

Chronic Appendicitis: A rare Cause of Recurrent Abdominal pain - A case Report

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INTRODUCTION

Abdominal pain is a common clinical complaint and is frequently linked to an underlying acute medical condition.¹ Acute appendicitis is among the most common surgical emergencies, with a lifetime risk of 7 to 9%.² Diagnosing acute appendicitis is usually uncomplicated in patients who initially experience periumbilical pain that later localizes to the right iliac fossa, typically along with symptoms such as fever, nausea, vomiting, and tenderness in the same area. In contrast, chronic appendicitis is an uncommon condition, accounting for about 1.5% of all appendicitis cases, and is characterized by the absence of clearly defined diagnostic criteria.² The clinical symptoms are typically milder and involve a nearly constant abdominal pain that can range from sharp to dull in nature, lasting for more than one to

two days, and in some cases, persisting for weeks, months, or even years.³ The exact etiology of chronic appendicitis remains unknown.³ Ultrasonography (USG) and computed tomography (CT) are supportive imaging modalities, but a definitive diagnosis is made through histopathological examination.⁴ While optimal treatment is not clearly established³, elective appendectomy has been shown to alleviate chronic pain.⁵ We present a similar case of a 56 year old female who had presented with recurrent abdominal pain.

CASE REPORT

A 56-year-old male presented to our OPD with a one-

year history of intermittent dull-aching pain predominantly localized to the right lower quadrant of the abdomen, without any radiation. It occurred two to three times a month, resolved spontaneously without treatment, and some episodes were associated with vomiting. There was no fever, dysuria, weight loss, diarrhea, constipation, melena, or hematemesis. Multiple institutional visits labelled her as a case of non-specific abdominal pain, and no further investigations were undertaken. On examination, there was localized tenderness in the right lower quadrant without rebound tenderness, guarding, or rigidity. Pelvic examination did not elicit any pain. Laboratory investigations revealed WBC 6700 / cmm, hemoglobin 14.7 g / dL, platelets 233000 / cmm. Urine and stool routine tests were unremarkable, with no indications of an infectious process. Inflammatory markers including C-reactive protein (CRP) and erythrocyte sedimentation rate (ESR) were within normal ranges. USG revealed a partially compressible appendix with a mildly thickened echogenic wall measuring 7 mm in diameter, along with slight probe tenderness and no peri appendiceal fluid collection. CECT abdomen pelvis showed an appendicular diameter of 7 mm, and a cluster of prominent lymph nodes adjacent to the appendix, indicative of acute or chronic inflammation of appendix. Hence, a diagnosis of chronic appendicitis was suspected, and elective appendectomy was performed. The post-operative course was uneventful. Histopathological examination of the excised appendix confirmed the diagnosis (Figures 1 and 2). At one-month follow-up, the patient reported complete resolution of symptoms and had resumed normal activities within a week of surgery, with no post-operative complications noted.

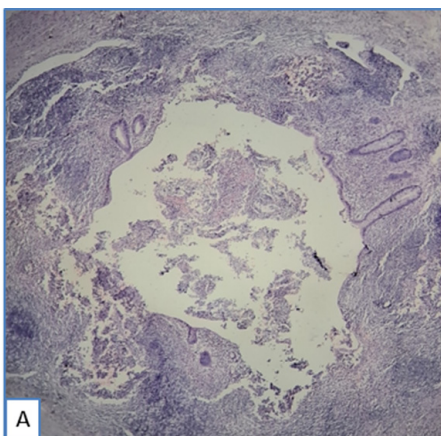


Fig 1: Colonic lining mucosa with ulceration and intraluminal lymphoproliferative inflammatory exudates

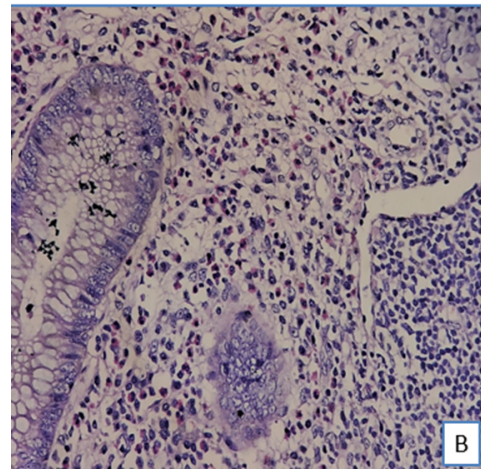


Fig 2: HPF microscopy showing collection of eosinophilic inflammatory cells in the lamina propria

