Laparoscopic Repair of a Post-myomectomy Uterocutaneous Fistula in a Nulligravida: A Case Report

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Abstract

Introduction: An abnormal passage connecting the skin and the uterus is the uterocutaneous fistula. It is rarely observed after a cesarean section or a gynecological surgery involving the uterus. The presence of an infection further complicates the management.

Case Presentation: A 29-year-old nulliparous woman who had undergone a laparotomy for removal of a large fibroid for primary infertility presented with complaints of abdominal pain and discharge from the scar site. These symptoms did not resolve with antibiotics and analgesics. An ultrasonography was performed and a fistulous tract extending up to the endometrium was revealed. She underwent a laparoscopic resection of the fistulous tract following which she was symptom free.

Conclusion: One of the rarely observed complications following laparotomies and cesarean section is a uterocutaneous fistula. It is even rarer in women with no previous pregnancies. The management involves adhesiolysis and layer by layer closure of the uterus and abdomen wall after excising the tract. Most often a repeat laparotomy is performed to treat the condition, but in the current times it is well known that repeated open surgeries in the peritoneal cavity increase the chances of adhesions which can reduce the chances of pregnancies in nulliparous women. Hence, this article shows a successful outcome of laparoscopic uterocutaneous fistula repair.

Keywords: Uterocutaneous fistula, Uterine diseases, Cesarean section, Pregnancy, Myomectomy, Laparoscopy
abdominal wall almost up to the fundus of the uterus (Figure 2). A probe was passed through the fistulous tract and hysteroscopy was performed to see if the probe was visible in the uterine cavity (Figure 3). The probe was not visible in the distended uterine cavity and this confirmed that the fistula was restricted to the myometrium. A harmonic scalpel was used to carefully dissect the uterus and the bladder from the anterior abdominal wall and the part of the tract entering the uterus was cauterized (Figure 4). Following this, a small incision was made encircling the point of discharge, the entire fistulous tract was excised and the abdomen was closed in layer (Figure 5). The patient was advised to get discharged on the second post-operative day and to continue oral linezolid (600 mg) twice daily for 5 days. The suture removal was performed on the 10th post-operative day. The histopathology report was suggestive of a fistulous tract lined by flattened epithelial cells and composed of dense fibrous tissue with focal speckled calcifications with chronic inflammatory cells (Figure 6). She was then advised to refer for follow-up after a month. The wound had healed well and she was symptom free on review. After a year, the patient was reviewed for elective cesarean section at 38 weeks of gestation and she delivered a male baby weighing 3.25 kg.

**Discussion**

Most cases of uterocutaneous fistula have been observed after classical cesarean section and other gynecological surgeries due to improper closure of the uterus and the layers of the anterior abdominal wall or drains left behind due to post-partum hemorrhage. However, an uterocutaneous fistula seen after a myomectomy in nulliparous women is extremely rare. Postoperative infections weaken the sutures and prevent proper approximation of the tissues. Tuberculosis has also been known to cause uterocutaneous fistulas (3). The most common symptoms associated with an uterocutaneous fistula are chronic discharge from the wound site and abdominal pain. The depth of the fistula is generally measured using imaging modalities such as ultrasonography, fistulography with a contrast dye, CT scan, and MRI. Among these imaging modalities, contrast-enhanced MRI provides proper delineation and
good resolution of the soft tissue and helps understand the extent of the fistula. Additionally, it helps in the assessment of other pelvic organs (1). Although there are not any clear guidelines on how a uterocutaneous fistula is managed, surgery by excising the fistulous tract and step-wise closure has been the accepted mode of treatment (4). There have been studies suggesting the use of gonadotropin-releasing hormone agonist which prevents menstruation, thereby leading to the atrophy of endometrial tissues in the fistulous tract and closing of the tract (5). However, further studies providing ways of medical management are required. Surgical management by laparoscopy has been rarely described in the literature but it provides an excellent vision of tissue planes and prevents complications. Moreover, the healing of the wound is enhanced due to smaller incisions. The main outcome of the repair of a uterocutaneous fistula is that fertility is enhanced. Adhesiolysis and proper closure of the layers help in improving tubal motility, reduce the chance of an ectopic pregnancy and improve the chance of intruterine gestation. In the current era of minimal access surgery, laparoscopy is definitely considered superior to laparotomy as an ideal mode of repair of a uterocutaneous fistula.

Authors’ Contribution
AR: Collection of data and drafting the article. SN: Revising it critically and providing final approval of the version.

Conflict of Interests
Authors declare that they have no conflict of interests.

Ethical Issues
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References