Uterocutaneous Fistula and its Repair

Shahnaz Anwer, Khiaynat Sarwar Hashmi, Noreena Saba and Naheed Fatima

Department of Obstetrics and Gynaecology, Bahawal Victoria Hospital, Bahawalpur, Punjab, Pakistan

ABSTRACT

A uterocutaneous fistula is a rare condition with a few reports in the literature. A 29-year female presented to our department with infected discharge at her previous Pfannenstiel incision. She was $P3^{+1}$ with her last hysterotomy 16 months back due to previous two cesarean sections and missed miscarriage at 24 weeks of gestational amenorrhea. Over a period of time, she developed a fistulous tract between uterus and anterior abdominal wall and had pussy discharge from the same. MRI showed a fistulous tract extending from the endometrial cavity till the anterior abdominal wall. Her laparotomy was done. The fistulous tract was removed and uterus was repaired successfully.

Key Words: *Fistula, Uterus, Hysterotomy.*

How to cite this article: Anwer S, Hashmi KS, Saba N, Fatima N. Uterocutaneous Fistula and its Repair. *J Coll Physicians Surg Pak* 2022; **32(JCPSPCR)**:CR125-CR127.

INTRODUCTION

Uterine fistulae are mostly formed between the uterus and the bladder or bowel.[1-3] A uterocutaneous fistula is a rare condition, and there are only a few reports in this regard in the published literature.[4] Due to its uncommon presentation, optimal treatment of uterocutaneous fistula, is challenging.[5] Herein, one such case which occurred following emergency hysterotomy for missed abortion in a patient with previous two cesarean sections is reported.

CASE REPORT

A 29-year female presented to our department with infected discharge at her previous Pfannenstiel incision. Our patient was $P3^{+1}$ with her last hysterotomy 16 months back due to previous 2 cesarean sections and missed miscarriage at 24 weeks of gestational amenorrhea at some private clinic. The patient was discharged on her second postoperative day. She developed low-grade fever 6 days after surgery. Her wound was clean, but she was unable to lie left laterally because of severe pain in her stitch line. One month after surgery, she developed sudden onset, tender swelling on the left side of her stitch line. The patient went to some private hospital, where I/V antibiotics for 5 days were given. Incision and drainage of abscess were done. Her daily wound wash and wound dressing were done for 4 months. The wound did not heal, superficial re-exploration was also done afterwards

Correspondence to: Dr. Khiaynat Sarwar Hashmi, Department of Obstetrics and Gynaecology, Bahawal Victoria Hospital, Bahawalpur, Punjab, Pakistan
E-mail: ksarwar61@gmail.com

Received: December 10, 2020; Revised: February 16, 2022; Accepted: April 15, 2022
DOI: https://doi.org/10.29271/jcpsp.2022.JCPSPCR.CR125

Patient continued to develop blood- stained pussy discharge from the middle of her stitch line and multiple times debridement was done. Her wound was closed by secondary intention after 6 months. Her wound gaped again 2 months later with oozing of blood from the same point on the third day of her menstruation. Patient then presented to our hospital.

In hospital, her detailed history was taken. On examination, her vitals were: pulse, 82 beats/min, respiratory rate, 16 breaths/min, temperature, 98.6°F and blood pressure, 110/70 mmHg. Abdomen was soft and non-tender. A 1-2 cm opening in middle of the stitch line with mild amount of pussy discharge oozing from wound was seen (Figure 1).

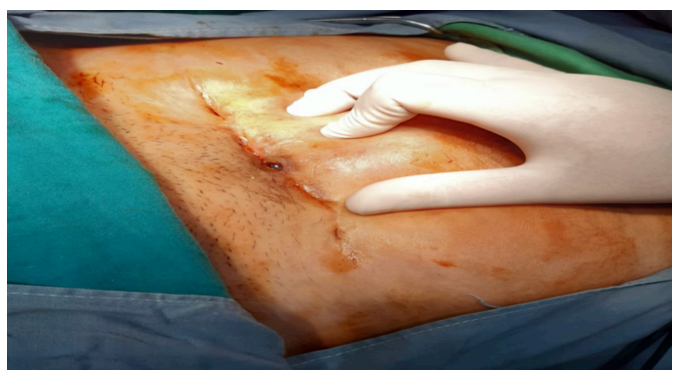

Figure 1: Fistulous tract opening in the middle of abdominal scar.

