Altemeier Operation for Recurred and Strangulated Rectal Prolapse

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Abstract Strangulation of an acute rectal prolapse is a rather unusual entity that represents a surgical emergency. We describe an extremely rare case of recurrent, incarcerated, and strangulated acute rectal prolapse. The patient underwent emergency perineal rectosigmoidectomy (the Altemeier operation). The postoperative course was uncomplicated with an excellent final result.

Keywords Anorectal disease · Rectal prolapse · Strangulation · Perineal rectosigmoidectomy · Altemeier operation

Introduction

Rectal prolapse, or procidentia, is defined as a protrusion of the rectum beyond the anus. Complete or full-thickness rectal prolapse is the protrusion of the entire rectal wall through the anal canal; if the rectal wall has prolapsed but does not protrude through the anus, it is called an occult (internal) rectal prolapse or a rectal intussusception. Full-thickness rectal prolapse should be distinguished from mucosal prolapse in which there is protrusion of only the rectal or anal mucosa [1]. It is a rare clinical entity that continues to arouse the enthusiasm of practitioners. The strangulation of rectal prolapse is a rare complication, whose urgent surgery is always indicated. Through a new case of

strangulated rectal prolapse, we propose to focus on the therapeutic management and results.

Case Report

A previously fit and healthy 57-year-old man, operated 12 years ago for rectal prolapse (direct rectopexy by laparotomy), presented to the emergency department with recurrent and incarcerated rectal prolapse appeared 5 h before consultation. Physical examination revealed a very edematous and irreducible rectal prolapse with areas of gangrene (Fig. 1). The patient was operated in emergency. The intervention consisted of a perineal rectosigmoidectomy with coloanal anastomosis using the Altemeier procedure: the rectal section was made just above the dentate line, the colonic section was performed in the colon lowered by transanal next to the dentate line (Fig. 2a), and the anastomosis was performed manually with interrupted sutures (Fig. 2b). A transanastomotic rubber blade was left (Fig. 2c). A protective colostomy was not performed due to the patient's history of laparotomy. The postoperative course was uncomplicated and the patient was discharged on the ninth postoperative day. However, he reported severe anal incontinence requiring the use of trim. Histopathological examination revealed severe ischemic alterations with total destruction of the rectal mucosa and the muscularis mucosa. After 6-month follow-up, there was no recurrence and anal continence had significantly improved (mild gas incontinence).

Discussion

The rectal prolapse is a rare disease whose treatment remains controversial. No technique has proved its

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Fig. 1 A very edematous and irreducible rectal prolapse with areas of gangrene

superiority over the other. There are techniques of resection, fixation, or combination of both. The surgical approach may be abdominal or perineal [1, 2].

A rare complication of rectal prolapse is the strangulation (2–4 %) [2, 3]. When the incarcerated rectal prolapse cannot be manually reduced, a few techniques may help the bowel return to its anatomic position such as sedation, Trendelenburg position, and topical application of salt and sucrose which may decrease bowel edema and enable reduction. A strapping can be combined in order to maintain the reduction [3]. The defin-

itive treatment of the prolapse is then carried out later. Failing to reduce or in case of necrosis (as was the case in our patient), the only treatment is an emergent surgery [2, 3]. The intervention of choice is the Altemeier procedure [2, 3]. Delorme's technique is difficult because of the presence of edema and is contra-indicated in case of necrosis. With Altemeier operation, the immediate postoperative morbidity is low with an anastomotic leakage risk practically nil [4, 5]. In the long term, the recurrence rate is acceptable (14–16 %), regardless of the length of resection and the addition of levatorplasty, although it is still higher than abdominal approaches [4, 5]. Improvement of continence is achieved in 62–85 % [4, 5]; the addition of levatorplasty would provide better results [3].

Conclusion

Altemeier intervention is the only possible surgical procedure in case of strangled rectal prolapse unresponsive to conservative treatment or complicated by necrosis. It is associated with good results for both short and long terms.

Fig. 2 Altemeier operation: **a** the lowering colon divided next to the dentate line (arrow) after rectal section, **b** coloanal anastomosis, and **c** final aspect with a transanastomotic rubber blade

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