



Small bowel transanal evisceration mimicking a rectal prolapse.

A case report and review of literature.



Ann Ital Chir, Digital Edition 2017, 6
pii: S2239253X17027839 - Epub, Nov. 14
free reading: www.annitalchir.com

Giuseppe Pisano*, Enrico Erdas*, Fabio Medas*, Umberto Pisano**, Pietro Giorgio Calò*

*Department of Surgical Sciences, University of Cagliari, Cagliari, Italy

**Department of Clinical and Interventional Radiology, Royal Victoria Hospital, Belfast, UK

Small bowel transanal evisceration mimicking a rectal prolapse. A case report and review of literature.

Transanal intestinal evisceration is a very uncommon and dramatic occurrence, linked most frequently to rectal prolapse rupture or, very rarely, to traumatic pathology. The Authors describe a case of a 74-year-old female patient who required urgent hospital admission because of a seemingly strangulated rectal prolapse. During surgical preparation the protruding mass was recognized as small bowel loops herniating from the anus. Evisceration was due to spontaneous rectal wall rupture, most likely caused by increased abdominal pressure and consequent breach through the weakened rectum. Surgical treatment consisted in small bowel resection combined with an Hartmann's procedure.

Spontaneous rectal rupture without a pre-existing rectal prolapse is a rather infrequent and challenging condition; its mechanism is still incompletely explained. The management is surgical and may range from primary repair up to extensive intestinal resection to include a defunctioning colostomy.

KEY WORDS: Rectal prolapse, Spontaneous rectal rupture, Transanal evisceration

Introduction

Rectal prolapse is defined as a full thickness circumferential descent of the rectum through the anus caused by intussusception¹⁻³. Its clinical recognition is straightforward and the differential diagnosis lies only in distinguishing between a purely mucosal prolapse and a full-thickness prolapse^{2,4}.

Rectal prolapse is by far the main cause of a mass protruding through the anal canal^{1,5-9}. The Authors describe a case of small bowel evisceration initially mimicking a

rectal prolapse. Clinical presentation, mechanism of development and surgical treatment are discussed following a literature search of Medline, Embase and the Cochrane Library conducted in January 2017, using the MeSH terms or relevant keywords "transanal", "evisceration", "prolapse".

Case Report

A 74-year-old lady required urgent admission to our surgical unit for abdominal pain and a recent onset large haemorrhagic mass protruding from the anus. Her background included a cholecystectomy with biliary endoscopic sphincterotomy, arterial hypertension, chronic constipation, neuropsychiatric disturbances and osteoporosis. Five months earlier she had undergone a neuropsychiatric stimulator implantation for chronic back pain. The clinical presentation was consistent with a rectal prolapse, which the admitting doctor was unsuccessful at

Pervenuto in Redazione Settembre 2017. Accettato per la pubblicazione Ottobre 2017

Correspondence to: Giuseppe Pisano, General Surgery, Department of Surgical Sciences, Policlinico di Monserrato, Asse Didattico, SS 554, bivio per Sestu, 09042 Monserrato, Cagliari, Italy (e-mail: gpisano@unica.it)



Fig. 1: Transanal protrusion of the large haemorrhagic mass with a rectal prolapse appearance.



Fig. 2: Induction of general anesthesia and muscle relaxation made evident several small bowel loops protruding through the anus.



Fig. 3: Operative specimen: jejunal loop penetrating through the rectal wall laceration.

reducing into the perineum (Fig. 1). The patient was urgently taken into the operating room shortly after routine blood tests and radiographic assessment with the intention to proceed via a perineal approach.

After placing the patient in a Lloyd-Davies position, the induction of general anesthesia and muscle relaxation, it became evident that the protruding mass, having

increased its volume, was represented by multiple small bowel loops protruding through the anus. Some of those already had undergone necrotic hemorrhagic infarction (Fig. 2). Through a combined approach of abdominal traction and manual pressure on the perineum, the intestinal loops were reduced. Nearly 4 feet of non-viable jejunal loops were then resected. Further exploration of the pelvis revealed a 3-4 cm longitudinal tear over the anterior rectal wall, just above the peritoneal reflection, through which the small bowel herniation occurred (Fig. 3).

