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Case Report

Delayed presentation of enterocutaneous fistula after tubal ligation: a case report

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ABSTRACT

A 50-year-old woman with a history of tubal ligation nine years earlier, presented with a complaint of discharge from the scar site. She was found to have an enterocutaneous fistula. The patient underwent an exploratory laparoscopy. The tract excised and primary repair of bowel done. A unique feature of the case is the formation of an enterocutaneous fistula after an extremely long latency due to gauze threads, which has not been previously reported in the literature.

Keywords: Enterocutaneous fistula, Iatrogenic complication, Gynaecology, Ileum

INTRODUCTION

Enterocutaneous fistula (ECF) is defined as an abnormal connection between the gastrointestinal tract and the skin externally[1]. While the great majority of ECFs are iatrogenic (75–85%), rest (15-25%) occur spontaneously[2]. Any part of either small or large gut can be involved in the formation of the enterocutaneous fistula. The most common site being ileum[3], can lead to significant morbidity.

In gynecological surgery, although recto-vaginal and vesico-vaginal fistulae could occur after hysterectomy, enterocutaneous fistula is rarely encountered[4].

In this case report, we present a rare presentation of enterocutaneous fistula developing 8 years following tubal ligation, managed with definitive surgical intervention. The most successful surgical intervention for the treatment of an enterocutaneous fistula is excision and primary repair or end to end anastomosis[5].

CASE REPORT

A 50-year-old woman had presented to our hospital with a complaint of mild distension of abdomen, and minimal discharge from the previous infraumbilical surgical scar which was waxing and waning over the past one year. She had a history of tubal ligation nine years back and the postoperative period at that time was uneventful. The patient was asymptomatic all this time till she presented to us.

On examination, the general condition was good, vitals were stable, and a small 3.5 cm transverse infraumbilical scar was present. There was feculent discharge from an opening in the scar, the surrounding skin was normal in appearance (Figure 1).

She was then evaluated with laboratory investigations and radiological imaging. The lab parameters like complete blood counts, urea, creatinine, ESR and CRP were within normal limits.

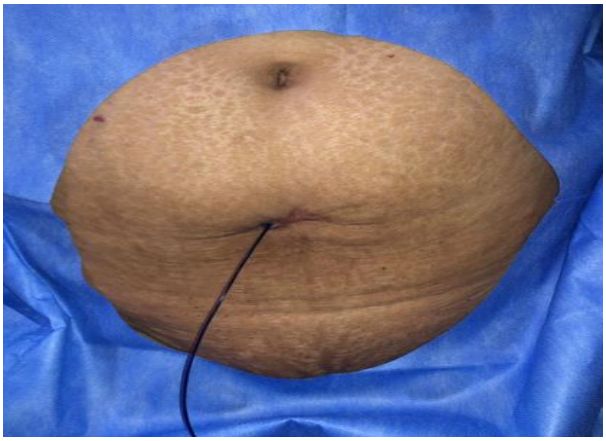

Figure 1: Methylene blue dye injected through the external opening.

The culture report of feculent discharge showed *E. coli*. CECT abdomen was performed which revealed the contrast traversing from the subcutaneous plane of fat in the anterior abdominal wall and draining into the intraperitoneal cavity communicating with the adjacent ileal bowel loops and reaching up to the funds of uterus, a soft tissue attenuation area of approx. 2.7*1.5cm seen anterior to fundus of uterus and adjacent ileum loops. This collection had a connection with the skin surface exteriorly (infraumbilical) opening in the scar. (Figure 2) The radiological diagnosis was suggestive of Ileocutaneous fistula. The decision for exploratory laparotomy was taken. The abdomen was opened through a transverse incision after injecting methylene blue through the fistulous opening. On exploration, a fistulous tract was seen communicating with the ileum approximately 2.5 feet from the ileocecal junction having few gauze threads in it, the fistulous tract was adhered to the right adnexa and fundus of uterus, although no communication was seen with the uterine fundus (Figure 3 and 4). The fistulous tract excision was done with primary repair of ileal defect with 3-0 PDS. The abdomen was closed in layers.

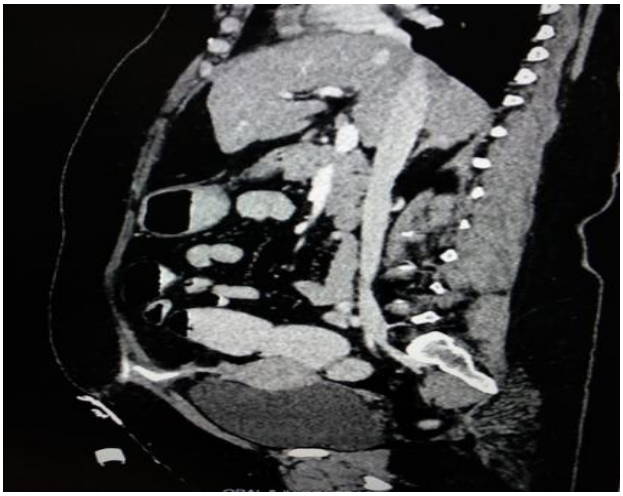

Figure 2: Contrast shows the fistulous tract.

