

HYPERPLASIC POLYP IN APPENDIX OSTIUM MANIFESTING ACUTE APPENDICITIS: CASE REPORT

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Abstract: Acute appendicitis represents one of the main causes of acute abdomen and, consequently, of patients operated on an urgent/emergency basis. Its pathophysiology is based on the obstruction of its lumen that triggers subsequent events until its perforation. The etiologies of obstruction range from the presence of appendicolite/fecalite to compression by neoplasms, which are much rarer. There are few cases described in which there was a hyperplastic polypoid lesion as the cause of appendicular ostium obstruction. In this report, the patient developed abdominal pain, with pain migration to the iliac fossa region and right flank. She underwent an abdominal tomography that showed tenuous parietal thickening near the cecum and colonoscopy, with a finding of protrusion of the cecum mucosa, close to the appendicular ostium. The surgery was initially performed using the videolaparoscopic approach, later converted to an open approach, to ensure the margin of the lesion. The biopsy showed a hyperplastic polyp as the etiology of the inflammatory/infectious condition of the appendix.

Keywords: Appendicitis; Laparoscopy; Colon Polyps; Intestinal Polyps.

INTRODUCTION

It is estimated that 7 to 8% of the world population will develop acute appendicitis during their lifetime. For this reason, the pathology is one of the main causes of acute abdomen in the world, reaching, in 2010, a number of deaths of 5 for every 100,000 patients operated on an emergency basis, both for underdeveloped countries and for countries. developed (STEWART, 2014).

Among the main etiologies, those that most frequently cause obstruction of the appendicular lumen stand out, such as the presence of thickened stools (appendicolith or fecalith), lymphoid hyperplasia, plant matter

or seeds, parasites and, more rarely, neoplasms (TOWNSEND, 2019).

The polypoid lesions found in the colon are usually adenomas or hyperplastic polyps (SANDMEIER, 2007). These are usually located on the right side of the colon, and may be close to the appendicular orifice or in the appendix itself (RUBIO, 2004).

There are few cases described in the literature of polypoid lesions as triggering acute appendicitis. In 2018, in Japan, it was one of the few cases reported in which a 69-year-old patient presented with appendicitis, associated with a liver abscess, whose etiology was the presence of a sessile polyp/adenoma obstructing the appendicular lumen (SATO, 2018).

The objective of this study is to report a rare etiology for one of the most prevalent pathologies in the world, especially in the case of acute abdomen, since there are few reports in the current literature.

CASE REPORT

Patient M.J.B., female, 39 years old, in a stable relationship and a cook, presented with mild to moderate intensity diffuse abdominal pain (grade 4 on the pain scale), associated with hyporexia, without correlation with food, without irradiation to the other regions and without associated nausea, vomiting or fever. After 24 hours, he evolved with worsening pain (grade 9 on the pain scale), and migration to the right flank and iliac fossa. At that moment, she sought medical attention in an emergency unit.

With no comorbidities or previous hospitalizations, she denied continuous use of medications. No family history of neoplasms. Social drinker (4 cans of beer per week) and smoker (about 4 cigarettes/day).

On physical examination, the abdomen was semiglobose due to adiposity, with no bulges or retractions on static and dynamic

inspection, hydro-air sounds present, flaccid, moderately painful on deep palpation of the right hemiabdomen, negative Blumberg, Rovsing and Murphy signs, without signs of pain on sudden decompression, absence of palpable masses or visceromegaly. Gynecological examination was not performed at the time of consultation.

Analgesics and anti-inflammatory drugs were prescribed, with momentary improvement of symptoms. Abdominal ultrasound showed thickening of the intestinal loop in the topography of the right iliac fossa, with partial loss of intestinal stratification, but without loop characterization in blind background. However, there was loss of compressibility in a segment studied with a diameter measuring about 51 x 11 mm. Another finding was the small amount of adjacent free fluid, suggesting that inflammatory bowel disease or appendagitis must be considered as a differential diagnosis.

Laboratory tests were within normal parameters, highlighting the leukogram with a value of 7,200/mm³, without deviation (VR = 5000-1000/mm³).

Due to the worsening of the pain, the patient was referred to a tertiary hospital. And as there was no direct evidence of a typical picture of acute appendicitis or other cause of inflammatory acute abdomen, including causes of gynecological origin, the investigation continued. Contrast-enhanced tomography of the abdomen showed thickening of the cecum and cecal appendix, with a non-specific appearance and without other findings. In view of the findings and to rule out a neoplastic process of the cecum or the cecal appendix, colonoscopy was requested.

Colonoscopy showed, in the cecum, an atypical protrusion of the appendicular ostium, with a closed lumen, covered

by mucosa with a normal endoscopic appearance, and an inflammatory or neoplastic appendicular process could not be ruled out (FIGURE 1). The histopathological result of the biopsy, collected in the colonoscopy, showed a finding compatible with acute typhlitis.

