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Case Report

Strangulation of Giant Rectal Prolapse: A Case Report

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Introduction: Rectal prolapse is the complete protrusion of the rectum through the anal canal. Incarceration rarely complicates rectal prolapse. Even more rarely, it becomes strangled and gangrenous, necessitating emergency surgery.

Case presentation: We report an extremely rare case of strangulated acute rectal prolapse as the first manifestation of rectal prolapse. The patient was a 26-year-old man who presented on admission a 20 × 6 cm semispherical mass extra-anally. Rectosigmoidectomy associated to sacral rectopexy was performed with resection of 20 cm of the incarcerated rectum and sigmoid colon. The postoperative course was quite uneventful with an excellent final result after colostomy closure and continuity restoration.

Conclusion: The successful treatment of this patient illustrates the value of surgery in the difficult and unusual case scenario of rectal incarceration.

Key words: Anorectal disease – Incarceration – Rectosigmoidectomy – Rectopexy

Rectal prolapse is the complete protrusion of the rectum through the anal canal.[1] It is most common in elderly people, but can rarely affect individuals at any age. It was described in Ebers Papyrus as early as 1500 BC.[2] There are many contributing factors: constipation, pregnancies, diastasis of the elevators, redundant sigmoid colon, deep cul-de-sac, abnormal rectal angle, and lack of retroperitonealization of the rectum.[3]

Incarceration rarely complicates rectal prolapse. Even more rarely, it becomes strangled and gangrenous, requiring emergency surgery.

To the best of our knowledge, our case is the first to describe a strangulated acute rectal prolapse as the first manifestations of this pathology on patient

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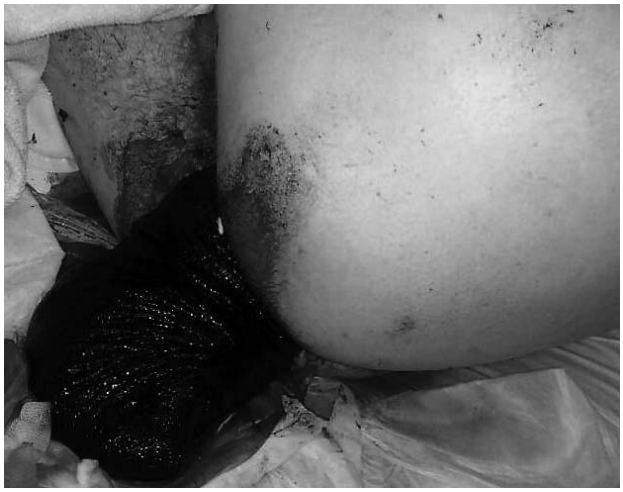

Fig. 1 Strangled rectal prolapse on admission to the emergency department.

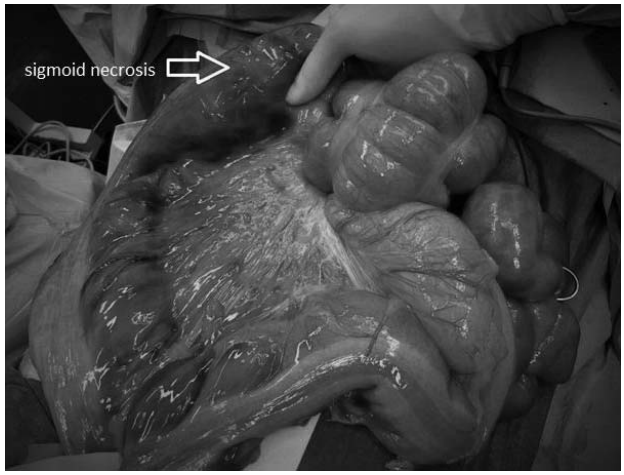

Fig. 2 Intraoperative picture showing a necrotic area of the sigmoid colon.

without a relevant previous history or symptoms of rectal prolapse.

Case Report

A 26- year-old man was admitted to the emergency department with a painful extra-anally protruding mass evolving for 24 hours. He reported a sudden protrusion of a mass from the anus during defecation, accompanied by excruciating anal pain. The patient has no medical history, especially no previous history or symptoms of rectal prolapse or constipation.