A sigmoido-rectal resection was then performed with rectal division at the elevators plane followed by an end-colostomy.

The patient fared well in the postoperative course and was discharged 13 days post-operatively.

Histology of the rectal specimen demonstrated features of ischaemic hemorrhagic necrosis with perforation of the rectal wall, without signs of inflammation or diverticular disease.

Discussion and Conclusions

Since its first description by Brodie in 1827, nearly 70 cases of transanal small bowel evisceration have been reported up to now ^{1,5,7-10}. Small bowels can herniate through the anus following a trauma of the rectosigmoid colon: such event has been described by different reports where the mechanism of the evisceration arises from blunt trauma or suction injury, as well as iatrogenic harm ^{11,12}.

In the majority of cases however, transanal evisceration is an uncommon complication of a rectal prolapse, as opposed to bleeding or strangulation ^{2,4,13}.

Rectal prolapse has been considered as a sliding hernia in which the viscera and the pouch of Douglas form the hernial content ^{8,14}; the subsequent intussusception of the rectal wall, along with

repeated episodes of procidentia and reduction, lead to a progressive weakening of the former, which becomes thinner and more fragile ^{1,5,7}. Rectal rupture can then occur when a sudden increase of intra-abdominal pressure develops ¹, after minor trauma such as digital self-evacuation of stools ^{15,16} or even few days after colonoscopy ². A rectal rupture can ensue while attempting to reduce an incarcerated prolapse ¹⁷.

In the absence of prolapse, a spontaneous rectal perforation is quite rare: since 1979, we have come across only 6 cases with intestinal transanal evisceration where the mechanism of rectal rupture could be considered spontaneous ^{1,10, 18-21}; in those cases, the mechanism of perforation is not clearly understood although diverticulosis, chronic inflammatory diseases, adhesions, malignancies, irradiation can be considered predisposing factors ¹⁹: however it is felt that none of them played a significant role in the current case.

The aetiology of a spontaneous rupture may rely on an

abnormally wide and deep rectovesical/rectovaginal pouch, which can occur after prolonged constipation^{1,10}; the loops of small bowels lying on the peritoneal reflection apply constant pressure over the anterior rectal wall, leading to luminal protrusion, progressive weakening and thinning of the latter^{7,18} which is the most susceptible portion to ischaemia^{5,18,21}. A sudden increase in intra-abdominal pressure during straining is then a crucial exacerbating factor.

Surgical treatment of bowel evisceration depends on general patient conditions, intestinal viability of the bowels and contamination of the peritoneal cavity^{14,19}; procedures vary from a simple rectal suture to extensive resection and terminal colostomy^{1,10,19-21}. The great majority of the cases have been treated with an open approach but a laparoscopic procedure is feasible: Antony and Memon described a successful outcome after a laparoscopic reduction of extruded bowel together with direct suturing of the rectal tear¹⁸.