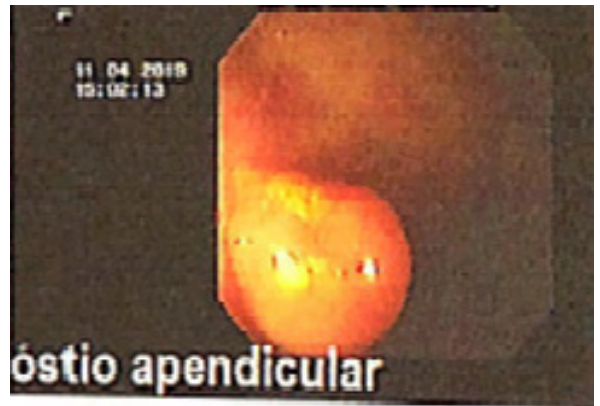


Figure 1: Protrusion in the appendicular ostium visualized at colonoscopy (source: the authors).

Given the diagnostic impasse, the possibility of neoplastic disease and the persistence of pain (12 days of symptoms), diagnostic laparoscopy with possible surgical resection of the cecal appendix was chosen.

The surgery was performed with the patient in the horizontal supine position, under general anesthesia, with asepsis, antisepsis and duly applied sterile drapes. It was decided to perform an arciform, supraumbilical incision of approximately 12 mm, diresis by planes and preparation of pneumoperitoneum using the open technique, after passage of an 11 mm trocar. Passage of the other trocars under direct vision, one of 10 mm in the left iliac fossa (about 2 cm medial to the iliac crest), and one of 5 mm in the suprapubic region (FIGURE 2).



Figure 2: Trocar position (source: the authors).

An inventory of the cavity was carried out and the presence of blockage was identified in the topography of the right iliac fossa containing the greater omentum, cecum and small bowel loops. After lysis of the adhesions and the blockage was undone, it was possible to identify the cecal appendix with a thickened and friable wall, an inflammatory process in its entirety and the presence of a lesion at its base, palpable with the laparoscopic forceps and which extended into the cecum lumen around from 1.5 to 2.0 centimeters (FIGURE 3).

Dissection of the mesoappendix was performed, followed by clipping with an LT-300 clip and section of the appendicular artery. Due to the unavailability of intraoperative frozen section on the day of the procedure, it was decided to perform an appendectomy with an enlarged margin for the cecum wall and complete resection of the lesion.

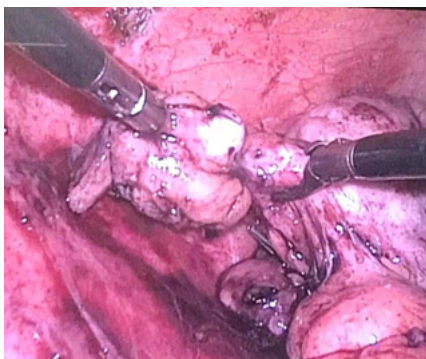
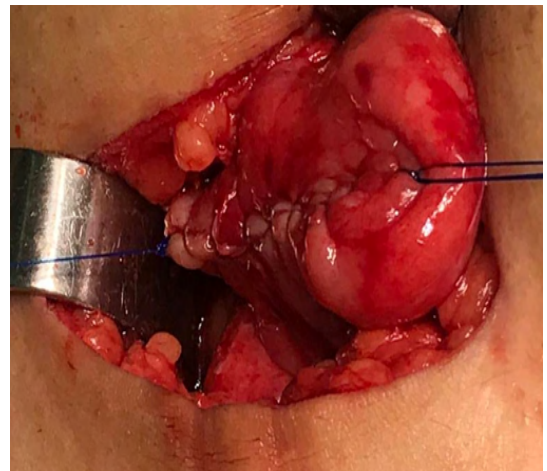


Figure 3: Friable appendix with lesion delimited with laparoscopic forceps (source: the authors).

Then, an incision was made in the right inguinal region, approximately 2 cm medial to the iliac crest, to better obtain a cecal margin without risk of stenosis of the ileocecal valve. The resection was performed with posterior cecal suture, with Prolene 3-0 thread through continuous suture. In the surgical specimen, it was observed the complete removal of the lesion with free edges and macroscopic appearance of a polypoid lesion (FIGURE 4).



A



B

Figure 4: A – Lesion delimited by forceps in the cecum region. B – Cecum suture after removal of the appendix with margin (source: the authors)

The appendix, together with the base lesion, was removed from the cavity with due

care to avoid contact with the edges of the incision, and separated for histopathological study (FIGURE 5).



