**Abstract**

**Objective:** To demonstrate a unique presentation and surgical treatment of a posterior uteroperitoneal fistula with excision of the fistula tract and repair in multiple layers.

**Design:** Illustrative video presentation. A case report is used to describe potential causes of an uteroperitoneal fistula found in a patient during evaluation of secondary infertility and to highlight surgical technique and management using the principles of fistula repair through a minimally invasive approach. The Institutional Review Board reviewed this video article and it was deemed "not human subject research."

**Setting:** Tertiary medical center.

**Patient(s):** A 33-year-old G1P1001 woman with a history of a cesarean section presented with secondary infertility, pelvic pain, and dysmenorrhea and was found to have a posterior uteroperitoneal fistula at the time of hysterosalpingography.

**Intervention(s):** The patient underwent an uncomplicated robot-assisted laparoscopic excision of a posterior uteroperitoneal fistula with the use of careful dissection of the fistula tract, continuous reassessment, and tension-free closure in layers.

**Main outcome measure(s):** Preoperative diagnosis and surgical management displaying intraoperative techniques for robot-assisted excision of fistula tract and repair of defect.

**Result(s):** The patient underwent robot-assisted operative laparoscopy that revealed a 4-cm mass on the right posterior aspect of the uterus independent from her adnexa. Concomitant hysteroscopy revealed normal endometrium without an evident fistula. During chromopertubation, extravasation was seen into the peritoneal cavity from this mass. The mass and fistula tract were excised without a connection found from her cesarean scar, and reconstruction was performed in multiple layers. Endometriotic lesions were noted intraperitoneally in locations distant from the mass. The patient had significant improvement in her symptoms after surgery.

**Conclusion(s):** We present a unique case of a suspected spontaneous posterior uteroperitoneal fistula in the presence of endometriosis without evidence of a connection to her prior hysterotomy scar. Possible etiologies include an undiagnosed, unrepaired hysterotomy extension or a result of chronic inflammation from deep infiltrating endometriosis. Adverse effects on fertility from uteroperitoneal fistulas may be due to disruption of sperm function or endometrial quality secondary to presence of old blood products sequestered in the fistula or due to resultant inflammation from the same. As in this video case, successful treatment of symptoms resulting from an uteroperitoneal fistula requires removal of the fistula tract. The constellation of pelvic pain, dysmenorrhea, postmenstrual bleeding, and infertility should raise suspicion for an uteroperitoneal fistula.