Case Report **OPEN ACCESS**

Spontaneous perforation of rectum with evisceration of small bowel simulating intussusception

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Abstract

Context: Spontaneous perforation of rectum is a rare event; however evisceration of the small bowel through the perforated site without predisposing factors is extremely rare, complex and worth reporting. **Case report:** A 14 years old presented to us apparently as a case of intussception. The operative findings revealed it to be a case of spontaneous perforation of rectum with evisceration of the small bowel through the perforation. **Conclusion:** Sudden increase in the intra-abdominal pressure leads to the perforation in the chronically deranged rectal wall and pushes the small bowel loops into the pelvis and through the perforated rectum to appear transanally.

Keywords: Spontaneous perforation, rectum, evisceration, chronic straining.

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Introduction

Evisceration of small bowel through a spontaneous perforation in rectum is an extremely rare event. Although 55 cases of evisceration of small bowel through anus due to perforation of rectum have been documented in world literature since the first report in 1827 by Benjamin Brodie [1], the number of cases without any significant predisposing factor is very less.

The article reports a case of spontaneous perforation of rectum with evisceration of small bowel in a normal bowel without an apparent cause which is an extremely rare presentation.

Case Report

A 14 years old male was admitted with the chief complaint of acute lower abdominal pain which started suddenly after he passed stools. The abdomen was tender on deep palpation in the left iliac fossa and bowel sounds were sluggish. However, on per rectal examination gut loops were felt in the anal canal and finger was stained with blood thereby making intussusception the most probable diagnosis. Basic hematological and radiological investigations were normal. Patient was taken to the operation theatre for laparotomy. A lump was felt in the left iliac fossa once the patient was anaesthetized for surgery. Peroperative findings revealed a distended and a tubular sigmoid colon (intussusception like appearance) and twisting of ileal loops around the sigmoid colon simulating ileo-sigmoid knotting. On further mobilization and gentle traction on the ileal loops gangrenous segment of ileum became evident till it finally emerged out from a longitudinal perforation (approximately15mm) in the anterior wall of rectum just above the peritoneal reflection (Fig.1) thereby stunning the entire surgical team. No contamination of peritoneal cavity was noticed. Gangrenous segment of ileum was resected and primary anastomosis was done. Rectal tear was closed primarily in single layer after taking the biopsy from the whole edge which revealed non specific inflammation. On repeated questioning in postoperative period patient denied any history suggestive of constipation, rectal prolapse, trauma, weight lifting, rectal instrumentation or homosexual activity; however intermittent straining at stools was present. Postoperative period remained

uneventful. Barium enema and colonoscopic examination in post operative follow up period were normal.

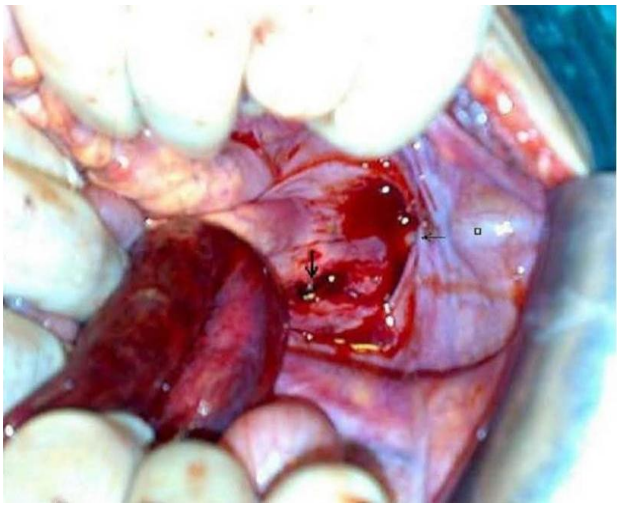

Fig.-1 Figure showing rectal perforation and the gangrenous segment of ileum which had eviscerated through the perforated rectum. Urinary bladder (small square), the peritoneal reflection (thin arrow) and the rectal perforation (thick arrow) are clearly visible.

Discussion

Spontaneous rectal perforation usually occurs due to excessive straining on the anterior rectal wall with a pre-existing pathology like, diverticulosis, colitis, ulceration, malignancy, adhesions, irradiation, rectal and uterine prolapse and as a consequence of iatrogenic injuries and blunt trauma abdomen [2, 3]. It has also been reported to have occurred during sleep [4]. Chronic strain because of the underlying pathology causes progressive deepening of rectovesical and rectouterine pouches and the rectal wall becomes thin and weak as it is unsupported [5]. Contraction of the abdominal muscles increases the intra-abdominal pressure and spontaneous perforation occurs through this thinned out area, mostly at the ant mesenteric border where the blood supply is poorest [4, 5]. Similarly, in a constipated patient the changed defecation pattern in some individuals per se causes a preliminary lesion in the intestinal wall which becomes friable due to chronic inflammation of its layers and may perforate.

Nevertheless intestinal evisceration through the perforated gut without any contamination of the peritoneal cavity is enigmatic and little difficult to explain. In a recent study it was reported that 73.8% cases were associated with rectal prolapse [6]. Wrobleski et al. presumed that two factors predisposed patients to this unusual complication: one was the sudden increase in intra-abdominal pressure and the other was the presence of rectal prolapse [7].

Whatever the mechanics involved the sudden increase in the intra-abdominal pressure seems to be the main contributing factor. It pushes the ileal loops into the rectovesical/rectouterine pouch which violently presses upon the anterior rectal wall [8]. As the week rectal wall gives way the ileal loops sneak in. This seems to be the only plausible explanation for the spontaneous act particularly when there are no signs of peritonitis as in our case.

In a perforated simple ulcer of rectum there is an area of induration around edges while a spontaneous perforation appears slit like, runs longitudinally (rarely transversally) with minimal signs of inflammation. It can occur in all age groups, the youngest one reported was six years old and oldest being ninety six years old [2, 5]. The treatment follows basic surgical principles. If reduced bowel is not viable it should be resected and followed by anastomosis or ileostomy depending upon the condition of the patient and contamination involved. In the follow up period patients should be investigated to detect exact etiology and cause specific management will prevent recurrence and complications.

Therefore, one must remember that per rectal palpation of bowel loops may be more than just rectal prolapse or intussusception.

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