**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.

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**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 isthmus occult obstructing embryo transfer.

**Interventions:** Ultrasound-guided hysteroscopic cervical dilation.

**Measurements and Main Results:** Despite simultaneous stenosis and isthmus occult, 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.

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**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**

*Wirth H.*, *Obstetrics and Gynecology, Kaiser Permanente Los Angeles Medical Center, Los Angeles, CA; Muaro M.G.*, *Obstetrics and Gynecology, UCLA School of Medicine, Los Angeles, CA; Templeman C.*, *Obstetrics and Gynecology, Kaiser Permanente, Los Angeles, CA*

*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...
didelphys, pelvic wall adhesions, and a 3 cm left ovarian cyst. Three months later, when the patient had persistent LLQ pain, MRI demonstrated presence of a double cervix, obstructed and dilated left hemivagina, and left renal agenesis. Referral to a tertiary center was made for further evaluation.

**Interventions:** At the tertiary center, diagnostic hysteroscopy through the single visible cervix demonstrated a right uterine cavity and ostium. Transvaginal ultrasound did not identify the hematocolpos in a way that aided surgical exploration. During diagnostic laparoscopy, a BK 4-way 10 mm OD articulated laparoscopic ultrasound transducer (112C4F) was attached to the BK 5000 imaging system. The transducer was directed toward the pelvic floor revealing the minimally dilated hematocolpos allowing for image-guided positioning of a needle and injection of sterile water making the mass adequately tense to allow easy identification via the vagina. A portion of the oblique vaginal septum was removed, the opening was secured with interrupted absorbable sutures, and hysteroscopy was performed on the left side through the exposed left cervix demonstrating a left uterine cavity and ostium.

**Measurements and Main Results:** The patient did well postoperatively. Both cervices were readily seen and the area of resection healed appropriately. No further interventions anticipated.

**Conclusion:** This video demonstrates the utility of laparoscopic ultrasound to assist with the management of selected Müllerian anomalies, particularly when important features may not be palpable or visible vaginally, hysteroscopically, or laparoscopically.

**Plenary 7: New Instrumentation & Technology**

(11:00 AM — 12:30 PM)

11:18 AM

**In-Person Versus Video Preoperative Visit: A Randomized Clinical Trial**

Braxton E.G., 1* Khan Z., 1 Viers B.R., 2 Behm K.T., 3 Burnett T.L. 4

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**Study Objective:** To demonstrate the use of intraureteral indocyanine green (ICG) in gynecologic surgery.

**Design:** Educational video highlighting a surgical technique.

**Setting:** Academic medical center.

**Patients or Participants:** Women undergoing laparoscopic pelvic surgery for benign gynecologic indications including both conventional and robotic approaches. We use this in our practice in cases where significant distortion of anatomy from presenting pathology is anticipated or in the setting of patient factors including multiple prior surgeries, radiation, active inflammation, or congenital anomalies.

**Interventions:** At the start of the procedure, rigid cystoscopy is performed using a 22 French rigid cystoscope. We combine 25 mg of ICG with 10 mL of sterile water (concentration of 2.5 mg/mL). A 5 French ureteral catheter is passed into the ureter up to 20 cm and 5 mL of ICG is gradually injected as the catheter is slowly withdrawn. This process is repeated in the contralateral ureter. Using specialized equipment, near infrared light or laser penetrates the ureter causing the ICG molecules fluoresce and emit near infrared light that is captured and electronically converted to give the ureter a green color.

**Measurements and Main Results:** The fluorescence of the ICG allows for quick identification of the ureter. The catheter used may have a smaller diameter than stents, potentially reducing risk of ureteral edema, injury, and obstruction. Indwelling stents also have greater likelihood of thinning the ureteral wall. ICG allows for detection of small full thickness injury that may be missed by stents as extravasation will present in the surrounding tissues. There are fewer externalized foreign bodies intraoperatively for a shorter duration of time, potentially reducing risk of infection or inadvertent injury. Limitations include the need for specialized equipment and possible washout effect with ICG used intravenously or intracervically.

**Conclusion:** Intraureteral ICG helps identify the ureter intraoperatively during benign gynecologic surgery with low risk of complications and potential benefits in comparison to stents.