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Rectum Perforation Secondary A Closed Loop Obstruction After Perineal Rectosigmoidectomy (Altemeier Surgery)

Perfuração de reto secundária a obstrução em alça fechada após retossigmoidectomia perineal (Cirurgia de Altemeier)

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Abstract
Rectal prolapse is a relatively rare pathology that consists of partial or complete exit of the rectum through the anus (in this case, also called rectal prolapse), more common in the seventh decade of life in female patients. This condition presents varied clinical symptoms, such as proctalgia, fecal incontinence, constipation, bleeding, mucus discharge, anal bulging, among others. The treatment of this pathology is surgery, however, non-operative therapies can be used to combat the associated symptoms. There are different surgical techniques for correction of rectal prolapse described in literature. These techniques can be performed perineal or abdominal, choosing the approach according to the type of prolapse and the patient's clinical conditions.This report aims to present a complication that occurred after perineal rectosigmoidectomy with sphincter repair (Altemeier's technique) in a patient at Hospital PUC-Campinas, Brazil.
Keywords: Coloproctology, Rectum, Perforation, Altemeier Surgery.

Resumo
O prolapso retal é uma patologia relativamente rara que consiste na saída parcial ou completa do reto através do ânus (neste caso, também chamado prolapso retal), mais comum na sétima década de vida de pacientes do sexo feminino. Esta condição apresenta sintomas clínicos variados, tais como proctalgia, incontinência fecal, obstipação, sangramento, descarga de muco, protuberância anal, entre outros. O tratamento desta patologia é cirúrgico, contudo, as terapias não cirúrgicas podem ser utilizadas para combater os sintomas associados. Existem diferentes técnicas cirúrgicas para a correcção do prolapso retal descritas na literatura. Estas técnicas podem ser realizadas pela via perineal ou abdominal, escolhendo a abordagem de acordo com o tipo de prolapso e as condições clínicas do paciente. Este relato pretende apresentar uma complicação que ocorreu após a rectosigmoidectomia perineal com reparação de esfíncteres (técnica de Altemeier) em uma paciente no Hospital PUC-Campinas, SP.
Palavras-chave: Coloproctologia, Reto, Perfuração, Cirurgia de Altemeier.

Introduction

Rectal prolapse (RP) is an uncommon pathology that can affect any age group, however, its presentation is more common in the elderly, with a higher incidence in female patients. The pathophysiology may be linked to anatomical alterations such as diastasis of the muscles levator ani and redundant sigmoid, sphincter pathologies or alterations in the sacral ligaments (MEDEIROS et al., 2012). The diagnosis of RP is made through physical examination, but complementary tests can be used to rule out differential diagnoses, whereas some symptoms can mimic colorectal malignant pathologies. The RP can be categorized into incomplete or complete prolapse. Incomplete prolapses can be further subdivided into occult prolapse, when there is no exteriorization of the rectum through the anal orifice, or mucous, when there is only exteriorization of the rectal mucosa (SANTOS JUNIOR, 2005). The prolapse is considered complete (rectal prolapse), when there is full exposure of the thickness of the rectum, regardless of size. There are multiples techniques for PR correction, and perineal or abdominal approaches can be used. The technique to be chosen is based on the type of prolapse, the associated symptomatology, the age and clinical conditions of the patient, as well as the treatment experience. Furthermore, the considered technique must present the lowest complication rates, allowing the correction of anatomy and functional disorders without increasing the rates of relapse or postoperative incontinence (BUENO et al., 2001).

Abdominal correction can be performed laparotomically or laparoscopically and consists primarily of performing rectopexy, with or without associated sigmoidectomy. This approach is most

indicated for young patients with few comorbidities and provides a lower rate of recurrence, though, it also implicates in higher rates of postoperative constipation.

Perineal correction can lead to higher rates of recurrence, however, with lower associated rates of constipation. In general, perineal approach is the procedure of choice for elderly patients or patients with multiple comorbidities. Stand out: Delorme technique: plication of the rectal muscular layer and section of the excess mucosa (mucosectomy); Thiersch technique: anal cerclage with construction of subcutaneous rings; Altemeier technique: perineal rectosigmoidectomy and external sphincter repair.

