

Chronic Appendicitis: Does It Exist?

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The typical presentation of acute appendicitis is well known. A few patients, however, have had an atypical clinical course suggestive of recurrent appendiceal inflammation, which has been confirmed by appendectomy. Therefore, in the evaluation of a patient with abdominal pain, a history of similar episodes should not preclude a diagnosis of appendicitis.

KEY WORDS. Appendicitis; abdominal pain; abdomen, acute. (*J Fam Pract* 1998; 46:507-509)

In 1886, Reginald Fitz¹ described several cases of alleged recurrent appendicitis in his classic comprehensive view of the "new" illness of appendicitis. Over the next several decades, surgical indications for appendectomy became more clearly defined,^{2,3} and the rejection of any recurrent or nonacute abdominal pain as real appendiceal disease became a common trend.^{4,5} Today, skepticism still persists among many physicians concerning the legitimacy of the condition known as "chronic appendicitis." However, there have been several reports of recurrent abdominal illness relieved by appendectomy. In these cases, pathological examination of the appendix has revealed evidence of acute transmural inflammation (acute appendicitis) and a lymphohistiocytic or eosinophilic infiltrate coupled with fibrosis (suggesting recurrent infection).

In this paper, we describe a patient with several episodes of recurrent abdominal pain over a period of 10 months who was confirmed at surgery to have appendicitis. The clinical history and pathologic diagnosis suggest that chronic inflammation of the appendix is a distinct disease process and should be considered in the differential diagnosis of recurrent right lower quadrant abdominal pain.

CASE REPORT

A 25-year-old man was transferred from an urgent care center to the emergency department with a

12-hour history of right-sided abdominal pain, nausea, and low-grade fever. On further questioning, the patient stated that over the past 10 months he had experienced four similar episodes of right-sided abdominal pain. All of these previous episodes had begun in the right upper quadrant, migrated to the right lower quadrant, and resolved spontaneously and completely over 48 hours. During these episodes, the patient experienced no diarrhea, received no therapy, and had no tests or procedures performed.

On initial presentation to an urgent care center, the patient's abdominal examination suggested generalized peritonitis. Later, on arrival at our emergency department, his abdomen was soft with localized tenderness in the right lower quadrant. Normal bowel sounds were present, and there were no masses or organomegaly on abdominal, pelvic, and rectal examinations. The patient was afebrile with normal vital signs. Laboratory tests revealed a white blood count (WBC) of $7.5 \times 10^9/L$, a normal urinalysis, and a negative urinary Gram stain.

Because of the recurring nature of his symptoms, and the physicians' inability to accurately make a diagnosis based on examination and laboratory investigation, the patient was sent for a computerized tomography (CT) scan of the abdomen and pelvis (Figure). The results of the CT scan revealed a calculus at the base of the appendix accompanied by appendiceal dilatation and appendiceal wall hyperemia; these findings are consistent with appendicitis.

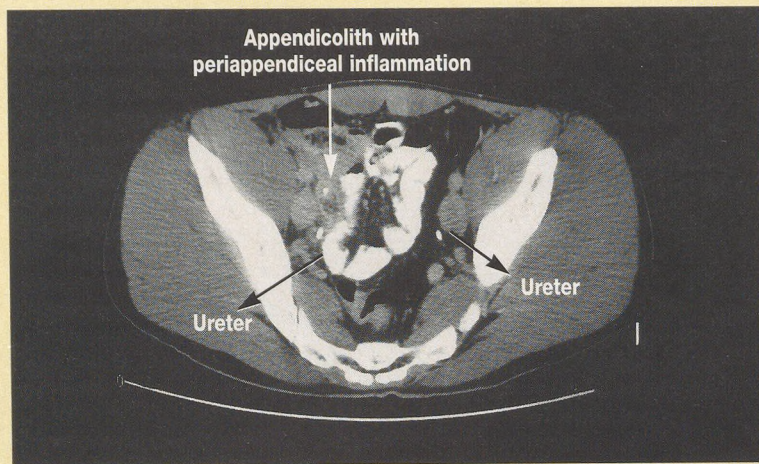
Given the presence of recurrent right lower pain, fever, and the apparent appendiceal inflammation on CT scan, exploratory surgery was discussed with the patient. He agreed and was taken to the operating room, where exploration of the right lower quadrant revealed a grossly swollen

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FIGURE

Computerized tomography scan showing appendicolith with periappendiceal inflammation.



and indurated appendix adherent to the lateral abdominal sidewall. The adhesions and significant induration of the surrounding tissues indicated long-standing inflammation. Pathologic examination confirmed marked infiltration with polymononuclear cells, thereby confirming acute inflammation. The terminal ileum, cecum, and ascending colon were examined and found to be normal.

The patient had an uneventful postoperative course and was dismissed from the hospital 48 hours after surgery. During the 1-year follow-up, he reported no additional episodes of right lower quadrant pain.

DISCUSSION

It is well recognized that acute appendicitis is caused by a combination of infection and obstruction. The latter is usually caused by a fecalith; or the obstruction might be secondary to lymphoid hyperplasia, a tumor, a foreign body, a parasite, or an anatomic variance, including hyperinnervation of the mucosa. Obstruction can also be partial or intermittent, thus allowing resolution of symptoms between attacks. These types of cases, including that of our 25-year-old man, are probably milder variants of cases in which acute appendicitis is diagnosed because of classic symptomatology.⁶⁻¹⁰

Unlike acute appendicitis, no clinical characteristics that might aid in a diagnosis of chronic appendicitis (other than recurrent abdominal

pain) have been identified. Signs and symptoms are less obvious than in acute appendicitis. In addition, there is a low incidence of perforation.¹¹ Other reported cases actually have had clinical courses that seem to refute the diagnosis of appendicitis; for example, normal WBC or mild leukocytosis, minimal fever, imprecise pain, imprecise localization, or the absence of anorexia. In one recent study, only 15% of patients with acute appendicitis had a temperature higher than 100.5°F. In contrast to anticipated findings, 60% of patients with a normal appendix had a WBC of more than $10 \times 10^9/L$.¹² Symptom evolution can

therefore be subtle, making the diagnosis difficult and allowing future episodes of recurrence.

There are no typical findings or routine diagnostic modalities to diagnose chronic relapsing appendicitis. It is a diagnosis of exclusion,^{13,14} and the physician must also consider terminal ileitis (even in the absence of diarrhea), Meckel's diverticulitis, cecal adenocarcinoma causing intermittent obstruction of the appendiceal orifice, or a primary appendiceal neoplasm. Computerized tomography scanning can help differentiate the source for chronic and recurring right lower quadrant pain. Diagnostic laparoscopy may also be helpful in selected patients with suspected appendicitis. Laparoscopy often aids in the diagnosis when used for children with equivocal test results and women of childbearing age with right lower quadrant pain.¹⁵ Critics of this procedure, however, point out that the patient must still undergo the potential morbidity of general anesthesia.

It is true that all episodes of previous abdominal pain in patients eventually given a diagnosis of recurrent appendicitis cannot be attributed to that diagnosis. There are, however, enough instances in which careful review of the patient's history revealed that the final clinical symptoms which led to appendectomy were identical to those suffered during past episodes. Our case report serves as a worthwhile reminder that appendicitis can resolve and recur spontaneously.² Therefore, appendicitis should not be excluded.

ed from the differential diagnosis of a patient with recurrent abdominal pain. Awareness of this concept is important so that appropriate treatment is not delayed.

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