CASE REPORT

Transanal evisceration of small intestines due to chronic rectal prolapse: Still an intriguing case

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ABSTRACT

Evisceration of the small intestine from a perforated rectum is a rare condition, particularly seen in elderly women. We present a case involving an 83-year-old woman with a history of chronic rectal prolapse and no other comorbidities. The patient declined surgical intervention for her rectal prolapse, and one month later, she presented with evisceration of the small intestine from the anus. The intervention was a laparotomy followed by Hartmann's procedure, which is the most recommended procedure. No small bowel resection was necessary. Although the management of this case was adequate and timely, the patient did not survive. This case underscores that elective repair of rectal prolapse might prevent this very rare but potentially fatal complication of transanal small intestinal evisceration.

Keywords: Hartmann's procedure; Rectal prolapse; transanal evisceration.

INTRODUCTION

Rectal prolapse is defined as the protrusion of the rectum from the anus. This condition predominantly affects women aged 70 to 80 years. There are more than a hundred different surgical techniques described for elective operations, which are grouped into transabdominal and transanal approaches. [1] If not treated electively, serious complications, including evisceration of the small intestines from a perforated rectum, can occur.

From 1827 to the present, evisceration of the small intestine from the anus following perforation of the rectum has been reported as a rare condition in case reports.[2] In most cases, chronic rectal prolapse plays a role.[3] Additionally, female gender and advanced age are recognized as risk factors for the evisceration of abdominal organs, especially the small intestine, following spontaneous perforation of the rectum. [4] Whatever the reason may be, this condition is recognized as a surgical emergency requiring immediate intervention. In this report, we present a fatal case despite all interventions.

CASE REPORT

An 83-year-old female patient presented to our clinic with a one-year history of complete rectal prolapse of 15 cm, which required digital assistance for defecation. A robotic mesh rectopexy operation was recommended, as the patient had no comorbidities. However, the patient declined the surgery. One month later, she returned to our emergency clinic with evisceration of the small intestine from the anus. This event occurred while she was straining during forceful defecation, as reported by a relative (Fig. 1). Her condition was critical with unstable vital signs; her blood pressure was 60/20 mmHg, heart rate was 138 beats per minute, and temperature was 37 degrees Celsius. She was immediately taken to the operating room for a laparotomy. There was no sign of fecal or purulent contamination of the peritoneal cavity, as illustrated in Figure 2. When the small bowel was repositioned inside the abdominal cavity, a perforated area was observed on the anterior wall of the rectosigmoid junction. Since the eviscerated small intestinal segment was ischemic, we applied topical papaverine and noted that the small intestine regained viability

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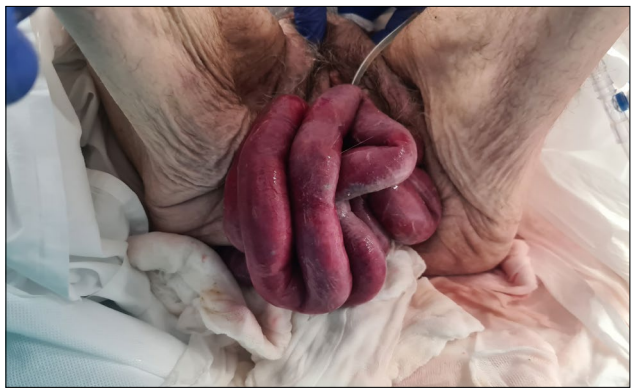

Figure 1. Evisceration of the small intestines from the anus.

after 10 minutes. Due to her unstable condition, bowel resection and anastomosis were deemed inappropriate. Instead, Hartmann's procedure was performed. Postoperatively, she was monitored in the intensive care unit. Pathological examination showed diverticular disease of the sigmoid colon, with no evidence of diverticulitis. Her condition deteriorated with signs of sepsis on the ninth postoperative day, prompting an abdominal computed tomography scan, which revealed free air in the abdomen. She was returned to the operating room. During exploration, it was discovered that there was a 180 degrees dehiscence of the end colostomy from the abdominal wall. No other pathological findings were observed, including in the small intestine, and the colostomy was subsequently revised. On the fifth postoperative day, the patient died despite intensive inotropic support.

DISCUSSION

Transanal evisceration of the small intestine due to a perforated rectum or sigmoid colon has been recognized for nearly 200 years. Approximately 100 similar cases have been reported in the literature following rupture of the rectum.[3,4] This condition is life-threatening and requires emergency surgical intervention. In a review of 38 cases published in recent years, five were fatal despite immediate intervention.[4] Similarly, the patient presented here did not survive despite our timely interventions. The primary cause of mortality was shock. As this patient population is generally over 65 years old, the mortality rate tends to be higher. However, with advancing knowledge of this condition and the development of interventional techniques, survival chances have improved.[3]

Several potential causes of rectal perforation exist. Given the history of rectal prolapse, digitation-induced perforation by the patient herself is a likely cause. Other proposed risk factors include diverticular disease, rectal prolapse, uterine prolapse, and solitary rectal ulcers, which can lead to thinning of the rectal wall.[5] Although the patient had histopathologically confirmed sigmoid diverticular disease, she had not experienced any attacks of diverticulitis prior, thus uncomplicated colonic diverticula cannot be considered a direct cause of the rupture. Other risk factors include female gender, advanced age, and a history of rectal prolapse, all present in our case.[4] Indeed, rectal prolapse is identified as the underlying cause of rupture in most cases reported in the literature, with rates of 73% according to Wrobleski et al. and 67% according to Czerniak et al.[3,6] Although surgical correction of rectal prolapse was recommended, our patient declined due to concerns about potential postoperative morbidities. This is the main reason for mortality, which could have been avoided.