DISCUSSION

Chronic appendicitis is a rare surgical entity with an incidence of 1.5% among all the cases of appendicitis.² The rarity of the chronic appendicitis leads to the clinicians being inexperienced towards the condition.⁶ On top of that, the atypical presentation will often lead to delay and difficulty in diagnosis⁷ and is often overlooked as non-specific abdominal pain. The presence of self-limiting, recurrent, non-radiating, dull aching pain in the right lower quadrant occurring two to three times a week, less frequently associated with other notable symptoms, was consistent with similar presentations reported in the literature.²

Chronic appendicitis can be considered when a patient presents with abdominal pain lasting longer than one to two weeks, particularly if appendicitis is suspected clinically and HPE of the appendix reveals features of chronic inflammation.² In some cases, clinical symptoms can persist for weeks, months, or even years, often presenting as episodic and recurrent pain, with the longest documented case of chronic abdominal pain due to recurrent appendicitis lasting 18 years.⁸

The exact etiology of chronic appendicitis remains unclear. It is believed to result from complete or partial obstruction of the appendiceal lumen. Potential causes of such obstruction include fecaliths, lymphoid hyperplasia, neoplasms, foreign bodies, or mucosal folds within the appendix.^{2,5} Genetic and environmental factors may contribute to the development of appendicitis, though it remains unclear whether chronic appendicitis arises independently or follows an inadequately treated acute episode.⁷

Classical acute appendicitis is typically easy to diagnose, presenting with 48 hours of periumbilical pain shifting to the right iliac fossa, along with anorexia, abdominal guarding, and leukocytosis. However, atypical and chronic forms are less frequent and are thought to arise from partial or intermittent obstruction of the appendix.^{5,8} Chronic appendicitis is harder to diagnose accurately, yet it is believed to be the underlying cause in about 8% of confirmed appendicitis cases. Advancements in imaging have enhanced diagnostic accuracy. In practice, USG is typically used to rule out other potential causes of symptoms, whereas CT is the preferred tool for assessing the appendix, offering comparable specificity (89%) and greater sensitivity (96%); however, histopathological examination remains the definitive method for diagnosis.⁶

Laboratory findings may reveal normal or mildly elevated leukocyte counts, without a left shift in the white blood cell differential.⁸ CT of chronic appendicitis often reveals features similar to those of acute appendicitis, such as an enlarged appendix (over 5 - 7 mm in diameter), a thickened appendiceal wall (sometimes showing a target or halo sign), enhanced periappendiceal fat, lymph node enlargement, cecal mass effect, localized cecal wall thickening, presence of calcified appendicoliths, the arrowhead sign, phlegmon, and fluid accumulation.⁹

Our patient presented with an unusual case of chronic right lower quadrant abdominal pain that persisted for over a year and remained undiagnosed despite multiple consultations and non-revealing investigations. His pain was intermittent, dull-aching, and localized to the periumbilical and right lower quadrant regions, with no systemic symptoms or significant laboratory abnormalities. Initial USG findings suggested a mildly thickened appendix, while CECT revealed an enlarged appendicular diameter with adjacent lymphadenopathy, raising suspicion of chronic appendicitis. Surgical pathology confirmed a chronically inflamed appendix. This case highlights the importance of considering chronic appendicitis in the differential diagnosis of long-standing, unexplained right lower quadrant pain. Timely imaging and surgical evaluation are essential, especially when clinical suspicion remains high, to prevent prolonged patient discomfort and ensure appropriate management.

CONCLUSIONS

Chronic appendicitis, though rare and often overlooked, should be considered in patients with recurrent right lower quadrant abdominal pain and unremarkable lab findings. Its subtle presentation necessitates a high index of suspicion. While imaging aids diagnosis, histopathology confirms it. Early recognition and timely appendectomy

can relieve symptoms and prevent complications.

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