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Scrotal fecal fistula due to enteric perforation in inguinal hernia

Bhavinder Arora

ABSTRACT

Introduction: Obstructed and strangulated inguinal hernia is known for intestinal perforation. Inflamed appendix in hernia sac is known for scrotal abscess. Enteric perforation within hernial sac has formed a fecal fistula through scrotum.
Case Report: A patient presented with fecal fistula in scrotum with right inguinal hernia along with signs of generalized peritonitis. On exploratory, laparotomy was having a loop of ileum in right inguinal hernia sac along with multiple perforations. Multiple perforations in ileum are common in enteric fever. Ileum perforation within hernial sac can lead to inflammation and resultant fecal fistula formation.
Conclusion: Early diagnosis and surgery can prevent fecal fistula formation.

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Keywords: Enteric perforation, Fecal fistula, Inguinal hernia, Scrotum

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INTRODUCTION

Enteric perforation commonly occurs in terminal ileum. Peyer's patches on antimesenteric border are inflamed leading to single or multiple perforation [1]. Ileum perforation occurring in inguinal hernia due to blunt trauma is well reported in literature [2]. A sudden increase in intra-abdominal pressure, transmitted as increased intraluminal pressure in intestine is considered as lead cause of intestinal perforation in inguinal hernia [3]. Traumatic large intestine perforation is known to occur in inguinal hernia [4]. A cough induced perforation of intestine occurring in inguinal hernia due to sudden shearing force has also been reported. Intestinal perforation occurring in all these cases produces generalized peritonitis [5]. Scrotal fecal fistula formation can occur as a result of strangulation of inguinal hernia and sloughing of intestine. The sloughing of scrotal skin leads to fecal fistula formation as part of natural cure of inguinal hernia. The inflammatory process with in inguinal hernia for example Amyand's hernia in which appendix is a content, can form fecal fistula through scrotum. We report the first case of spontaneous scrotal fecal fistula formation due to enteric perforation.

CASE REPORT

A 35-year-old male presented with history of swelling of right inguinoscrotal region since one month, pain in the swelling along with purulent discharge from scrotum since four days and non-passage of flatus and stools since two days. There was history of fever two weeks back persisting for one week. On examination, there was a 9x6 cm swelling in right inguinoscrotal region,

reaching the base of scrotum. Impulse on coughing was not present and there was active fecal discharge from a 2x1 cm opening near the inferior part of the swelling (Figure 1). Swelling was warm and tender on palpation and overlying skin was indurated. Per abdominal examination revealed distention, tenderness and absent bowel sounds. Diagnosis of obstructed inguinal hernia with fecal fistula was made. Total and differential leukocyte count was normal. The Widal test was TO 1:360 positive. Blood culture taken in postoperative period was negative. Ultrasound examination revealed presence of gut and omentum in right inguinoscrotal region and X-ray abdomen showed multiple air-fluid levels. Two separate incisions were used; first right inguinoscrotal for release of obstructed hernia and second midline incision for exploration of abdomen. Operative findings included three liters of infected fluid in the peritoneal cavity. A small intestinal mass forming Maydl's hernia with perforation was taken out of right inguinal hernia sac (Figure 2). Multiple perforations were seen in ileum 10–30 cm proximal to ileocecal junction. The resection of ileum containing all perforations was done. The distal end of ileum was closed and end ileostomy was done. The inguinal repair was done by orchiectomy and meshplasty. The inguinal area was not contaminated so a tension free meshplasty was done to reinforce the posterior inguinal wall. Three months later ileostomy closure was done. Postoperative period and follow-up was uneventful.

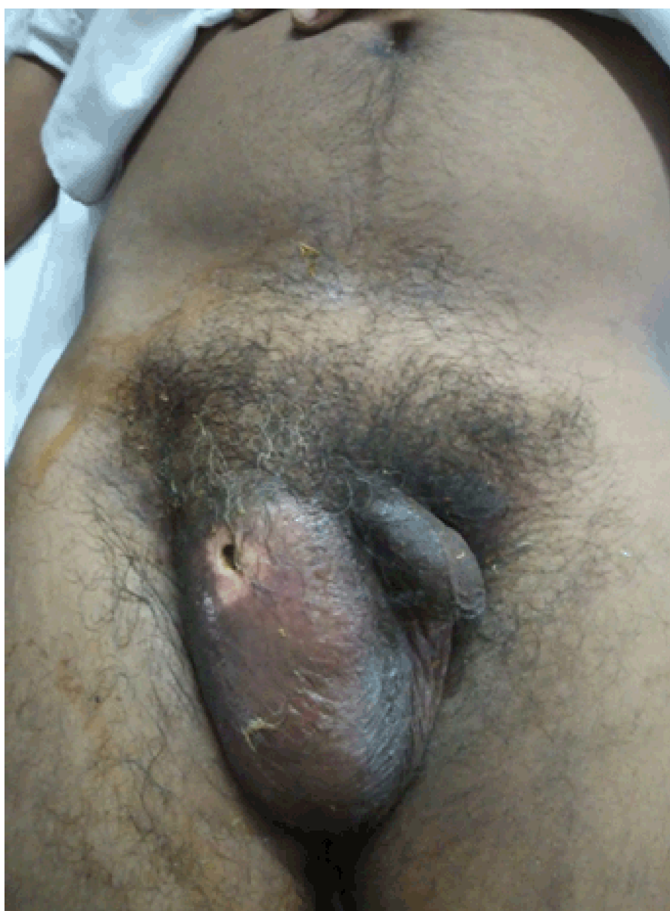

Figure 1: Right inguinal hernia with scrotal fecal fistula.

