

# Laparoscopic Repair of a Uteroperitoneal Fistula

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## ABSTRACT

Repairs of pelvic fistulas using abdominal, vaginal, and laparoscopic approaches have been described. In the present case report, we describe our experience with the laparoscopic repair of a uteroperitoneal fistula.

**Key Words:** Laparoscopy, Uteroperitoneal fistula, Endometriosis, Fistula, Chronic pelvic pain.

## INTRODUCTION

This is a case report describing the laparoscopic repair of a uteroperitoneal fistula. This patient presented 6 months following an uncomplicated Cesarean delivery with pelvic pain. As part of her diagnostic workup, she underwent a laparoscopy and lysis of adhesions. One month later, her symptoms did not improve and she had a repeat laparoscopy and lysis of adhesions. After a year, she presented with left-sided pelvic pain, heavy menses, dysmenorrhea, and dyschezia. She was referred to where a comprehensive evaluation was performed. At laparoscopy, she was found to have dense adhesions and an endometriotic nodule between the bladder and the lower uterine segment. Following an extensive dissection, a uteroperitoneal fistula was identified and confirmed hysteroscopically. The fistulous tract was successfully repaired laparoscopically. Postoperatively, the patient experienced complete resolution of her pain. She conceived 10 months later and had an uncomplicated repeat Cesarean delivery.

## CASE REPORT

A healthy 24-year-old female, gravida 2, para 2-0-0-2 with no prior surgeries underwent an uncomplicated primary low transverse Cesarean delivery for fetal intolerance of labor and failure to progress. Six months later, she presented to her physician complaining of progressive pelvic pain, dyspareunia, and dysmenorrhea. She did not respond to medical therapy, including narcotics and an empiric course of antibiotic therapy. She underwent an operative laparoscopy and adhesiolysis. The anterior aspect of the uterus was found to be adherent to the anterior abdominal wall up to the level of the fundus. Her symptoms did not improve, and a second laparoscopy and adhesiolysis were performed a month later with some improvement in her symptomatology. After 1 year, she reported persistent pelvic pain, abnormal bleeding, and dysmenorrhea; she was treated empirically with a course of Depot-Lupron with some improvement. She was then referred to our center for further evaluation. A pelvic examination revealed adenexal tenderness. The pelvic ultrasound, urinalysis, and complete blood count were within normal limits. The urine preg-

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nancy test was negative. The patient was anxious to conceive and after extensive counseling elected to proceed with surgery. Hysteroscopy initially revealed a normal uterine cavity with no evidence of leiomyomata or polyps. At laparoscopy, she had superficial implants of endometriosis on the right ovarian cortex and a fibrotic endometriotic nodule in the right pararectal space, which was excised by using a CO<sub>2</sub> laser. She had dense adhesions in the anterior cul-de-sac and an endometriotic nodule between the anterior lower uterine segment and the bladder. A 1-cm defect was identified between the uterus and the peritoneum at the level of the anterior lower uterine segment. This defect was also clearly visible on repeat hysteroscopy. To facilitate the development of the bladder flap, the superior vesical artery was desiccated and incised on the left. The bladder was mobilized inferiorly to the level of the vagina. No bleeding occurred from the edges of the fistulous tract, and these findings were felt to be consistent with a uteroperitoneal fistula rather than with an acute uterine perforation. Under hysteroscopic guidance, the boundaries of the fistula were clearly demarcated. Using the laparoscopic approach, the edges of the fistula were excised with the CO<sub>2</sub> laser and the fresh tissue margins were re-approximated with 2 interrupted sutures of 2-0 Vicryl. A cystoscopy revealed mild interstitial cystitis. No evidence was present of a vesicouterine fistula, cystotomy, or bladder endometriosis. The patient had an uncomplicated intraoperative and postoperative course. She experienced complete resolution of her symptoms and conceived 10 months following her repair. She had an uncomplicated repeat Cesarean delivery and continues to do well.

## DISCUSSION

Uteroperitoneal fistulas are extremely rare. In developing countries, fistulas are generally due to obstetrical injury from prolonged, obstructed labor. However, in the United States, pelvic fistulas are relatively uncommon; vesicovaginal and rectovaginal fistulas have been more frequently described.<sup>1,2</sup> Approximately 75% of vesicovaginal fistulas are a complication of hysterectomy.<sup>3</sup> Other risk factors include carcinoma, radiation, endometriosis, vascular disease, pelvic infection, obesity, smoking, and inflammatory bowel disease. Inadequate healing of the lower uterine segment incision at the time of her prior Cesarean delivery may have caused this patient's uteroperitoneal fistula. It may also have been the result of an undiagnosed uterine perforation during one of her

previous endoscopies. The fistula was identified following an extensive lysis of an adhesion to separate the uterus from its dense attachment to the bladder. The appearance of epithelialized tissue with no bleeding from the tissue margins was most consistent with a uteroperitoneal fistula rather than with an acute uterine perforation.

Advanced laparoscopy has transformed the field of gynecologic surgery. Complex surgical procedures once considered possible only via laparotomy are now being routinely performed laparoscopically. The surgical approach to the management of fistulas depends on the nature of the fistulous tract, and the surgeon's experience and skill. Laparoscopic repair of vesicovaginal fistulas has previously been reported in the literature.<sup>4-8</sup> In the present case, we describe the successful laparoscopic repair of a uteroperitoneal fistula in a patient with endometriosis and a history of an uncomplicated Cesarean delivery.

## CONCLUSION

The range of procedures being performed laparoscopically continues to expand. Our initial experience suggests that in experienced hands, laparoscopy can be used for the management of a uteroperitoneal fistula.

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