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Case Report

Perforation in duplicated intestinal segment: a rare presentation

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ABSTRACT

Enteric duplication is very rare congenital anomaly present mainly with the complain of abdominal pain, perforation, intestinal obstruction and sometimes GI bleeding posing a challenge in diagnosis due to nonspecific symptoms that may mimic other pathologies. Furthermore, the management options including total resection, mucosal striping, and internal drainage of the duplicate depend on the presentation of the patient, site, and length of the involved bowel. In this report we describe a case of ileal duplication in a 65 year old male patient without any prior gastrointestinal morbidity who presented with abdominal pain and distension and underwent exploratory laparotomy for suspected gastrointestinal perforation.

Keywords: Duplication, Anomalies, Perforation, Laparotomy

INTRODUCTION

Intestinal duplications are rare congenital anomalies presenting clinically most commonly in first 2 years of age. They may be associated with other congenital anomalies like vertebral defects, congenital heart disease, anorectal anomalies etc.[1,2] This can be of two different types cystic and tubular. The midgut is more commonly involved followed by the foregut and hindgut.[3-6] Around 80% of enteric duplications are diagnosed in pediatric population group before the age of 2 years. Sarin et al reported association of colonic triplication and urinary tract duplication with double bladder, diphallus and double urethra.[7] Colonic duplications may be associated with imperforate anus and or rectovaginal fistula.[8] Due to infrequency of enteric duplication and its major prevalence in pediatric age group, the analyses of patient characteristics and its clinical presentation in the adult are rare.

CASE REPORT

A 65 year old male presented in surgical emergency department with complain of severe pain abdomen and abdominal distention having history of fall from stairs/ height 2 days ago. He had not passed stool and flatus since then. The patient had no family history of inflammatory bowel disease (IBD) and there were no abdominal masses, cutaneous fistulas or other stigmata of Crohn's disease.

At the time of admission his vitals were: BP- 90/72 mm hg, PR -112 per min, Spo2-97%, RR- 20 per min. He was febrile for 3 days; hence we were suspecting septic shock.

Examination of abdomen revealed a tense, tender, distended abdomen with absent bowel sounds. Empty rectum with normal mucosa and normal anal tone found on digital rectal examination. On chest radiography, gas under right dome of diaphragm was seen. Lab

investigations Hb- 11.2 gm% TLC-25.500 per cumm, ESR 60 mm/hr).

Urea-144, creatinine-2.3 Na+ 122 meq/l, K+ 3.2 meq/l, urine output-20 ml since admission (before shifting to OT). Patient was posted for emergency laparotomy.

Intraoperative findings

Abdomen was opened through midline incision and approximately 1 liter bilious fluid drained. The distal jejunum and most of the ileum was fused with its adjacent segment giving a pouched appearance with a common mesentery (Figure 1). This pouching was present from distal jejunum and approximately whole length of ileum upto ileocaecal (IC) Junction with intervening normal ileum of approximately 1.5 feet (Figure 2). A rent of size 1×1 cm found over the pouched segment of the ileum 6 feet from duodenojejunal (DJ) junction, which was repaired primarily (Figure 3 and 4). Yellowish flakes and exudates were present all over the peritoneal cavity. Peritoneal wash was done with 5 liters of normal saline. Other organs were found to be normal. Pelvic drain was placed. About 20 ml of pus/exudates was collected and sent for culture. Abdomen was closed and patient shifted in ICU-ward.as the patient was on inotropes and required intensive care and monitoring.

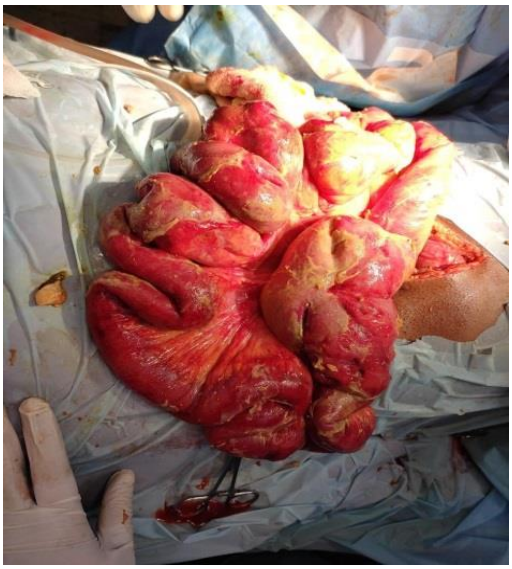

Figure 1: Multiple ileal duplication.

