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**Design:** A retrospective cohort study between 3.2011–4.2020.

**Setting:** Tertiary medical center.

**Patients or Participants:** All women who underwent surgical diagnostic procedure due to suspected adnexal torsion in pregnancy. Overall, 156 women were included.

**Interventions:** Operative laparoscopy.

**Measurements and Main Results:** We collected demographic and clinical characteristics. The presence or absence of adnexal torsion during the surgical procedure was recorded.

Adnexal torsion was identified in 131 (83.9%) of the surgical procedures.

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

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

After multivariate analysis, three risk factors remained significantly independently associated with ovarian torsion; previous ovarian torsion was negatively associated [aOR(95%CI) 0.24(0.04-0.80),  $p=0.03$ ], while ART and women that appeared in pain were positively associated [aOR(95%CI) 9.8(2.22-43.6),  $p=0.003$ ; 3.8 (1.23-12.18),  $p=0.02$ , respectively].

Calculated risk for adnexal torsion was 0%, 68.2%, 90.4% and 100% in the presence of 0, 1, 2 and 3 risk factors respectively.

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

#### Robotic Single-Site Resection of Ureteral Endometriosis with Additional Ports

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**Study Objective:** To demonstrate the feasibility and advantages in applying the robotic system with additional ports to single-site laparoscopic resection of ureteral endometriosis.

**Design:** Video presentation of surgical techniques.

**Setting:** University hospital.

**Patients or Participants:** Three patients with endometriosis obstructing the ureter(s).

**Interventions:** A bipolar grasper, wristed needle drivers, and scissors with monopolar energy were used. Additional ports were inserted due to the complexity of the operation. Entry was made at the umbilicus and carried down into the abdominal cavity, and the pelvis was inspected for endometriosis lesions. The first patient was a 38-year-old G0P0 with an absent right kidney and ureter from a congenital Mullerian fusion defect who complained of one-year duration of pelvic pain. Superficial endometriosis nodules were identified on the left ureter. The lesions were trimmed with cold scissors to avoid thermal damage. The second patient was a 44-year-old G1P1001 who presented with left kidney failure following a longstanding history of chronic pelvic pain and endometriosis with urinary symptoms. Multiple gynecologic procedures were required, including resection of bilateral deep-infiltrating endometriosis lesions, total laparoscopic hysterectomy with bilateral salpingo-oophorectomy, and lysis of adhesions.

Structured segments of the left ureter were excised and then left ureteroneocystostomy was carried out. The third patient was a 33-year-old G0P0 with recurrent Stage IV endometriosis who had bilateral ureteral strictures. Bilateral robotic laparoscopic ureterolysis and ureteroneocystostomy were indicated. Notably, for the anastomosis, the bladder was sufficiently mobilized and a Psoas hitch was performed on the right to ensure no tension at the repair site.

**Measurements and Main Results:** Final abdominal survey was performed, and hemostasis was ensured. All patients had successful outcomes with minimal blood loss and no known complications to date.

**Conclusion:** Robotic-assisted single-site laparoscopy with additional ports is an effective method for ureteral endometriosis removal. A combined effort between gynecology and urology may be needed for highly advanced cases.

#### Robotic Assisted Transvaginal Notes Hysterectomy

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**Study Objective:** To demonstrate a novel approach to transvaginal natural orifice transluminal endoscopic surgery (vNOTES) hysterectomy with bilateral salpingectomy using robotic assistance

**Design:** Video presentation of the surgical procedure.

**Setting:** University hospital.

**Patients or Participants:** A 34-year-old G2P1011 with one prior cesarean section and myomectomy complained of dysmenorrhea and chronic pelvic pain and requested for the most minimally invasive form of hysterectomy.

**Interventions:** A robotic-assisted transvaginal hysterectomy with bilateral salpingectomy was performed. The surgery began as a conventional transvaginal hysterectomy. An anterior and posterior colpotomy were performed, as which point, a camera was inserted to improve visibility. This allowed for confirmation of suspected adhesions from the patient's surgical history, most notably present in the anterior cul-de-sac between the bladder and uterus. Wristed instruments of the robot, the monopolar scissors and bipolar grasper, were also placed which enabled better navigation in the narrow surgical space. The remainder of the surgery, including the lysis of the dense adhesions, was completed smoothly with robotic assistance. The vaginal cuff was closed with a continuous running v-loc. The pelvis was inspected upon conclusion of the procedure and hemostasis was observed throughout.

**Measurements and Main Results:** The surgery was completed in 90 mins without complications. The patient was discharged on the same day. On follow-up, the patient noted that her post-operative pain was significantly less than what she had experienced after her previous myomectomy.

**Conclusion:** We showed that robotic-assisted NOTES is a novel and feasible option for transvaginal hysterectomy in indicated patients, particularly those with abnormal pathologies such as dense adhesions. In addition to image-guidance, robotic surgery allows for full articulation of instruments required for this surgery, which improves ease and access over other methods like laparoscopic surgery.

#### The Impact of the COVID-19 Pandemic on Obstetric and Gynecologic Procedures and Consults at a Metropolitan Hospital in the Epicenter

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