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Altemeier's procedure for the treatment of incarcerated rectal prolapse: A case report and literature review

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Case Report

Colorectal Surgery

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Introduction: Rectal prolapse is the protrusion of the entire thickness of the rectal wall through the anal sphincter. It was one of the first surgical problems recognized by the medical profession. However, many facets of its etiology and treatment remain controversial. There is still debate about the pathophysiological mechanism of rectal prolapse, but chronic abdominal strain is present in most cases. The goal of surgical treatment is to perform anatomical correction of the prolapse, restore continence, and improve constipation and bowel movements.
Case report: In this article we present the case of an adult patient with massive irreducible rectal prolapse who was successfully treated with a perineal rectosigmoidectomy known as the Altemeier's procedure.
Conclusion: The type of surgery for patients with rectal prolapse should be selected taking into account the general condition of the patient, the degree of prolapse and the surgical experience, however, when we are in the presence of an incarcerated rectal prolapse, the surgical procedure of choice is to be the perineal rectosigmoidectomy (Altemeier's procedure) as occurred in our case.

Key Words: rectal prolapse, perineal rectosigmoidectomy, Altemeier's procedure

Introduction

Rectal prolapse is the full-thickness protrusion of the rectal wall through the anal sphincter. It was one of the first surgical problems recognized by the medical profession. However, many facets of its etiology and treatment remain controversial. (3) In the Ebers papyri, ancient Egyptians described laxative suppositories and enemas containing honey in the treatment of rectal prolapse. Moschocowitz identified rectal prolapse as a sliding perineal hernia by identifying a deep cul-de-sac in affected patients. (7)
The prevalence of external rectal prolapse is relatively low, it is estimated that it occurs in less than 0.5% of the general population. It occurs more frequently in the elderly population and in women. Patients can present with a wide variety of symptoms. True complete external prolapse is associated with a large rectal mass or bulge that may not shrink spontaneously upon completion of a bowel movement and straining. Most may have more nonspecific complaints such as: fullness or lump within the rectum, constipation, fecal incontinence, obstructed defecation, mucus drainage and / or bleeding. (4)
There is still debate about the pathophysiological mechanism of rectal prolapse, but chronic abdominal strain is present in most cases. The most common form is the chronic course of the disorder that allows diagnostic tests such as sigmoidoscopy, videodefecography, endoanal ultrasound, and anal manometry to be performed. In the context of incarceration, diagnostic tests are omitted since urgent surgical treatment is mandatory, as is the case with our patient.
The goal of surgical treatment is to perform anatomical correction of the prolapse, restore continence, and improve constipation and bowel movements. (1). In this article we present the case of an adult patient with massive irreducible rectal prolapse who was successfully treated with perineal rectosigmoidectomy known as the Altemeier's procedure. This procedure is well described as a surgical approach that can be less invasive and that can be used in cases of irreducible prolapse.

Case report

A 51-year-old male patient with no known chronic comorbidities, without previous surgeries, was admitted to the emergency department with a history of rectal prolapse of 2 hours of evolution after straining for defecation, which he tried to reduce

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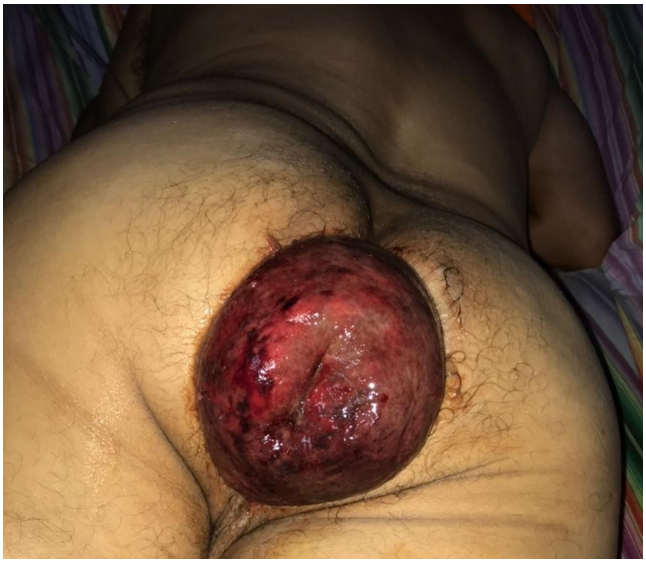

Figure 1. Incarcerated rectal prolapse.

manually without success. (**Figure 1**). The patient had history of suffering from rectal prolapse since the age of 3, which used to be reduced spontaneously or manually by himself. In the present time, symptoms were an irreducible rectal mass associated with moderate pain and bright red bleeding.

Physical examination revealed rectal prolapse with marked edema and complete areas of ischemia at the level of the anal border. Initially, medical treatment was given with local hypertonic dextrose and an attempt was made to reduce it in the operation room with a spinal block without any success, which is why it was decided to perform the Altemeier procedure.