Postoperative period: In ICU, patient was resuscitated further and other associated syndromes findings were looked for (vertebral anomalies, GU malformation etc). However, none could be appreciated. Patient was planned to undergo specific imaging for the same, but the patient expired after 2 days.

Pus culture report: E. coli species predominantly.

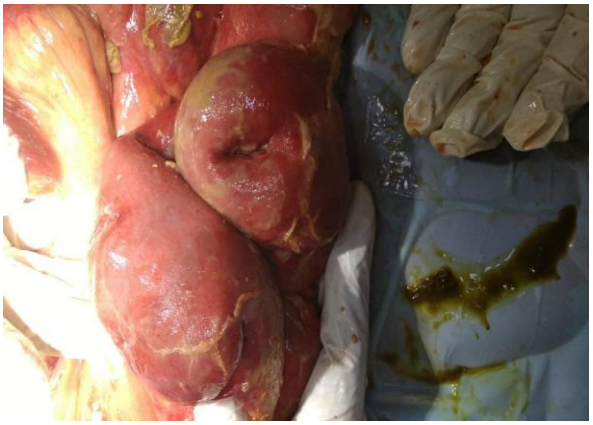

Figure 2: Pouched ileal loop.

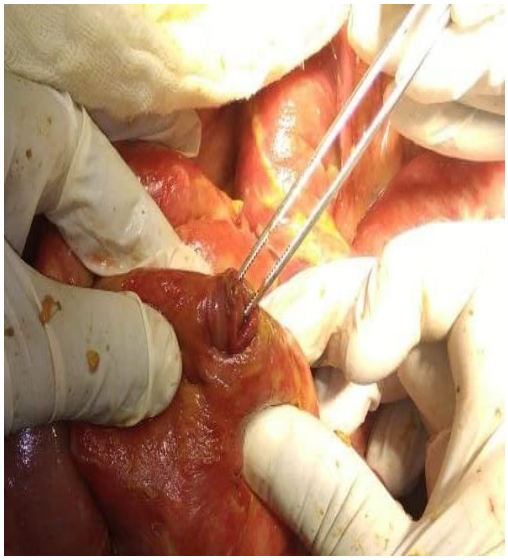

Figure 3: Ileal perforation (size 1×1 cm).

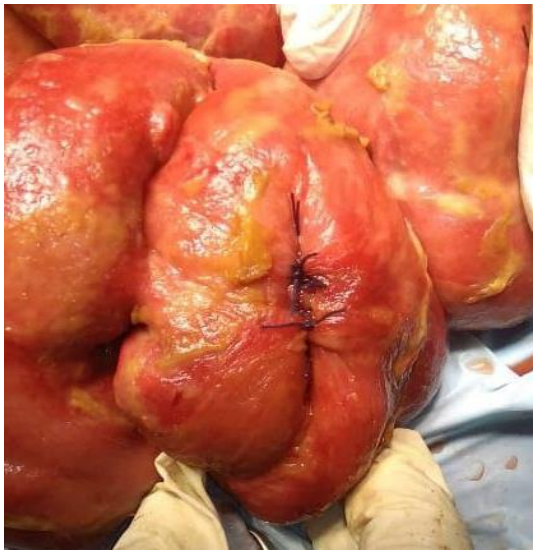

Figure 4: Primary repair done.

DISCUSSION

The differential diagnosis can be a mesenteric cyst or a true or a false diverticula. An enteric duplication shares portion of wall from adjacent small gut and also common blood supply. Clinical presentation of duplication in adults is variable and because these are very rare, they are usually not suspected. A mass can be palpable only in one half of the patients, pain abdomen can also occur but the most common presentations include intestinal obstruction, perforation and bleeding. These anomalies are usually cystic and localized on the mesenteric side of 1st and 2nd part of duodenum.[9] Ileal duplications affecting the distal part of intestine should be distinguished from the meckel's diverticulum, even though the latter is generally present at the anti mesenteric border of the ileum. Associated complications are obstruction, volvulus, perforation, bleeding and malignancy.

27 cases of illeal duplication in adult population have been described in the world literature in over 100 years.[10] Abdominal scan like SICUS, CT or MRI are useful tools for the diagnosis. The major hindrance for the diagnosis is the lack of suspicion which arises due to the extreme rarity of this entity in adult population.[10]

CONCLUSION

Alimentary tract duplications are congenital abnormalities that can arise at any level from the mouth to the anus. The ileum is the most frequent affected site and abdominal pain is the most referred symptom. Diagnosis proves to be difficult due to the rarity of this entity. Also, the symptoms are not specific and hence intestinal duplications are not considered in the usual differential diagnoses. We believe therefore that it will be useful as well as necessary for our fraternity to report such rare cases and to review the most relevant aspects of this entity.

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