Physical examinations showed an abdominal distention without signs of peritonitis. At the anus, there was a prolapse, strangled, edematous, dark red mass measuring 20 cm long by 6 cm wide (Fig. 1).

The laboratory data only showed a slightly elevated white blood cell count (11,800/μL) and C-reactive protein level (2.4 mg/dL).

Given the failure of the external manual reduction and installation of necrosis, we decided to perform an emergency laparotomy. The incarcerated sigmoid and rectal wall was reduced back into the normal position by both transanal and intraabdominal maneuvering. Since the anterior wall of the sigmoid, upper and medium rectum was necrotic (Fig. 2), rectosigmoidectomy was done by resecting 20 cm of the necrotic rectosigmoid colon with the creation of a colostomy (Hartmann's procedure) and combined to a sacral rectopexy. The postoperative recovery was uneventful with bowel function recovery on 2nd day postoperative returning home on the 6th postoperative day. Histopathologic examination revealed transmural necrosis in resected sigmoid and rectum.

Six months later, the patient was readmitted for colostomy closure. Anal manometry, colonoscopy, and barium enema were normal. The colostomy was closed without further complications. Since, and for a 2-year period, the patient has been well.

Discussion

Incarceration rarely complicates rectal prolapse. Even more rarely, it becomes strangled and gangrenous,[4] especially in patients with recurrent rectal prolapse. This case is one of the rare cases of incarcerated acute rectal prolapse, without a relevant previous history or symptoms of predisposing pathology.

The essential sign of strangulation is irreducibility painful of prolapsed rectum. It is edematous, swollen mucosa is purplish red. When this initial stage is passes, the mucosa becomes cyanotic and sweating is abundant and fetid.[5]

The exact mechanism of incarceration of rectal prolapse in this case during the first episode is unclear. No neoplastic mass can be identified as precipitating the cause. However, it is possible to assume that the sphincter mechanism and pararectal tissues have not undergone the chronic laxity and stretching that are seen with recurrent rectal

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prolapse. The relatively tight sphincter mechanism and pararectal tissues probably prevent the acute incarcerated rectal prolapse from spontaneous reduction.

There is yet no formal agreement on the technique to use and very few references were found on the management of rectal strangled prolapse.[6,7]

Several external maneuvers have been described for the reduction of strangled prolapse: ordinary table sugar for its drying effect on tissue edema, the injection of hyaluronidase,[8] the wet bathing and elastic compression wrap.[6–9] These actions are effective if done before the swelling becomes too large. They must be performed under general anesthesia, gently to avoid the prolapse breaking, source of evisceration.[9] When the prolapse is not reducible and signs of ischemia are present, surgery is needed. In this case, the technique of choice remains the rectosigmoidectomy with rectopexy and the results are satisfactory.[10] Several others surgical techniques have been described with the goal of the anatomical anomaly correction and to restore normal anorectal physiology. We distinguish techniques of resection, fixation or a combination of both. The approach may be perineal or abdominal, by laparotomy or laparoscopy.[11,12] Abdominal rectopexy techniques such as those Ripstein (anterior rectal sling), Wells (posterior rectal) or Loygue Orr (latero-rectal) are most used. Randriamananjara *et al*[6] call first for a colostomy to allow resorption of edema, before proceeding to a rectopexy. By perineal approach, the interventions of Delorme (mucosectomy and rectal muscle plication) and that of Altemeier (rectosigmoidectomy with or without colostomy) are most frequent.

The transabdominal procedures, posterior rectopexy and resection with posterior rectopexy, offer better functional results, the recurrence rate associated with transabdominal procedures is lower than those seen with transperineal procedures. Currently, the latter are indicated for elderly patients with a considerable surgical risk. For younger patients and older patients with less surgical risk factors, transabdominal procedures are preferred. Therefore, resection with rectopexy is the most widely performed procedure.

Conclusion

A rare case of incarcerated acute rectal prolapse, without a relevant previous history or symptoms of predisposing pathology, is described in our case report. The exact mechanism of incarceration is unclear. However, the surgical treatment with resection and rectopexy techniques remain the most appropriate.

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