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Case Report

Chronic appendicitis in an 11-year-old pediatric patient: a case report

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ABSTRACT

Chronic appendicitis is a very little-known entity within the segment of acute abdominal pain as an abdominal symptom, going unnoticed by a low grade of suspicion as well as by its very varied representation, the case of a pediatric patient is presented, with all its natural history of the disease, approach and conclusion to resume the importance of its search in clinical practice.

Keywords: Appendicitis, Chronic appendicitis, Recurrent appendicitis

INTRODUCTION

Abdominal pain is a common cause of medical consultation, it can be classified as acute, chronic or recurrent depending on the time of evolution. The most frequent pathology presented in the cecal appendix is acute appendicitis, whose pathology is well known.[1,5] However, in many cases with concurrent acute pain in the right lower quadrant of the abdomen is not so clear to make the diagnosis of acute appendicitis and disappears spontaneously with or without treatment but symptomatology persists intermittently and poorly defined.[2,3]

Many times when the pain has been recurrent or chronic, we rule out appendicular pathology based on the natural history of the disease. The clinical features of chronic appendicitis are similar to those of acute appendicitis but have a longer duration.[4,10]

The clinical picture is characterized by the presence of chronic pain for more than 3 weeks, vague, in the right lower quadrant, colicky type; it may or may not present nausea, vomiting, anorexia, fever, pain migration and rebound, and mostly leukocytosis with segmental forms elevation. Partial obstruction of the appendiceal lumen by mucosal hyperplasia or fecaliths (10 to 20%) is the most frequent cause of chronic or recurrent appendicitis.[5-8] In 44.6% of the patients with appendicular involvement have an atypical clinical picture, caused by advanced age, previous medical treatment, atypical location of the appendix, appendicular tumors and comorbidities, mainly diabetes mellitus.[3]

Appendicular pathology can be classified as follows - chronic appendicitis: appendix infiltrated with cells of chronic inflammation, recurrent appendicitis: the acute picture resolves spontaneously before surgery, and appendiceal colic secondary to luminal involvement of the cecal appendix.[8]

These clinical entities are pathophysiologically distinct; however, clinically and histopathologically, chronic and recurrent appendicitis behave the same and may show changes suggestive of chronic inflammation (eosinophilic or lymphocytic infiltrate in the appendix wall and/or fibrosis).[7-9] It has been mentioned that recurrent and chronic appendicitis represent an incidence of 10% and 1-1.5% respectively, of the cases with a history of acute appendicitis.[7,11,12]

We describe the case of a patient with abdominal pain of 5 months of evolution, multitreated without improvement, who underwent open appendectomy with macroscopic data of inflammation of the cecal appendix.

CASE REPORT

Female patient aged 11 years, with any antecedent of importance for the current condition, perinatal history: product of the third gestation, with adequate prenatal control 9 prenatal consultations, obtained by cesarean section at 39 weeks of gestation with a birth weight of 2, 900 g. Personal history of importance denied, previous surgical: laparoscopy and endoscopy September 2023, allergic denied.

She began her current condition in September 2023 with diffuse abdominal pain that later became localized in the right iliac fossa. In addition to pain in the right hip joint, she sought medical attention for abdominal pain and data of acute abdomen, laparoscopy and emergency diagnostic endoscopy was performed for suspected acute appendicitis without finding data of appendicitis or other pathology requiring surgical intervention. Subsequently, she was discharged and when she persisted with abdominal pain, she went to a physician specialized in pediatric gastroenterology who diagnosed abdominal migraine, and subsequently she started treatment with escitalopram, sertraline, antispasmodics and lactates. When he continued without improvement, he was sent to this specialized unit for evaluation and management. During his 3-week hospital stay he reported poor oral tolerance, requiring nasogastric tube feeding and total parenteral nutrition at 1356 kcal/kg/day, early satiety, continuous nausea and vomiting, intermittent fever and mild to moderate abdominal pain mainly located in the epigastrium.

The physical examination showed a soft abdomen, depressible with abdominal pain located in the right iliac fossa and radiating to the right hip, which was constant throughout the day, with no evidence of peritoneal irritation, no palpable tumors, peristalsis present.

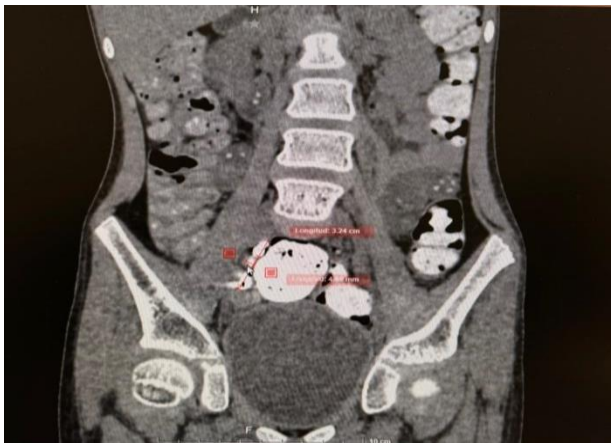

Figure 1: Distended bowel loops with increased gas pattern and pericardial effusion.