All relevant laboratory investigations were normal. Her ultrasound abdomen was also done followed by MRI scan, which showed fistulous tract extending from endometrial cavity till the anterior abdominal wall (Figure 2).

After a complete work-up, laparotomy was planned for exploration and fistula repair. The fistulous tract was identified by passing a probe through fistulous opening in Pfannenstiel scar (Figure 3). Abdomen was opened by subumbilical midline incision. Pockets of whitish caseous material were found around

fistulous tract. Fistulous tract was dissected uptil uterus and removed. It was also dissected in the wall of uterus up to endometrial cavity. Omental patch was placed over the uterus to prevent recurrence.

The fistulous tract was sent for histopathology and staining to rule out tuberculosis. Histopathology showed necrotizing granulation tissue. ZN staining could not rule out tuberculosis. Keeping in view, this report and her long history of fever on and off, along with loss of weight and appetite, a multidisciplinary team discussed the case. The patient was kept on close follow-up for six weeks. Her wound was healthy, and the pain got settled.

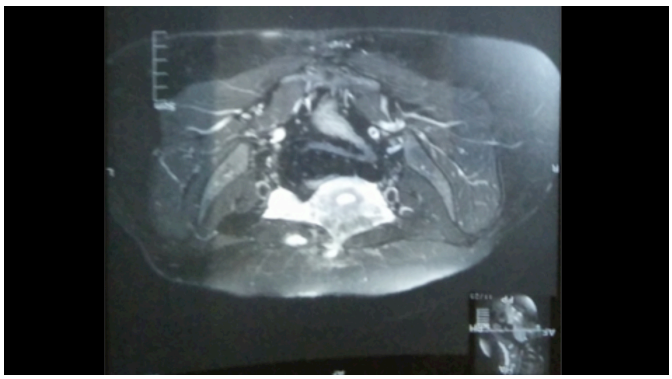

Figure 2: MRI showing fistulous tract from uterinecavity to anterior abdominal wall.

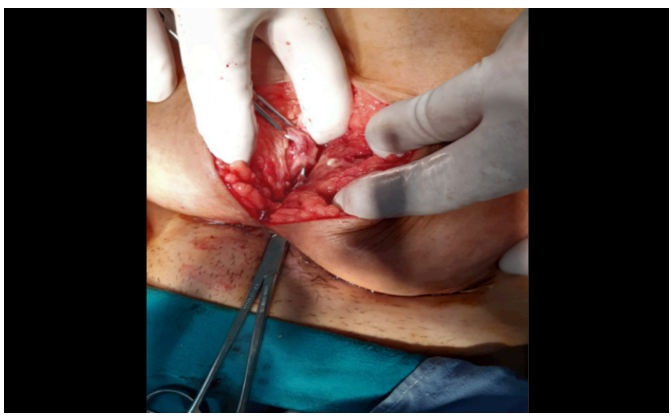

Figure 3: Fistulous tract exploration. Probe showing communication between uterus and skin *i.e.* uterocutaneous fistula.

DISCUSSION

The pathophysiology of uterocutaneous fistula is not fully understood. It can be caused by multiple surgeries in the abdomen, use of drains, and incomplete closure of incisions.[5] Infections and other inflammatory processes may be causative in some cases. Similarly, radiation therapy or traumas to the uterine wall during curettage can also cause fistula formation.[3] This patient developed uterocutaneous fistula following an emergency hysterotomy; an alternative name for cesarean section performed before the age of viability, similar to that reported by Venteka *et al*,[2] Ghodratollah *et al*[4] and Dragoumis *et al*.[6]

This patient reported about 16 months after surgery, while the average time of presentation varies from 02 months to 06 years after the previous surgery.[7-9] Uterocutaneous fistula is usually diagnosed clinically. Patient presents mostly with cyclical bleeding with menstruation from previous scar on lower abdomen, pussy or serosanguinous discharge. This patient presented with bleeding from the wound site during menstruation, similar to that reported by Jinan *et.al*.[10]

Injecting methylene blue through the cervix can help in making a diagnosis in ambiguous cases with patent fistulous tract.[10] Radiographic studies like MRI[5] and CT[4] with contrast are useful modalities for defining anatomical planes in pelvis. Fistulography[4,5] and hysterosalpingography[7] can also be used, while Thubert *et al*. considered hysteroscopy more helpful as a direct visualizing tool.[5] We used MRI for making diagnosis.

