INTRODUCTION

Transanal evisceration of the small bowel is rare, but when it occurs, a breach in the rectal wall is present. Evisceration may occur through a breach in the perineum or transvaginally and both may present in a similar fashion due to the anatomical proximity of these regions to the anus. Diagnosis is based on careful history and examination. This is the case of a patient who presented with transanal small bowel evisceration following attempted digital reduction of her chronically prolapsing rectum. The case is exceedingly rare, and its pathophysiology and management are discussed.

CASE REPORT

A 66-year old Parkinsonian woman presented to the emergency department with a 1-hour history of acute evisceration of small bowel from her anus. A history was obtained from her attendant as she had suffered a cerebrovascular accident (CVA) five years prior with a resulting expressive dysphasia and was thus a poor historian. She had a chronically prolapsing rectum and because of her previous stroke and Parkinsonism required habitual assistance with its reduction when it prolapsed during defecation. On this occasion, assisted reduction was attempted with her standing erect instead of in the usual lateral decubitus position. This position resulted in more force than usual being applied and as a result, a hole was torn in the rectal wall with immediate small bowel evisceration ensuing.

On examination, the patient was in discomfort, but not in acute pain. She was tachycardic but normotensive and afebrile. On abdominal examination, the abdomen was scaphoid, but there was no evidence of peritonism. Anal examination revealed a prolapsed rectum and eviscerated loops of jejunum and ileum through an anterior rectal tear (Figure 1). Peristaltic waves and mild bowel congestion were noted, but there was no evidence of strangulation or ischemia clinically. Gentle reduction of the small bowel through the rectal tear was attempted in the emergency department but was unsuccessful. The bowel was wrapped in warm, moist saline-soaked swabs, and the patient was taken to the operating theatre.

An examination under anaesthesia was performed and revealed a 6 cm breach of the anterior rectal wall 10 cm from the anal verge (Figure 2). Another attempt at reduction of the small bowel was undertaken but again proved unsuccessful. A thorough a lower midline laparotomy was performed and the bowel loops were carefully pulled back into the peritoneal cavity. The bowel was deemed viable after close assessment.

ABSTRACT

Evisceration of the small bowel through a rectal perforation is rare. This is the case of a 66 year-old female presenting to the Accident and Emergency Department with transanal evisceration of her small bowel resulting from attempted digital reduction and subsequent tear of her chronically prolapsing rectum. Reduction of the prolapsed small bowel and primary repair of the rectal tear were carried out at laparotomy. The management of this case is discussed.

Key words: Small bowel prolapse. Transanal. Evisceration. Rectal perforation.

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Figure 1: Eviscerated loops of jejunum and ileum through an anterior rectal wall tear.
There was no faecal contamination of the peritoneal cavity. A biopsy of the edge of the rectal tear was taken to exclude malignancy, and the tear was then closed in two layers with polydiaxanone (PDS) suture material. A redundant rectosigmoid colon and a deep rectovaginal pouch (of Douglas) were noted. Peritoneal lavage was performed with warm normal saline, and the abdomen was closed in layers. The patient made a full recovery. Histopathology of the rectal biopsy revealed no evidence of malignancy or other pathology.

 Besides her CVA and Parkinsonism, her medical history was also notable for asthma, ischemic heart disease and grade III congestive cardiac failure. She was therefore deemed an unsuitable candidate for rectopexy.

DISCUSSION

The aetiology of transanal evisceration of the small bowel is varied. The most common cause of perforation seems to be spontaneous rupture, with the majority of cases occurring in patients with a history of rectal prolapse. In the absence of prolapse, rectal rupture may also occur, and has been attributed to sheer stress on the anterior rectal wall caused by postoperative adhesions; and chronic constipation, possibly due in part to rectal wall compression and compromise of blood supply from the mass effect of faecal loading, and from the act of forcing at stool which causes increased intraluminal pressure. Isolated cases of traumatic rectal rupture have been reported in the literature, and range from self-inflicted and accidental trauma, abdominal crush injury and iatrogenic rectal injury. It may also represent an unusual presentation of child abuse. Swimming pool suction injury has also been described as a particularly rare but potential cause. Reports of the latter suggest that this type of injury may be more common in pediatric populations, and carries a potential risk of vascular thrombosis and bowel necrosis.

As the small bowel tends to prolapse through a comparatively narrow breach in the rectal wall, it is prone to strangulation and ischemia, especially in the presence of an increased anal tone or sphincteral spasm. Adequate resuscitative measures and prompt surgical intervention are the mainstay of treatment. The surgical procedure performed depends very much on the findings at presentation and at surgery. Attempts should be made to determine the nature of the evisceration and to distinguish transanal evisceration from transperineal or transvaginal. If bowel strangulation is present, bowel resection, with or without primary anastomosis, and stoma formation may become necessary. Definitive repair of the rectal prolapse (rectopexy) should be considered in suitable candidates. This may be performed perineally, transabdominally or laparoscopically. If chronic constipation is present preoperatively, sigmoid resection can be performed at the time of rectopexy. The successful use of a Thiersch repair in the management of evisceration following spontaneous rectal rupture has been reported.

Whilst the diagnosis of this condition is primarily clinical, imaging may have a role in its management. A plain abdominal film may detect peritoneal and retroperitoneal emphysema. In addition, CT scanning may be useful in detecting free air outside of the rectosigmoid junction. This would suggest parietal rupture and can help plan surgery.

The presented case is the third reported case of rectal rupture and small bowel evisceration following attempted digital reduction. It is believed that the patient’s posture during attempted reduction played an important role in addition to an acquired rectal wall weakness from repeated prolapse and reductions. The gravitational weight of the loops of small bowel in the pelvic cavity against the walls of the rectum would have rendered reduction of the prolapse technically more difficult, resulting in the use of more digital force than usual. Rectal perforation may have been avoided had this reduction been attempted in the lateral decubitus or lithotomy position. The findings of a redundant rectosigmoid colon and a deep Pouch of Douglas at surgery were in keeping with her history of chronic rectal prolapse as both are contributory factors. Finally, though no case of small bowel evisceration in conjunction with rectal perforation secondary to carcinoma has previously been reported, biopsy of the perforation edge is probably advisable because of the theoretical likelihood of such an occurrence.

REFERENCES