In his study, protocol a bowel transit was requested on 15 November 2023, no images suggestive of lesions.

Bone scan on 16 November 2023, 3 phase study, vascular, tissue and mineral of the pelvis and coxofemoral joints without evidence of sites of increased abnormal ionic bone turnover.

Endoscopy on 29 November 2023 with findings of erythematous pangastritis, duodenitis, and duodenal ulcers forrest lll.

It is not reported, but a hyperdense image is observed in the same position of each of the slices, in the region of the right iliac fossa, lateral to the rectus and medial to the ipsilateral psoas muscle of dimensions 3.24 cm and 4.99 mm approximately.

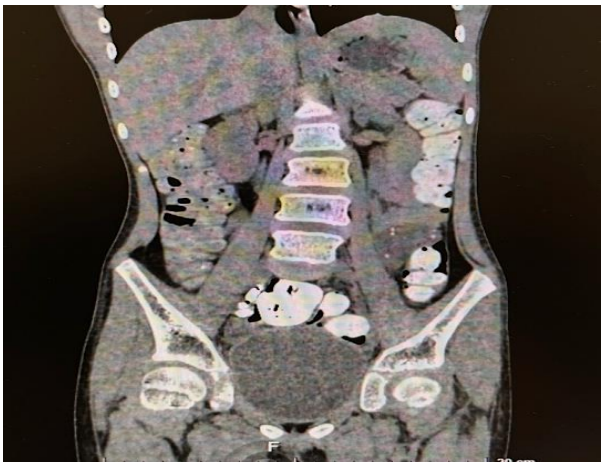

Figure 2: Lateral to the rectus and medial to the ipsilateral psoas muscle of dimensions 3.24 cm and 4.99 mm approximately.

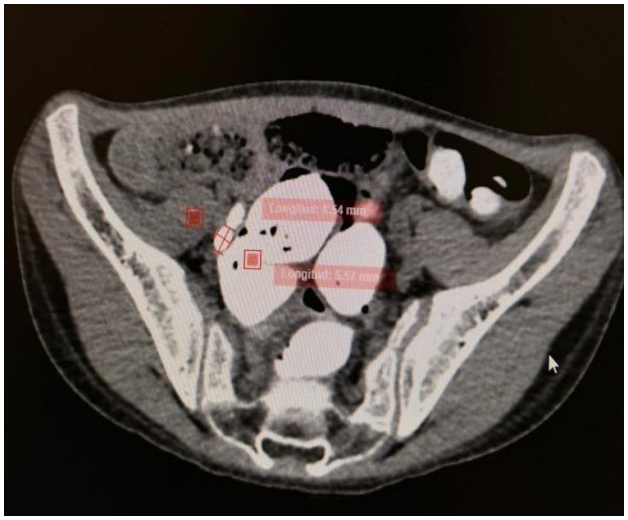

Figure 3: In the axial section, 2 hyperdense images of approximately 8.5×5.7 mm can be observed in the location of the same previous sections.

Abdominal ultrasonography on 29 December 2023, no free fluid, no structural alterations were described.

An interdisciplinary session is held to comprehensively address the patient's condition and evolution. So far without conclusive findings of imaging studies for etiology of abdominal pain syndrome and pain in the right hip region persistently.

Figure 4: Chronic appendicitis with cecal appendix 5 cm long.

Figure 5: Chronic appendicitis with cecal appendix 6 mm in diameter.

In the postoperative period, the patient was managed with analgesic, antibiotic therapy with cefepime for 10 days, fasting for 72 hours and resumption of diet by gastrostomy and oral route, which was adequately tolerated in a pulatin form.

During her follow-up she showed a significant reduction of symptoms and tolerance of the enteral route with gastrostomy and oral route, and it was decided to discharge her on 26 January 2024. The histopathological study on 16 February 2023 reports: enlargement of the wall with fibrosis and moderate chronic inflammation (Figure 6) and thickening of the muscular portion of the wall with moderate chronic inflammation (Figure 7).