Perineal rectosigmoidectomy, initially described by Mikulicz (1889) and modified by Altemeier and Culbertson (1965), has been widely used in renowned coloproctology services. In general, perineal rectosigmoidectomy is associated with low morbidity and mortality and also low rates of recurrence (BUENO et al., 2001). The case below is about a female patient, in electively approach in our service, who presented an unusual complication associated with the use of the Altemeier's technique.

Aim

To report a case of rectum perforation secondary a closed loop obstruction after perineal rectosigmoidectomy treated in our Service.

Method

This is a case report of a single patient seen at the Coloproctology Service of PUC – UNICAMP hospital, located at Campinas – SP, Brazil. The patient authorized the use of information about her case by signing an informed consent form, and the researchers committed themselves not to divulge any information that would allow her identification. No new procedures were performed, and all the information regarding the case was collected from the patient's medical record, already archived at the Department. This research met the requirements of 466/2012 Resolution of the National Health Council, which defines the ethical and legal aspects of research involving human beings.

Case report

Patient M. J. B. J., 84 years old, hypertensive and diabetic, forwarded to the coloproctology ambulatory because of a complaint of rectal bulging associated with episodes of bleeding and proctalgia, denying constipation or fecal incontinence. Physical examination showed a rectal protrusion of approximately 15cm, without mucosal ulcerations. It was chosen to perform an elective perineal rectosigmoidectomy (Altemeier procedure), without intercurrences intraoperatively, the patient remained hemodynamically stable and did not complain of pain or bleeding on the first postoperative day. Therefore, she was discharged for outpatient follow-up.

The patient returns on the fourth postoperative day complaining of diffuse abdominal pain of sudden onset for 3 hours, associated with tachycardia, sweating, vomiting and constipation. She also presented hypotension, abdominal distension and impacted fecaloma in the anal canal, partially removed, manually, on physical examination. After performing glycerin enema via rectal, no contents returned. Then, volume expansion was performed with partial improvement of vital signs and she was forward to additional tests.

Abdominal tomography showed signs of recent colorectal surgical manipulation, with pneumoperitoneum, densification of the presacral adipose tissues and a small amount of free abdominal fluid, as well as coprostasis in the rectosigmoid with a maximum caliber of 7.0 cm.
The patient was referred to the operating room, where a proctological examination was performed under analgesia, showing a prior intact anastomosis with viable-looking mucosa and a large amount of feces. It was chosen then to perform a laparoscopy diagnosis, which showed leakage of fecal content. Conversion to median exploratory laparotomy was performed, presenting fecal peritonitis and perforation in the upper rectum. Because of the fecal output, it was conducted a rectosigmoidectomy, according to the performance of Hartmann. The patient kept hemodynamic instable throughout the surgical procedure, requiring high doses of vasoactive drugs. After the surgical approach, she was referred to the ICU for postoperative care, where she died 18 hours after the end of the surgical procedure.

Discussion

The option for the Altemeier technique in the correction of rectal prolapses is associated with lower hospitalization and postoperative rates and is currently the most used technique for elderly

patients or patients with multiple comorbidities, due to lower morbidity and mortality associated. Early postoperative complications reported are, mostly, dehiscence and infection of the anastomosis, complications related to underlying pathologies or infections from other sites, such as lungs or urinary tract.

Intestinal constipation and the consequent formation of fecaloma can occur in the postoperative period, however, this complications can be dealed with clinical measures and without further implications.

After reviewing the literature, case reports and meta-analyses, no content of intra-abdominal intestinal perforation due to the closed-loop syndrome, caused by the impaction of the postoperative fecaloma, were found, and only reports of extra-abdominal perforation secondary to strangulation by evisceration were identified. Thus, the complication arising from the Altemeier technique reported in the present case is considered not only unusual, but also, unknown to the procedure.

Due to the rare incidence of intra-abdominal perforation after perineal rectosigmoidectomy, laparoscopic or open exploration of the abdominal cavity in search of postoperative complications is not indicated, since the choice of the perineal method is made with the intention of depriving patients of the risks associated with the abdominal procedure and the anesthetic complications related to the method. As an alternative, is prudent to perform previous imaging tests or other less invasive diagnostic methods. In the present case, the approach was necessary after the identification of pneumoperitoneum in abdominal tomography and after a detailed examination that did not show perforation or dehiscence in the anastomosis.

Despite the precaution, the Altemeier technique for correction of rectal prolapse remains one of the most used techniques, with the lowest morbidity and mortality associated, therefore, this technique is performed in various coloproctology services, with high success rates among patients.

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