

Secondary Perineal Hernia Perforation Post Trauma

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Abstract

Perineal Hernias (PH) result from weakness or defects in the pelvic floor musculature, which may allow the passage of abdominal contents to a pelvic-perineal region. They can be classified as primary (congenital) or secondary (post-pelvic surgery), being anatomically distinguished by their position, anterior or posterior, to the transverse perineal muscle. With variable clinical presentation and surgical treatment aimed at cases with greater symptoms, complications caused by perineal hernias in outpatient follow-up are rarely described in the literature. The objective of this study is to carry out a brief literature review and report a case of perineal hernia in a conservative clinical-surgical follow-up, with a perforation event after trauma, approached in an emergency room.

Keywords: Pelvic Floor; Abdominoperineal Surgery; Perineal Hernia; Intestinal Perforation

Abbreviation

PH: Perineal Hernias

Introduction

Perineal hernias (PH) result from weaknesses or defects in the pelvic floor muscles, capable of allowing the passage of abdominal contents to the pelvic-perineal region [1,2]. Perineal hernias (PH) result from weakness or defects in the pelvic floor musculature,

capable of allowing the passage of abdominal contents to the pelvic-perineal region [1,2]. They can be classified as primary, taking as an example the congenital entities, being quite rare entities, or secondary, resulting from the fragility generated after a pelvic surgical procedure, such as abdominoperineal amputation or pelvic exenteration [3]. It is a non-common pathological alteration, being anatomically distinguished by its position, anterior or posterior to the transverse perineal muscle [1,4,5]. With variable clinical features and surgical treatment aimed at cases of greater

symptomatology, complications caused by perineal hernia in out-patient follow-up are rarely ruled out in literature.

The objective of this study is to carry out a brief review of the literature and report a case of perineal hernia in clinical follow-up, with a post-trauma perforation event, approached in an emergency.

Case Report

LAV, 67 years old, male, in perineal hernia follow-up at Hospital PUC Campinas, after abdominoperineal amputation due to advanced low rectal adenocarcinoma, diagnosed in 2014, followed by neoadjuvant therapy and surgical treatment, and also in follow-up by synchronous prostate cancer, undergoing palliative chemotherapy due to bone metastasis since the same period.

He was seen in the Emergency Room of our service after syncope followed by a fall from his own height, with severe abdominal and pelvic pain, associated with nausea and vomiting, and, on physical examination, incarcerated moderate perineal hernia with local phlogistic signs.

Having ruled out any seriousness that could be related to the neurological condition, and being hemodynamically stable, he was initially submitted to computed tomography, which showed a massive herniation of small bowel loops and colon in the perineal region (Figure 1), with an approximate ostium of 4.2 cm. Along with the hernia content, there was evidence of a moderate amount of free intraperitoneal fluid associated with spots of pneumoperitoneum, suggestive of intestinal perforation (Figure 2).

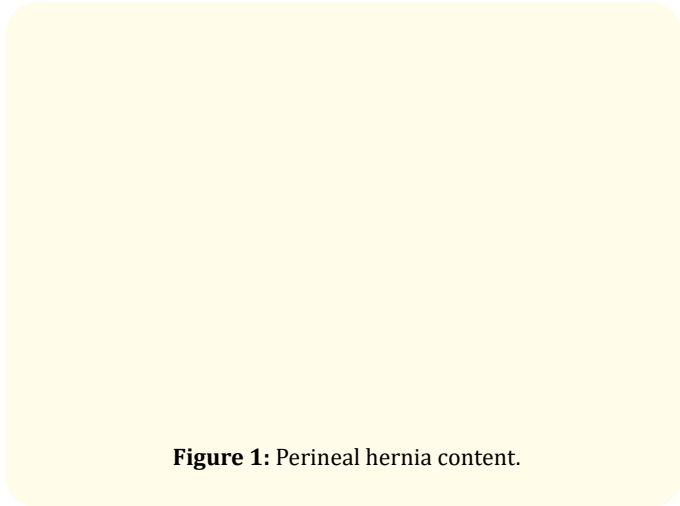


Figure 1: Perineal hernia content.

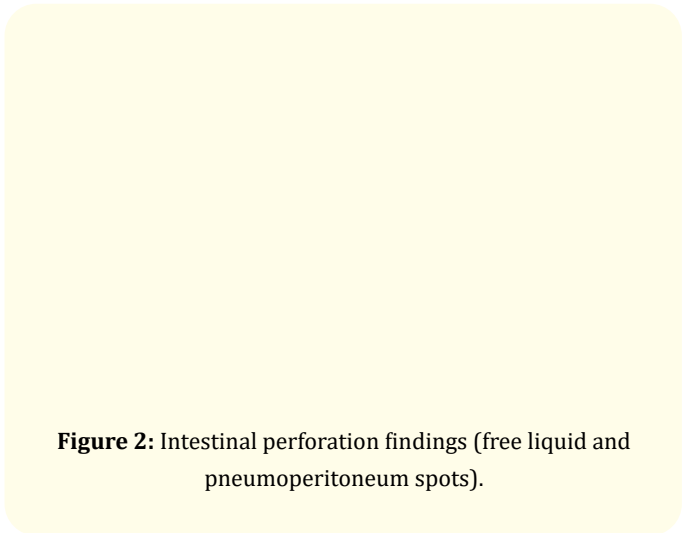


Figure 2: Intestinal perforation findings (free liquid and pneumoperitoneum spots).

Referred to emergency surgery, with intraoperative isolated laceration in the small intestine, approximately 3 cm long, at 90 cm from the angle of Treitz (Figures 3 and 4), with diagnostic confirmation and the need for intestinal surgical approach and hernia repair.