Owing to rarity of uterocutaneous fistula, a definitive treatment has yet to be defined. Both medical and surgical modalities can be used. In medical treatment, Gonadotrophin releasing hormone (GnRH) agonists can be used to induce atrophic changes in epithelium and help in closure of fistulous tract. Surgical treatment varies from excision of fistulous tract to minimally invasive laparoscopic surgery, to hysterectomy. Follow-up is recommended.[4,5,10,11] We excised the fistulous tract completely and the omental patch was used to avoid its recurrence.

Although uterocutaneous fistula is rare, it can occur after cesarean section, abortion, abscess, malignancy, foreign body or use of non-absorbable suturing material on the uterus. In case of any such suspicion, proper workup, with probing of fistulous tract and timely treatment is required.

PATIENT'S CONSENT:

The case is reported after consent from the patient.

COMPETING INTEREST:

The authors declared no competing interest.

AUTHORS' CONTRIBUTION:

SA, NF: Idea conception and plan
KSH, NS: literature review and manuscript writing
All the authors have approved the final version of manuscript to be published.

REFERENCES

1. Yadav R, Rani PR, Jayalakshmi D. Uterocutaneous fistula. *J Obstet Gynecol India* 2006; **56**:81-82.
2. Venkata SV, Sajana G, Jahnavi, Sailaja K. Case Report of Uterocutaneous Fistula. *J Women's Health Care* 2014; **4:**2.
3. Eldem G, Turkbey B, Balas S, Akpinar E. MDCT diagnosis of uterocutaneous fistula. *Eur J Radiol* 2008; **67**:e129-e30. doi: 10.1016/j.ejrex.2008.05.009.
4. Ghodratollah M, Asieh SF, Ali R, Shirin TJ. Uterocutaneous Fistula Following Cesarean Section: Successful Management of a Case. *Iran J Med Sci* 2016; **41(2)**.
5. Thubert T, Denoiseux C, Faivre E, Naveau A, Trichot C, Deffieux X. Combined conservative surgical and medical treatment of a uterocutaneous fistula. *J Minim Invasive Gynecol* 2012; **19**:244-7. doi: 10.1016/j.
6. Dragoumis K, Mikos T, Zafrakas M, Assimakopoulos E, Stamatopoulos P, Bontis J. Endometriotic uterocutaneous

fistula after cesarean section. A case report. *Gynecol Obstet Invest* 2004; **57**:90-2. doi: 10.1159/000075384.

7. Sonmezer M, Sahincioglu O, Cetinkaya E, Yazici F. Uterocutaneous fistula after surgical treatment of an incomplete abortion: Methylene blue test to verify the diagnosis. *Arch Gynecol Obstet* 2009; **279**:225-7. doi: 10.1007/s00404-008-0683-7.
8. Tedeschi A, Di Mezza G, D'Amico O, Ermann A, Montone L, Siciliano M, *et al*. A case of pelvic actinomycosis presenting as cutaneous fistula. *Eur J Obstet Gynecol Reprod Biol* 2003; **108**:103-5. doi: 10.1016/S0301-2115(02)00361-5.
9. Promsonthi P, Herabutya Y. Uterocutaneous fistula in term abdominal pregnancy. *Eur J Obstet Gynecol Reprod Biol* 2007; **132**:239-41. doi: 10.1016/j.ejogrb.2006.04.041.
10. Hassan JN, Musa DH, Mohammed AA. Uterocutaneous fistula after cesarean section; Case report. *International J Surgery Case Reports* 2021; **89**. http://doi.org/10.1016/j.ijscr.2021.106621.
11. Seyhan A, Ata B, Sidal B, Urman B. Medical treatment of uterocutaneous fistula with gonadotropin-releasing hormone agonist administration. *Obstet Gynecol* 2008; **111**:526-8. doi: 10.1097/01.AOG.0000281670.94265.5c.