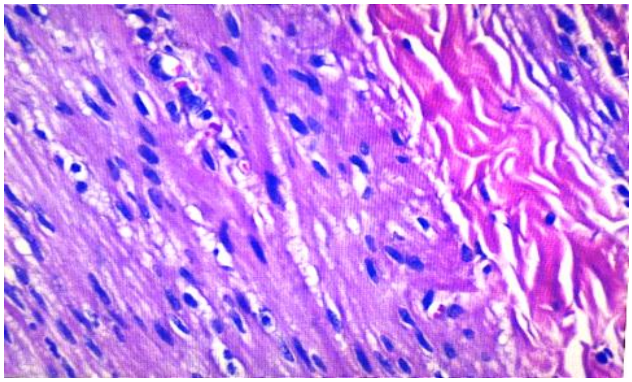

Figure 6: Enlargement of the wall with fibrosis and moderate chronic inflammation.

A consensus is reached on the option of surgical intervention by pediatric surgery so the surgery is scheduled on 19 January 2023 performing exploratory laparotomy plus gastrostomy with stamm technique and appendectomy with the findings of chronic appendicitis with cecal appendix 5 cm long and 6 mm in diameter with fecaliths in the entire length of the light, the rest of the intestine without alterations, without incidents or accidents.

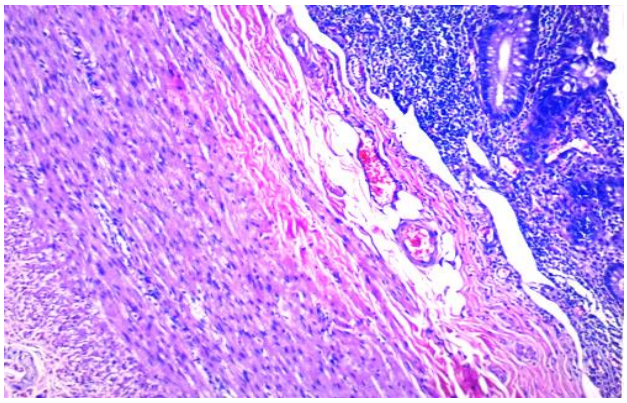

Figure 7: Thickening of the muscular portion of the wall with moderate chronic inflammation.

DISCUSSION

The presented case of chronic appendicitis in an 11-year-old pediatric patient highlights the complexity and diagnostic difficulty associated with this condition, particularly when it presents with a prolonged clinical course and nonspecific symptoms. Chronic appendicitis, although less common than acute appendicitis, can challenge clinicians because of its atypical presentation and the need for high diagnostic suspicion.

The literature indicates that chronic appendicitis is relatively rare, with a reported incidence of approximately 1-1.5% compared to acute appendicitis.[6,10] Unlike acute appendicitis, which typically manifests with severe abdominal pain, fever, and leukocytosis, chronic appendicitis presents with persistent abdominal pain for

more than three weeks, with less dramatic and often less specific features.[3,9] This case confirms that symptoms of chronic appendicitis can be subtle and prolonged, which can lead to delayed or erroneous diagnosis.

In our case, the patient presented with a prolonged and recurrent clinical picture that was initially misinterpreted as abdominal migraine, a condition that can mimic the symptoms of appendicitis in some cases.[4,5] This confusion is consistent with the literature, which shows that chronic appendicitis can be difficult to distinguish from other chronic abdominal pathologies.[7] The lack of definitive findings on initial imaging and the initial diagnosis of abdominal migraine underscores the importance of a thorough evaluation in patients with persistent abdominal pain.

The main clinical lesson of this case is the need to consider this pathology in the differential diagnosis of pediatric patients with persistent and prolonged abdominal pain, especially when imaging studies show inconclusive findings and do not respond to conventional treatments. This is crucial to avoid delays in diagnosis and to ensure adequate treatment before further complications develop.

The need for further research on chronic appendicitis and its presentation in pediatrics is highlighted. Although acute appendicitis is well understood, more research is needed to better characterize chronic appendicitis and develop more effective diagnostic strategies. In addition, medical education should emphasize the importance of a thorough differential diagnosis in patients with chronic abdominal pain, including those with symptoms that may not initially be suggestive of appendicitis.

CONCLUSION

This case of chronic appendicitis in an 11-year-old pediatric patient demonstrates the importance of maintaining a high suspicion for chronic appendicitis in patients with recurrent and persistent abdominal pain, despite initial negative findings on diagnostic studies. In addition, the need for a complete and detailed evaluation to reach an accurate and timely diagnosis.

The experience of this case emphasizes the need for a comprehensive and multidisciplinary approach in the evaluation of patients with persistent and chronic abdominal symptoms, and it is suggested that chronic appendicitis, although less frequent, should be included in the differential diagnosis of chronic abdominal pain to ensure adequate treatment and prevent long-term complications.

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