Figure 5: Surgical specimen highlighted in the lesion at the base of the appendix (source: the authors)

Hemostasis review and material count were performed. The inguinal incision was closed in layers using Vicryl 2-0 thread for the peritoneum, Prolene 0 for the aponeurosis and Nylon 4-0 for the skin. The synthesis of the supraumbilical incision was performed with Prolene 0 for closure of the aponeurosis and Nylon 4-0 for the skin. The suprapubic incision was closed with Nylon 4-0 for skin only, in addition to local anesthetic infiltrate in all incisions (FIGURE 6).



Figure 6: Final appearance of the incisions (source: the authors)

In the immediate postoperative period, the patient developed mild pain in the inguinal incision, which subsided with analgesics. The restricted liquid diet was started on the first postoperative day (PO), with progression according to acceptance and there were no episodes of vomiting or nausea. Hospital discharge was on the 2nd PO day and the patient came for an outpatient follow-up 15 days after the surgery, bringing with her the histopathological result confirming a hyperplastic polyp in the appendicular ostium.

DISCUSSION

Acute appendicitis is one of the most prevalent causes of acute abdomen, especially in surgical emergencies. About 7-8% of the world population will develop the disease during their lifetime, and for every 100,000 patients operated on urgently, 5 die from this pathology. (STEWART, 2014).

There are currently several scores for diagnosing acute appendicitis. One of the most used scores is the Alvarado score, which is based on symptomatic criteria (migration of pain, anorexia and/or nausea/vomiting), laboratory (leukocytosis and/or left shift) and physical examination (right lower quadrant defense), decompression pain and/or temperature elevation), with the presence of defense and/or leukocytosis scoring 2 points. A score between 7-8 indicates a probable

diagnosis of appendicitis, and a score between 9-10 a very likely diagnosis. The patient in question scored 3 points in total, being discordant with the score, probably due to the blocked infectious process found in the intraoperative period (ALVARADO, 1986).

Another more current one is the Adult Appendicitis Score (AAS), which, like the Alvarado score, is based on clinical and laboratory findings, however, with the addition of C-reactive protein values and proportion of neutrophils found in the blood count test. Values greater than or equal to 16 indicate a high risk of acute appendicitis (SAMMALKORPI, 2017).

Imaging tests may be necessary in cases of diagnostic doubt to avoid high numbers of white appendectomy. Computed tomography (CT) of the abdomen with contrast is the most accurate exam in cases of acute appendicitis, however, it must be requested with caution, given the patient's exposure to radioactivity. Ultrasonography (USG) may be interesting for some specific populations, such as children and women of childbearing age, as well as pregnant women, in addition to being a low-cost exam. Magnetic resonance imaging (MRI) may be an option in cases where the USG was not very elucidative (DI SAVERIO, 2016).

Hyperplastic polyps are the most common types of colorectal polyps. They are usually smaller than 5 mm and do not have features of malignancy compared to other subtypes, such as adenomatous. However, when examining colonoscopy, it is difficult to distinguish with the other subtypes, being most often removed (SHUSSMAN, 2014). There are studies that indicate that the correct use of colonoscopic criteria, such as location, size, presence of hernias in crypts, horizontalization, and undifferentiated cells are good predictors in the differentiation between hyperplastic and

sessile adenomatous polyps (SANDMEIR, 2007).

The diagnostic doubt, given the complementary exams, and especially the possibility of malignant neoplastic colonic or appendicular lesion, was the determining factor for performing videolaparoscopy, since any suspicion of malignant lesion would change the course of the surgery.

There are very few cases described in the literature of polypoid lesions, even if of other subtypes, if not hyperplastic, that manifested as acute appendicitis. One of the few similar cases occurred in Japan, with a 69-year-old patient who underwent resection of the terminal ileum and cecum due to acute appendicitis resulting from a polypoid/adenomatous lesion (SATO, 2017).

The presence of intraoperative findings corroborated the diagnosis of acute appendicitis, and the most well-established route of choice for resection is currently the laparoscopic technique. The decision for the videolaparoscopic approach was initially encouraged, not only because the technique is already well established, but also in view of the diagnostic doubt of the etiology of the condition, since the presence of a malignant lesion would probably change subsequent decisions.

Even in more complicated cases, the minimally invasive technique proved to be superior to the open technique, especially in more experienced hands (FRATTINI, 2018). However, due to the lack of a laparoscopic stapler, a complementary incision in the inguinal region was chosen to ensure an adequate resection margin.

CONCLUSION

Patients with signs and symptoms of acute abdomen are routinely found in the emergency room, mainly surgical, with acute appendicitis being the main cause to be ruled

out. The presence of a hyperplastic polyp as a triggering factor for obstruction of the appendicular lumen is rarely described in the current literature, making the reported case a rare one and of great need for future experiments.

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