs. 110 min, p=0.001). Post-operative complication, conversion to laparotomy rate, transfusion rate were similar between the two groups.

Conclusion: Robotic single-port myomectomy using new da Vinci SP® surgical system is feasible surgical modality as like as multi-site myomectomy. Further studies are needed to confirm these preliminary results and to determine the proper indications for the surgery.

[Table] Surgical outcomes.

<table>
<thead>
<tr>
<th></th>
<th>Multi-site myomectomy</th>
<th>Single-port myomectomy</th>
<th>P-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Docking time (min)</td>
<td>2.8 (2.7-3.0)</td>
<td>2.8 (2.7-2.9)</td>
<td>0.530</td>
</tr>
<tr>
<td>Console time (min)</td>
<td>45.0 (35.0-62.0)</td>
<td>40.0 (26.0-67.0)</td>
<td>0.007</td>
</tr>
<tr>
<td>Total operation time (min)</td>
<td>110.0 (97.5-125.0)</td>
<td>105.0 (85.0-135.0)</td>
<td>&lt;0.001</td>
</tr>
<tr>
<td>Estimated blood loss (ml)</td>
<td>150.0 (100.0-300.0)</td>
<td>50.0 (50.0-100.0)</td>
<td>&lt;0.001</td>
</tr>
<tr>
<td>Hemoglobin change (g/dl)</td>
<td>2.6±1.1 (0.6-5.2)</td>
<td>2.2±0.8 (0.5-3.6)</td>
<td>0.046</td>
</tr>
<tr>
<td>Hospitalization period (days)</td>
<td>5.0 (3.5-6.5)</td>
<td>5.0 (5.0-5.0)</td>
<td>0.271</td>
</tr>
<tr>
<td>Conversion to laparotomy rate, n (%)</td>
<td>0 (0.0%)</td>
<td>0 (0.0%)</td>
<td>ns</td>
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<tr>
<td>Transfusion, n (%)</td>
<td>1 (2.9%)</td>
<td>4 (6.0%)</td>
<td>0.661</td>
</tr>
</tbody>
</table>

Plenary 7: New Instrumentation & Technology
(11:00 AM — 12:30 PM)

11:11 AM

Excision of an Occult, Obstructed Hemivagina Under Laparoscopic Ultrasound Guidance in a Patient with Ohvira Syndrome
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*Corresponding author:

Study Objective: To demonstrate the use of laparoscopic ultrasound guidance for identification and excision of an oblique vaginal septum in a patient with a congenital uterine anomaly.

Design: Case presentation.

Setting: Academic-affiliated tertiary care center.

Patients or Participants: A 27-year-old P0000 who presented to an outside facility with 7 months of abnormal uterine bleeding, pelvic pain, and increased vaginal discharge. A complex left adnexal mass was seen on ultrasound. The patient was taken to the OR and found to have a uterine