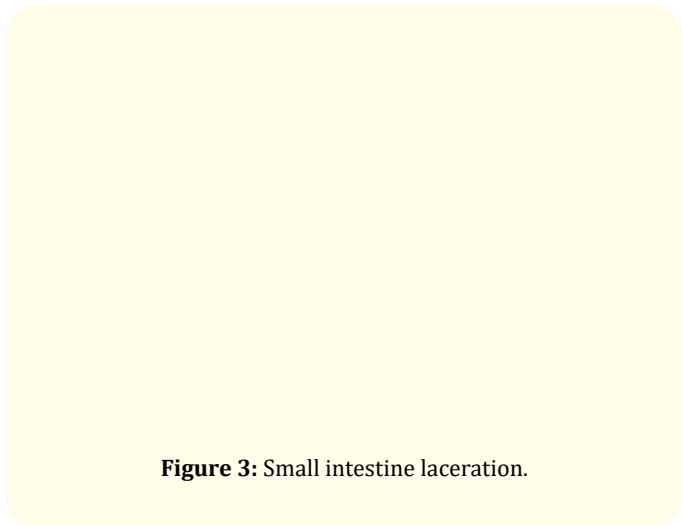


Figure 3: Small intestine laceration.

A revival of the edges was performed with closure in two planes, followed by irrigation of the abdominal cavity and, at the same surgical time, hernia correction by primary closure of the pelvic wall. Opted for peritonectomy with plastic film to shorten the surgical time.

Figure 4: Intestinal edges revival for later closing in two plans.

Two subsequent posterior surgical approaches were performed to review the cavity, without complications and without evidence of hernia recurrence. During hospitalization, the patient evolved with cardiopulmonary complications, refractory to clinical treatment, evolving to death.

Results and Discussion

PH was first described in 1939 by Yeomans [6], after a rectal cancer resection, having a first report in the laparoscopy era in 2007, by Veenhof, *et al.* [7].

The incidence of symptomatic PH secondary to abdominoperineal surgeries has been presented in 0.626 to 1% of cases [8-10], most of which are evidenced after one year of surgery. They affect patients between the fifth and seventh decades of life, especially women, in a ratio of 5:1, having as risk factors diabetes mellitus, obesity, patients undergoing neoadjuvant therapy [11,12] and postoperative wound infections [13].

In general, PH are asymptomatic, which contributes to the low incidence of this disease in the literature [4]. In the presence of symptoms, the clinical picture can be characterized by perineal discomfort when sitting, feeling of perineal heaviness, skin laceration, urinary symptoms and intestinal obstruction [2], among others, and the diagnosis is usually established in the clinical history and physical examination.

Occasionally, for diagnostic complementation, imaging exams such as contrast radiography, computed tomography or magnetic

resonance imaging are necessary, differentiating with lipomas, fibromas, rectocele, cystocele and prolapsed rectum [14-16].

The treatment is surgical, indicated for patients who develop symptoms such as skin erosion, discomfort, pain, bowel obstruction or urinary obstruction, or in congenital cases [2]. However, elderly patients, patients with severe comorbidities, and those with few symptoms may experience relief from symptoms only with the use of local bandages, and corrective surgery is not necessary. If surgery is chosen, it can be performed perineally, abdominally, laparoscopically or mixed, and the repair of this type of defect is still presented today as a surgical challenge in which several methods have been described, without an established ideal approach [9,17].

In the literature, complications caused by PH are not well described. An extensive search in databases such as SciELO, SCOPUS, PubMed, revealed only one other case of traumatic perforation, in a patient with diagnosed PH, described in 2018 by Ugwu, *et al.* [17], with a female patient, the most common incidence of the underlying condition, which, after pelvic trauma to PH, also evolved with perforating acute abdomen [18].

In the case reported here, the patient presented as the main risk factor for PH a cancer history and neoadjuvant therapy, in addition to a prolonged cancer status with the diagnosis of a second synchronous tumor and palliative chemotherapy. Added to the poor symptoms, it resulted in factors that motivated outpatient conservative treatment.

In view of the situation of intestinal perforation, the approach adopted was the abdominal route, in urgent circumstances, contamination of the cavity and the need for an intestinal approach and exhaustive washing of the cavity.

In the literature, preventive measures are described in abdominoperineal amputation procedures, including primary closure being almost always possible in the classic intersphincteric technique, while in the extra-levator excision and in the ischioanal technique, additional measures of pelvic floor reconstruction are needed, either by omentoplasty with a large epiploon flap, uterine flap repair, musculocutaneous flaps with rectus abdominis, large gluteus or gracilis and the placement of biological collagen prostheses [19,20]. However, just as the repair of this type of defect remains a surgical challenge, its prevention method also remains without an established consensus.

As it may have variable symptoms and associated severe complications, PH is capable of representing a diagnostic challenge for surgeons who have not been exposed to this unusual entity.

Consideration of risk factors and possible complications requires better surgical design and planning methods for prevention techniques. Therefore, the importance of diagnosing and disseminating information about this condition is precisely to be able to discuss the risk factors, possible complications and the possibilities of correcting this pelvic fragility, in the post-surgical period of pelvic surgeries, such as abdominoperineal amputation or pelvic exenteration, minimizing the possibility of forming a perineal hernia.

Conclusion

PH are possible complications of abdominoperineal amputation of the rectum that have been described and may present with variable symptoms and associated severe complications, capable of representing a diagnostic challenge for surgeons who have not been exposed to this atypical entity. Thinking about the importance of diagnosis, risk factors, and possible complications requires planning methods for better surgical design and preventive techniques.

Therefore, the surgeon must be prepared to deal with this situation, which can present itself with a high degree of severity.

Conflict of Interest

We declare that there is no financial interest or conflict of interest.

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