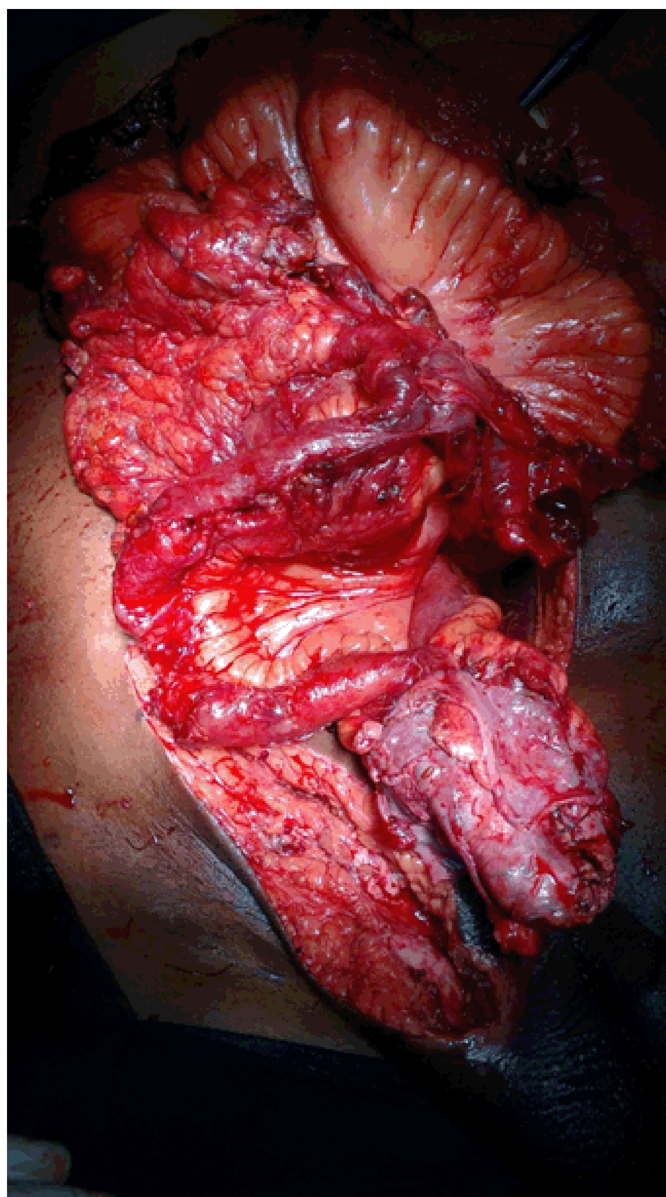

Figure 2: Operative findings showing hernia containing ileum with perforation.

DISCUSSION

The preliminary principle that while examining abdomen the genitalia must be examined, otherwise inguinoscrotal hernia may missed. This hernia may be obstructed or strangulated. Signs of inflammation must be seen in these cases. Many reasons can be assigned for signs of inflammation appearing in case of inguinoscrotal hernia. Signs of inflammation may appear in a delayed case of a strangulated hernia when its contents become gangrenous [6]. Amyand's hernia is rare condition in which appendix herniates into the inguinal hernia. Inflammation of appendix can produce inflamed hernia. This leads to suppuration and sloughs out in process of natural cure forming a fecal fistula [7]. Similar pathology could have occurred in this case, where sequence of

inflammation, suppuration, sloughing and fecal fistula has been followed. The prime cause of inflammation in this case was inflammation of Peyer's patches. The perforation of Peyer's patches is well known complication of enteric fever [8]. However, it is proposed that due to herniation, the intestine can become more vulnerable to microtrauma, causing adherence to hernia sac due to fibrosis [9]. This hypothesis that inflammatory swelling may lead to incarceration, subsequent impaired blood supply, and bacterial proliferation. Muscle contraction and changes in abdominal pressure can cause compression of the intestine, resulting in reduced blood supply and secondary inflammation. Increased intra-abdominal pressure, as in case of abdominal trauma producing high intra luminal pressure in intestine within hernial sac, must have played a role in perforation of Peyer's patch [10]. With this mechanism scrotal abscess formation in a patient with Richter's hernia has been reported [11]. The diagnosis of enteric fever was made by history, operative findings multiple perforations and positive Widal test. The blood culture taken in postoperative period was negative. The formation of fecal fistula in inguinal hernia through scrotum is consistent with mechanism of perforation of small intestine and fistula formation in inflamed inguinal hernia.

CONCLUSION

The genitalia examination is must while examining the abdomen particularly in trauma, intestinal obstruction and peritonitis. The early diagnosis of inguinal hernia is essential to prevent sequence of complication of inflammation, suppuration, sloughing and scrotal fecal fistula formation. Early operative intervention can avoid major surgery like resection anastomosis and scrotal fecal fistula formation in inguinal hernia.

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Author Contributions

Bhavinder Arora – Substantial contributions to conception and design, Acquisition of data, Analysis and interpretation of data, Drafting the article, Revising it critically for important intellectual content, Final approval of the version to be published

Guarantor

The corresponding author is the guarantor of submission.

Conflict of Interest

Authors declare no conflict of interest.

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