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Acute Intestinal Obstruction Following Strangulation of Appendicular Origin. Report of A Case Treated in Bangui.

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Summary

Acute appendicitisis a rare cause of obstruction. It is often discovered incidentally during a laparotomy performed for acute intestinal obstruction.Our study reports a case of acute intestinal occlusion in a young adult presenting with an occlusive syndrome associated with fever, operated on at the Sino-Central African Friendship University Hospital in Bangui.

Keywords: Mechanical obstruction; Acute appendicitis; Strangulation; Central African Republic

Abstract

Acute appendicitis is a rare cause of intestinal obstruction. It is often discovered incidentally during a laparotomy performed for acute intestinal obstruction. Our study reports a case of acute intestinal obstruction in a young female adult presenting with an obstructive syndrome associated with fever who underwent surgery at the Sino-Central African Friendship University Hospital in Bangui.

Introduction

Acute appendicitis is a medical-surgical emergency [1]. In its typical form, diagnosis is clinical, but in cases of diagnostic uncertainty, abdominal ultrasound and CT scan are the gold standard examinations [2]. Acute intestinal obstruction is one of the rare complications of appendicitis [3].

We report a case of small bowel obstruction following strangulation of appendicular origin treated at the Sino-Central African Friendship University Hospital in Bangui.

Observation

This was a 21-year-old female patient who presented to the surgical emergency department with diffuse abdominal pain. The onset was sudden, marked by pain in the right iliac fossa, followed 48 hours later by vomiting of food and then bile, constipation, and then fever. The patient underwent antiparasitic treatment and herbal decoctions at home without improvement. She initially presented to the medical emergency department where she received 2 grams of injectable ceftriaxone and 500 mg of metronidazole by intravenous infusion, before being referred to the surgical emergency department. The patient had no prior medical or surgical history. She was a primiparous woman.

On clinical examination, the patient's general condition was good, her temperature was 38.5°C, her heart rate was 92 bpm, and her blood pressure was 110/80 mmHg. The abdomen was slightly distended with signs of intestinal distress in the form of accelerated peristalsis on inspection. On palpation, the abdomen was relatively soft and bowel sounds were normal. Pelvic examinations were unremarkable. For budgetary reasons, the prescribed imaging workup, including a plain abdominal X-ray, was not performed. After a preliminary assessment of the patient, including blood type and Rh factor (B+), blood glucose (0.8 g/L), and hemoglobin (6.5 g/dL), we performed an exploratory laparotomy. This was carried out under general anesthesia without intubation. The approach was midline, both supra- and infraumbilical. Upon exploration, we found necrosis of the terminal ileal loops (Figure 1) with a constriction zone approximately 4 cm from the ileocecal flexure, resulting from strangulation of appendiceal origin. The phlegmonous tip of the appendix formed a ring in which the strangulated intestinal loop was trapped (Figure 1). We performed an appendectomy (Figure 2) and resection of approximately 40 cm of the non-viable ileal portion. The ileocecal valve was closed with a running suture of 0 Vicryl. Bowel continuity was restored by an end-to-side ileocolic anastomosis using the same suture. Macroscopically, it was a necrotic dolichoappendix measuring approximately 5 cm in length. The histological examination of the appendix could not be performed, as the patient was unable to pay the analysis fees due to lack of funds. The postoperative course was uneventful, and the patient was discharged after 7 days of hospitalization.



Figure 1: Intraoperative view of the dilated, strangulated intestinal loop and the phlegmonous appendix.



Figure 2: View of the appendectomy specimen.

Comments

Acute appendicitis is a rare cause of intestinal obstruction [4, 5]. Several mechanisms are involved in the occurrence of this obstruction, including adhesion of the inflamed appendix to the posterior peritoneum, crossing the ileum and thus compressing the lumen; direct adhesion of the inflamed appendix to the intestinal wall, causing obstruction by compression; adhesion of the inflamed appendix to the mesentery near the ileocecal artery, causing thrombosis and gangrene of the terminal ileum; or wrapping of the inflamed appendix around a portion of the kinked terminal ileum and its mesentery [6,9]. The clinical diagnosis is often suggested by an occlusive syndrome associated with fever [4].

CT scanning can aid in diagnosis [7]. In situations where access to imaging is often compromised by the unavailability of diagnostic equipment, the appendiceal cause is frequently discovered during surgery. Since the diagnosis of obstruction is clinical, a laparotomy is necessary. This allows for extensive exploration of the abdominal cavity, investigation of other causes of obstruction, and establishment of a definitive diagnosis. The involvement of acute appendicitis as a cause of acute intestinal obstruction is often discovered incidentally during laparotomy, as in other studies [8,9].

Conclusion

Mechanical bowel obstructions of the small intestine originating from the appendix are among the rare complications of appendicitis. Attention should be paid to the presence of fever associated with an obstructive syndrome. Diagnostic imaging examinations such as CT scans or ultrasound are not often available in emergency situations in our setting. Therefore, their use should not delay treatment, as the prognosis may depend on it.

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