It has been found that there is almost always a precipitating event that increases intra-abdominal pressure, such as defecation, vomiting, heavy lifting, or digital manipulation.[3,7] The acute presentation of our case and the herniation of the small bowel through the perforated rectum explain the absence of fecal contamination in the abdominal cavity. All cases demonstrate that the rupture occurs at the anterior side of the rectosigmoid junction with a similar diameter of the perforated area (Fig. 2). The rupture is attributed to chronic ischemia, inflammation, friction, and pressure on the anterior wall of the rectum due to rectal prolapse.

To prevent evisceration of the small bowels following perforation, rectal prolapse must be addressed with an elective operation. Elective abdominal approaches such as suture rectopexy, resection rectopexy, anterior mesh rectopexy, posterior mesh rectopexy, and ventral mesh rectopexy have lower recurrence rates but higher complication rates compared to perineal procedures like Delorme and Altemeier.[8,9] Furthermore, Delorme and Altemeier procedures, which can

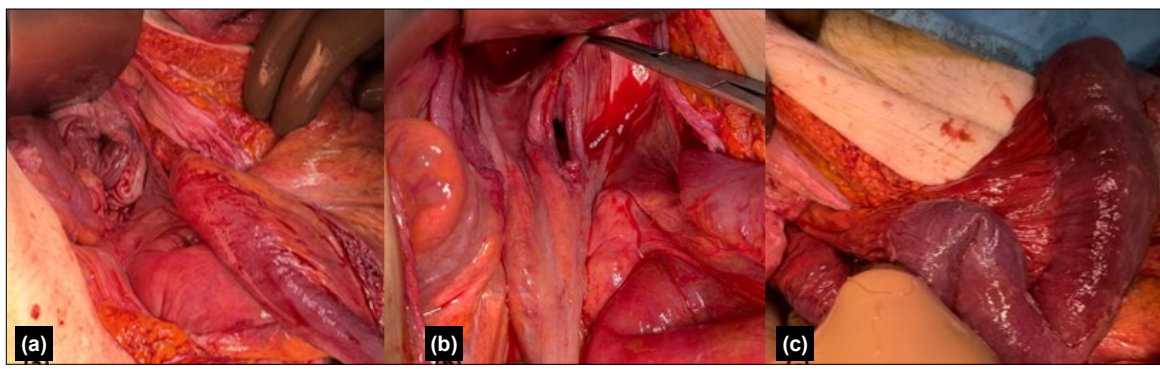

Figure 2. (a) No signs of contamination with fecal or purulent content. **(b)** Perforated area on the anterior side of the rectosigmoid junction. **(c)** Herniated small bowel segment.

be performed under spinal anesthesia, may be considered for patients at high risk from general anesthesia.

For this specific emergency, various surgical approaches are preferred, including suturing of the tear only, suturing and colostomy creation, Thiersch repair, and Hartmann's procedure.[3,4,10] According to a literature review published in 1979, almost all of the 28 patients who died had a history of chronic rectal prolapse.[3] The mortality rate was 63% at that time.[3] In a review of 38 case reports published in 2021, the rate is reported as 13%.[3] The reduction in mortality rates can be linked to the increasing number of colostomy and Hartmann's procedures. The creation of a colostomy increases survival chances. A study on spontaneous rupture of the rectum demonstrated that performing a colostomy instead of just suturing the tear decreased the mortality rate from 46% to 23%.[11] Hartmann's procedure has reduced the mortality rate to as low as 0%.[11,12] Hartmann's procedure was deemed the best option for our case.[3,6] Additionally, rapid preoperative management is important to decrease the mortality rate.[13] If an ischemic bowel segment is present, resection should also be considered in addition to Hartmann's procedure.[7] In our case, the eviscerated small bowel segment became viable after papaverine application (Fig. 2c); therefore, small bowel resection was not performed.

CONCLUSION

We conclude that evisceration of the small intestine following rectal perforation due to rectal prolapse is a rare event and this situation is more common among the elderly, with a high mortality rate in emergency settings. Elective and timely surgical management of rectal prolapse prevents life-threatening complications and reduces mortality rates.

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OLGU SUNUMU - *ÖZ*

Kronik rektal prolapsus sonucu ince bağırsakların transanal eviserasyonu: Nadir ve şaşırtıcı bir olgu

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Kronik rektal prolapsusa bağlı rektum perforasyonu sonucu ince bağırsağın anüsten evisere olması özellikle yaşlı kadınlarda görülen nadir bir durumdur. Bu olguda kronik rektal prolapsus öyküsü olan ve ek hastalığı bulunmayan 83 yaşındaki kadın hastada rektal prolapsusa bağlı ince bağırsakların transanal eviserasyonu gelişen acil vakayı sunduk. Rektal prolapsus nedeniyle elektif şartlarda ameliyat önerilen ve cerrahi müdahaleyi kabul etmeyen hasta, bir ay sonra ince bağırsağın anüsten evisere olması ile acil servise başvurdu. Acil laparatomi sonrası evisere ince bağırsak ansları batın içine redükte edildi. İnce bağırsak beslenmesinin normal olması nedeniyle ince bağırsak rezeksiyonu yapılmadı. Rektosigmoid bölgeden perforasyon için en çok önerilen ameliyat olan Hartmann prosedürü yapıldı. Zamanında gerekli müdahele yapılmış olmasına rağmen ameliyat sonrası 14. gün hasta eksitus oldu. Bu olgu, rektal prolapsusun elektif cerrahi tedavisinin, potansiyel olarak ölümcül olabilecek transanal ince bağırsak eviserasyonu gibi bir komplikasyonun önlenmesindeki önemini göstermektedir.

Anahtar sözcükler: rektal prolapsus, transanal eviserasyon, Hartmann prosedürü

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