CASE REPORT

Spontaneous Tubercular Enterocutaneous Fistula

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ABSTRACT

Spontaneous enterocutaneous fistula can occur in patients with Crohn's disease, malignancy, typhoid or radiation exposure. Tuberculosis is a rare cause of enterocutaneous fistula. A 60-year-old female with no significant previous history presented with a feculent discharge from a fistulous opening on the right gluteal region for 3 months. There was also a history of extrusion of multiple *Ascaris* worms through the opening. Abdominal ultrasonography showed no intraperitoneal fluid collections. A contrast-enhanced computed tomography of the abdomen, magnetic resonance (MR) imaging and MR fistulogram revealed cortical destruction of the right iliac bone with fluid coursing along a tract, from the small gut loops attached to bone internally through the iliac bone to the soft tissues in the right gluteal region before opening on the skin. A biopsy from the tissue of the fistula site revealed tuberculosis. The patient responded well to conservative management and was discharged after 4 weeks.

Key words: Biopsy, female, intestinal fistula, tuberculosis

INTRODUCTION

An enterocutaneous fistula is an abnormal communication between a part of the gut and the skin, which can develop in any part of gut from the oropharynx to the anus. Approximately 75% of enterocutaneous fistulas are postoperative, particularly after surgeries for malignancy, inflammatory bowel disease or adhesions.[1] Spontaneously occurring fistulas are encountered in patients with inflammatory bowel disease, malignancies, perforated ulcers, diverticular disease and ischemic bowel disease.[2] In our review of literature, we were able to find very few studies on spontaneous tubercular enterocutaneous fistula.

CASE REPORT

A 60-year-old female presented with a history of abdominal pain and fluid discharge from an opening above the right buttock for 3 months. There was no significant past history or comorbidity. The discharge was initially purulent, but later it became feculent. There was also history of extrusions of multiple worms (*Ascaris lumbricoides)* through the opening. On physical examination, there was a 10-mm fistulous opening near the right iliac crest posteriorly [Figure 1]. There was discharge of feculent fluid through the opening with mild edema of the surrounding skin. There was no evidence of any surgical scar and the rest of physical examination was normal. The routine laboratory investigations showed raised leukocyte count, mildly raised total bilirubin and decreased serum albumin. The 24-h fistula output on average was 300 ml. The cultures of the fluid were sterile and cultures of the swabs from the fistulous tract also showed no positive results. Abdominal ultrasonography showed no intraperitoneal

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fluid collection. Upper and lower gastrointestinal (GI) endoscopies were normal. A fistulogram performed by injecting radiopaque contrast through the fistulous opening failed to reveal any internal communication. A contrast-enhanced computed tomography (CECT) of the abdomen was undertaken, which showed cortical destruction of the right iliac bone with enhancing soft tissue engulfing small bowel loops internally and extending into the gluteal muscles before opening on the surface. To further evaluate the pathology, a magnetic resonance imaging (MRI) with MR fistulogram was performed, which showed destruction of the right iliac bone, with radiopaque contrast coursing through it from the small gut loops attached to the bone internally and to soft tissues in the right gluteal region [Figure 2]. Biopsies were taken from the fistulous opening and tract that showed evidence of chronic inflammation with caseating granulomas, which was suggestive of tuberculosis.

The patient was managed conservatively with antibiotics, intravenous fluids and antisecretory agents. Regular monitoring of the hematological parameters and fistula output was done. The fistula site was covered with a stoma bag to collect the affluent and protect the surrounding skin. This conservative treatment continued for 4 weeks, during which time there was a significant improvement in the physical and biochemical parameters. The fistula output gradually reduced to nil, hematological parameters became normal and serum albumin rose to normal levels. The patient was gradually shifted to oral feeds, which she tolerated and moved bowels normally.

The patient was provisionally discharged from the hospital after starting antitubercular treatment. The patient was doing well in two subsequent follow-ups, with no fresh discharge from the fistula site. Unfortunately, patient was lost in the subsequent follow-ups and could not be traced despite several efforts.