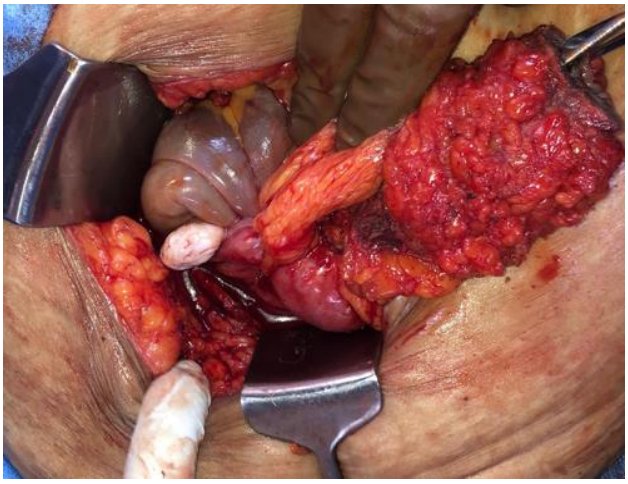

Figure 3: Adhesive ileal loops.

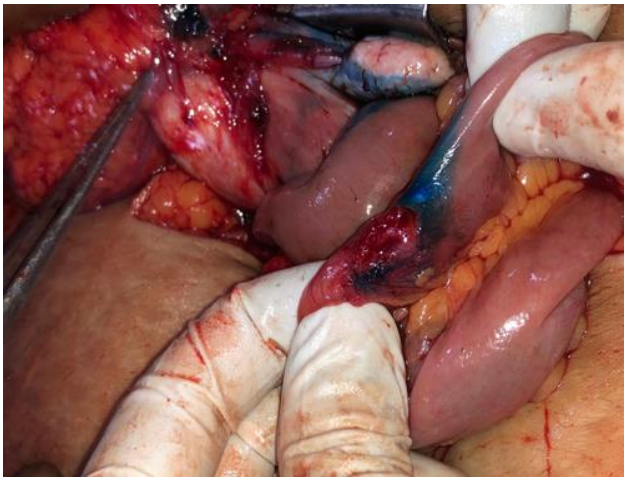

Figure 4: Opening of the fistula as seen in the ileum.

The resected specimen was then sent for histopathology, which revealed features of fibro collagenous tissue lined by granulation tissue, dense mixed inflammatory infiltrate predominantly of lymphocytes, plasma cells, histiocytic foreign body giant cells.

Postoperative period was uneventful and the patient was discharged on postoperative day 5 and advised for regular follow-up.

DISCUSSION

The commonest etiological factor for ECF has been abdominal surgery. However, it is a rare complication after gynecological procedures and usual presentation is seen in the postoperative period between day five and ten[6].We are reporting a rare delayed presentation of ECF after 8 years of tubal ligation surgery.

Presence of feculent discharge, elaborate clinical examination and imaging suggested to make a diagnosis in our case. Clinically diagnosis is by visualizing the

discharge from the operative incision[1]. Based on the volume of the output in 24 hours, ECF is classified as low output (<200 ml), moderate output (200 to 500 ml) and high output (>500 ml)[7]. The present case being a low output fistula indicates good prognosis.[7]

CT scanning provide information on safe sites of entry into the abdominal cavity, define the extent of intestinal involvement, site of origin, to exclude any distal obstruction and gives a picture of fistulous tract anatomy. It also helps in identifying undrained abscess, as intra-abdominal abscesses are associated with fistula in 44% of the cases[8].

The spontaneous closure rates depend on various factors and ranges from 17% to 75%[7] in the first month and less than 10% later on, therefore surgical intervention has to be done in a patient with persistent ECF in spite of sepsis free interval of conservative management for 4-5weeks, if the patient is able to bear the consequences of the surgery[6.]

Surgical management is safe and success in healing rates after surgery is seen over 94%.[9] The patient had definitive surgery and satisfactory result is seen throughout follow up. The cause of fistula formation in this patient appears to be due to foreign body reaction in the form of gauze threads. Most of the delayed presentation of ECF, years after surgery are following meshplasty surgeries and there are no reported cases of ECF caused by gauze threads.

The postoperative causes of gastrointestinal fistula formation reported in data include leak from anastomosis, inadvertent enterotomy, local sepsis, obstruction distally, presence of foreign body like mesh or gauze, and complex wound problem.[10]

CONCLUSION

In this case report, we highlight the incidence of enterocutaneous fistula following tubal ligation presenting after 8 years of surgery, which could be avoided by minimal bowel handling and avoid using gauze and mopping pads with loose threads. Therefore, extreme caution needs to be taken by the surgical team during closure as even a few gauze threads left behind can lead to ECF. Definite surgical intervention is the mainline of treatment to prevent morbidity and complications

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