Case Report

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Transanal evisceration of bowel loops due to blunt trauma

Abdul Haque M. Quraishi
Department of Surgery, Government Medical College, Nagpur, India

Correspondence: A. M. Quraishi, 22, Vijaynagar, Chhaoni, Nagpur - 440 013, India. E-mail: am_quraishi@hotmail.com

ABSTRACT

A rare case of a five-year-old boy who sustained closed abdominal trauma with rectal tear and evisceration of ileum and sigmoid colon per anum, is presented. He was managed successfully with resection anastomosis of ileum and sigmoid colostomy, which was closed subsequently. The relevant literature is also reviewed.

KEY WORDS: Blunt trauma, evisceration of bowel, rectal tear

INTRODUCTION

Transanal evisceration of bowel loops is an alarming and rare presentation of rectal tear due to blunt trauma. A timely surgery can be life-saving in this potentially fatal injury. A case of transanal evisceration in a schoolboy who met with a roadside accident is presented. The mechanism of injury and management related issues are discussed. This is the sixth and the youngest case to be reported [Table 1]. It is perhaps the only case where both small bowel as well as sigmoid colon prolapsed through the anus following rectal perforation due to blunt trauma.

CASE HISTORY

A five-year-old schoolboy was brought to the casualty department with the history of roadside accident and 'bowels coming out from the bottom'. He was hit by a running truck, which stopped after the accident. He was said to have been trapped under one of the pair of the rear wheels. The other wheel was on a heap of coarse aggregate. The boy was removed with the help of a truck jack.

On examination, he had no airway or breathing problems. He had a blood pressure of 110/60 mm Hg and a pulse rate of 120/minute. He was fully conscious and well oriented. A 3 cm long lacerated scalp wound was noted in the parietal area. However, there were no signs of intracranial compressing lesion. There was no chest injury. Abdominal examination showed a 5 cm muscle-deep lacerated wound in the right iliac fossa. There was tenderness and guarding in the lower abdomen. There was no pelvic bone injury. The genitalia were normal. About 30 cm of distal ileum and 15 cm of sigmoid had eviscerated out of the anal opening [Figure 1]. There was no sign of injury in the perineum. Back and spine examination was unremarkable.

The boy was resuscitated; a nasogastric tube and a urethral catheter were passed. The ultrasonographic examination revealed a collection of 100 ml in the pelvis. There was no injury to the liver, spleen and kidney. An emergency laparotomy was done through a midline incision. There was a hemoperitoneum of about 200 ml. A tear in the small bowel mesentry of about 6 cm with venous bleeding was noted. A 5 cm tear in the intraperitoneal part of the rectum was seen anteriorly.

Table 1: Cases of transanal small bowel evisceration caused by blunt trauma in children

Cases	Reference	Age	Sex	Procedure	Outcome
1	Qureshi, 1977[3]	9	M	Resection anastomosis	Survived
2	Vesey and Shine, 1984[4]	7	M	Small bowel resection; suture of rectal tear	Survived
3	Ellul *et al.* 1995[5]	14	F	Partial rectal resection	Survived
4	Ellul *et al.* 1995[5]	9	M	Small bowel resection; suture of rectal tear	Survived
5	Rechner and Cogbill, 2001[6]	9	M	Small bowel resection; suture of rectal tear, colostomy	Survived
6	Present case	5	M	Small bowel resection; suture of rectal tear, colostomy	Survived

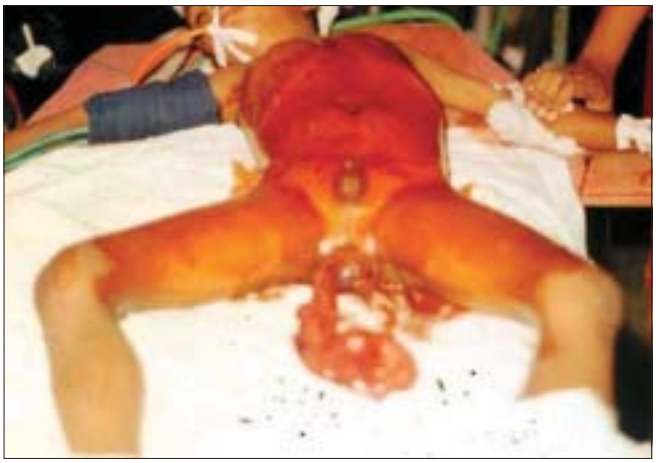

Figure 1: Eviscerated bowel protruding from the anal opening

Through this rent 30 cm of ileum and 15 cm of sigmoid colon had prolapsed and extruded through the anal opening. There was no injury to any other viscera.

The mesenteric bleeding was controlled. The extruded ileum was of doubtful viability hence it was resected and pulled from below, followed by anastomosis of the two ends. The sigmoid was brought up and cleaned. It was viable. The rectal tear was closed with vicryl in single layer interrupted sutures and a loop sigmoid colostomy constructed. A mass closure of the abdomen was done. Third generation cephalosporin along with metronidazole was administered. The child had an uncomplicated post-operative period. The colostomy was closed after two months. He was doing well at subsequent follow-up.

DISCUSSION

In children, traumatic bowel evisceration per anum can occur due to, penetrating injury, suction injury or blunt abdominal trauma. When history does not explain the physical findings, child abuse should always be suspected and reported to help protect the child.[1]

Cain and co-workers described five cases of small bowel evisceration in children caused by swimming pool drain. This occurred following full thickness rectal tear due to negative pressure of the strong vacuum.[2]

An English language literature search, on the MEDLINE, revealed that there were only five reported cases of transanal evisceration of bowel due to blunt trauma in children [Table 1]. As against adult cases there was no instance of associated rectal prolapse as a predisposing cause in these children. All reported cases have been dealt with surgically with a favorable outcome.

Rupture of rectum following blunt abdominal trauma occurs due to sudden sharp rise of intra-abdominal pressure at the time of impact. The pressure forces the freely mobile bowel loops through the rent. When the pressure is sustained over a long period of time, the loops travel through the rectum to present outside. The sealing effect of the prolapsing loops of intestine limits the peritonitis.

All patients of transanal evisceration require surgical management. As long segments of small intestine may be denuded off the mesentery, resection anastomosis of the non-viable bowel may be required. A colostomy should be done selectively depending on the nature of rectal tear, presence of contamination; time elapsed after injury and general condition of the patient.

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