References

1. Wroblewski DE, Dailey TH: *Spontaneous rupture of the distal colon with evisceration of small intestine through the anus: Report of two cases and review of literature*. Dis Colon Rectum, 1979; 22: 569-72.
2. Li JZ, Kittmer T, Forbes S, Ruo L: *Case report: Sigmoid strangulation from evisceration through a perforated rectal prolapse ulcer. An unusual complication of rectal prolapse*. Int J Surg Case Rep, 2015; 10:238-40.
3. Maternini M, Guttadauro A, Pecora N, Gabrielli F: *Perineal stapled prolapse resection (PSPR) for external rectal prolapse in high morbidity patients*. Ann Ital Chir, 2016; 87:476-80.
4. Lohsiriwat V: *Anorectal emergencies*. World J Gastroenterol, 2016; 22: 5867-878.
5. De Vogel PL, Kamstra PEJ: *Rupture of the rectum with evisceration of small intestine through the anus: A complication of advanced rectal prolapse. Case report*. Eur J Surg, 1994; 160:187-88.
6. Shoab SS, Saravanan B, Neminathan S, Garsaa T: *Thiersch repair of a spontaneous rupture of rectal prolapse with evisceration of small bowel through anus. A case report*. Ann R Coll Surg Engl, 2007; 89:1-3.
7. Furuya Y, Yasuhara H, Naka S, Yamazaki K, Yanagie H, Wakahara T, et al.: *Intestinal evisceration through the anus caused by fragile rectal wall*. Int J Colorectal Dis, 2008; 23:721-22.
8. Narayana Swamy Chetty YV, Sridhar M, Pankaja SS: *Transanal evisceration of small bowel. A rare surgical emergency*. J Clin Diagn Res, 2014; 8:183-84.
9. Kornaropoulos M, Makris MC, Yettimis E, Zevlas A: *Transanal evisceration of the small bowel a rare complication of rectal prolapse*. Int J Surg Case Rep, 2016; 19:38-40.
10. Morris AM, Setty SP, Standage BA, Hansen PD: *Acute transanal evisceration of the small bowel: Report of a case and review of the literature*. Dis Colon Rectum, 2003; 46:1280-283.
11. Juern J, Schmeling D, Feltis B: *Transanal wading pool suction-drain injury resulting in complete evisceration of the small intestine: Case report and review of the literature*. J Ped Surg, 2010; 45: e1-e3.
12. Medappil N, Prashanth AK, Latheef A: *Blunt abdominal trauma with transanal small bowel evisceration*. J Emerg Trauma Shock, 2013; 6:56-57.
13. Berwin JT, Ho TK, D'Souza R: *Small bowel evisceration through the anus-report of a case and review of literature*. BMJ Case Report.
14. Jeong J, Park JS, Byun CG, Yoon DS, Sohn SK, Lee YH, Chi HS. (Abstract): *Rupture of the rectosigmoid colon with evisceration of the small bowel through the anus*. Yonsei Med J, 2000; 41:289-92.
15. Martínez Pérez A, Torres Sánchez MT, Richart Aznar JM, Martí Martínez EM, Martínez-Abad M: *Transanal evisceration caused by rectal laceration*. Ann Coloproctol, 2014; 30:47-49.
16. Trinidad A, Shakeel M, Jehan S: *Transanal small bowel evisceration following digital reduction of a chronically prolapsing rectum*. J Coll Physicians Surg Pak, 2010; 20:760-62.
17. Hovey MA, Metcalf AM: *Incarcerated rectal prolapse-rupture and ileal evisceration after failed reduction: Report of a case*. Dis Colon Rectum, 1997; 40:1254-25.
18. Antony MT, Memon MA: *Successful laparoscopic repair of spontaneous rectosigmoid rupture with an acute transanal small bowel evisceration*. Surg Laparosc Endosc Percutan Tech, 2005; 15:172-73.
19. Bhat S, Azad TP, Kaur M: *Spontaneous perforation of rectum with evisceration of small bowel simulating intussusception*. N Am J Med Sci, 2010; 2:596-97.
20. Papapolychroniadis C, Kaimakis D, Gainnoulis K, Parlapani A, Karpini E, Georgiou M, et al.: *Spontaneous rupture of the sigmoid with small bowel evisceration through the anus*. Tech Coloproct, 2004; 8 Suppl 1: s126-28.
21. Salvador Rosés H, Falgueras Verdaguer L, Marinello F, Farrés Coll R, Codina Cazador A: *Perforación rectal transanal espontánea con evisceración del intestino delgado: A propósito de un caso y revisión de la literatura*. Cir Esp, 2016 <http://dx.doi.org/10.1016/j.ciresp.2016.09.004>.