In lithotomy position, under balanced orotracheal general anesthesia, a circumferential incision with electrocautery was made in the entire rectal wall, starting 2 cm above the dentate line. Mesorectum and mesosigmoid ligation was performed with 0 silk and with a bipolar instrument. The prolapsed rectosigmoid was resected and a coloanal anastomosis was created with points separated in 2 planes. **(figure 2)**

The post-operative course was satisfactory and without complications. **(figure 3).** The patient received 7 days of antibiotics (ceftriaxone and metronidazole) and analgesia (metamizole). He was discharged on the eighth postoperative day with a 5-point Wexner scale and without eventualities. The pathology of the surgical specimen showed: Rectal prolapse showing ulceration of the mucosa and cryptic abscesses associated with hemorrhages and thrombosed internal hemorrhoids.

In the posterior assessment 2 months later, the patient denies data of fecal incontinence and during physical examination there is a good anal sphincter tone, obtaining a 3-point Wexner scale.

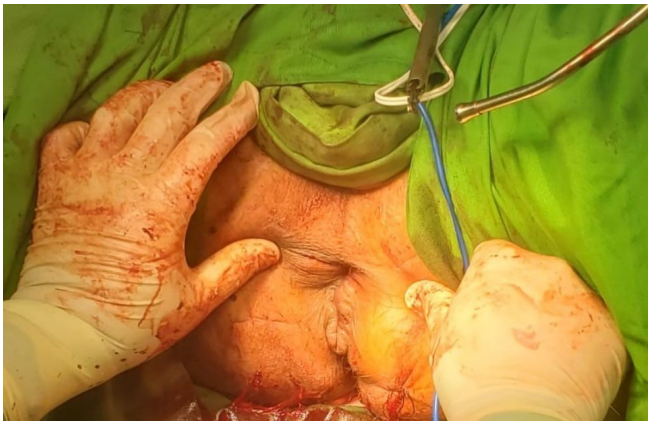

Figure 2. Altemeier's procedure completed.

Discussion

It is well known that there are more than 100 surgical procedures for the treatment of rectal prolapse, and these are categorized into abdominal and perineal approaches. Of which, approximately 10 of them are carried out in daily practice. (5) The choice of technique is made based on the clinical and functional characteristics of the patient such as: the patient's age, surgical risk, coexisting functional symptoms, the patient's clinical status, and the surgeon's familiarity with an approach surgical in particular. (2).

Regarding laparoscopic rectopexy, a large number of reports have demonstrated its satisfactory and less invasive post-operative results. However, other studies have not demonstrated its definitive superiority in terms of clinical and functional results compared to the Altemeier's technique. (5).

Treatment guidelines published by the American Colon and Rectum Society recommend that the surgeon choose the appropriate surgical procedure based on the general condition of each patient, making an individualized selection in each case. (6). The guidelines establish that laparoscopic rectopexy is recommended for patients in good general condition, while the perineal approach is more appropriate for patients with high surgical risk and poor general condition. The guidelines also state that the Delorme's procedure is preferable in cases of smaller rectal prolapses, while the Altemeier's procedure is preferable in cases of larger prolapses, as it was in this patient.

In cases of irreducible or incarcerated rectal prolapse, the surgical options are limited, since the abdominal approach is difficult to adopt, and there are no other options but to choose a perineal approach. Although the Altemeier's procedure requires a coloanal anastomosis, the incidence of severe complications is considered acceptable. (5)

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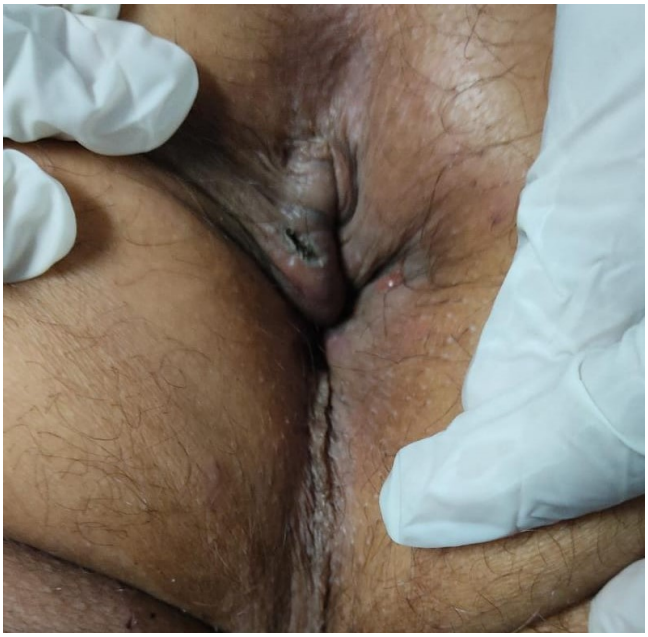

Figure 3. Perianal region prior to patient discharge.

Conclusion

The type of surgery for patients with rectal prolapse should be selected taking into account the general condition of the patient, the degree of prolapse and the surgical experience, however, when we are at the presence of an incarcerated rectal prolapse, the surgical procedure of choice will be perineal rectosigmoidectomy (Altemeier's procedure) as occurred in our case.

Conflicts of interests

Authors declare that there is no conflict of interest, as well as not having received any type of financing for the development of this research.

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