DISCUSSION

Spontaneous tubercular enterocutaneous fistula is very rare.[3] Conditions that can lead to the formation of a spontaneous enterocutaneous fistula include Crohn's disease, malignancies, typhoid, radiation exposure and mesenteric ischemia.[4,5] A spontaneous tubercular enterocutaneous fistula presenting over the gluteal region has not been mentioned in the available literature.

In the case of any GI fistula, there are two main aims for evaluation, that is, to determine the anatomy and cause of the fistula. The anatomy can be delineated using a variety of radiological investigations. A fistulogram can be done using water-soluble iodinated media, which delineates the tract. In addition, barium studies can accurately establish the site of the fistula. CECT can detect the exact tract of the fistula as well as determine any associated pathology.[6] MRI and MR fistulography can also be used, but MRI is generally used for evaluating fistulas in the perianal region. In the future, the use of MRI can be expanded with faster imaging sequences and the use of oral contrast agents. The ultimate diagnosis is obtained by histopathology of the tissue obtained from the fistula site.

Enterocutaneous fistulas are managed depending on whether they are low output (<200–500 ml/24 h) or high output (>500 ml/24 h). High-output fistulas generally require surgery, while low-output fistulas can conservatively be managed in well-preserved individuals. Surgical management involves taking down the fistulous tract with resection and anastomosis of the involved part of the intestine. In critically ill patients, exteriorization

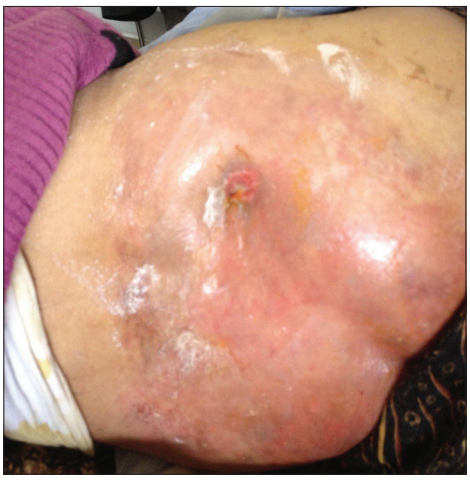

Figure 1: Site of the fistula opening near the right iliac crest

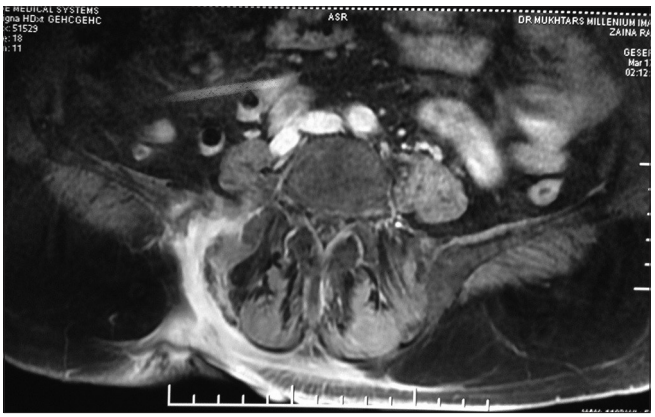

Figure 2: Magnetic resonance fistulogram showing course of contrast material through the right iliac bone into the soft tissues of gluteal region

of both ends (ostomy and mucus fistula) should be considered. In our case, because the fistula was low output, we were able to manage it conservatively.

CONCLUSION

Abdominal tuberculosis can present in the form of an enterocutaneous fistula, though it is rare even in those countries where abdominal tuberculosis is prevalent. Proper evaluation including tissue diagnosis, whenever possible, helps in proper management. Conservative management should always be the first option, provided the fistula is low output and the condition of the patient allows nonsurgical management.

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Conflicts of interest

There are no conflicts of interest.

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