Case Report

Tuberculous Appendicitis

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ABSTRACT

Gastrointestinal tuberculosis is quite rare, representing only 3% of all extrapulmonary cases. Involvement of the appendix is rare, only occurring in about 1% of cases. It is usually secondary to tuberculosis elsewhere in the abdomen. A prompt diagnosis depends on a high index of suspicion as clinical signs may be nonspecific and microbiological confirmation is difficult. Histopathologic examination is often the only way to reach a diagnosis and to establish specific antibiotic therapy. In these cases, due to the absence of specific symptoms and signs, the diagnosis is delayed until after surgery.

Key Words: Acute appendicitis, peritoneal tuberculosis, tuberculosis, peritonitis, appendectomy

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Tuberculosis (TB) is common in Morocco. The most commonly affected region is the lung.

Involvement of the appendix is rare, occurring only in about 1% of cases. Appendicular TB presenting the signs and symptoms of acute appendicitis is an even rarer occurrence. Therefore, the diagnosis of appendicular TB is usually made after the histopathologic examination of the appendectomy specimen.[1]

CASE REPORTS

Case 1

A 26-year-old man presented to the outpatient surgery department, suffering from nonradiating pain in the right iliac fossa associated with vomiting and high temperature (up to 39°) with chills for 6 days. The physical examination showed marked tenderness over the right lower quadrant; and his vital signs were normal. Initial blood counts and results of blood chemistry tests were entirely normal except for an elevated leukocyte count at 14,300/mm^3. An ultrasonogram of the abdomen demonstrated an inflammatory mass in the ileocecal zone, with localized signs of perforation; the appendix was not visible. These symptoms are consistent with a laparotomy with appendectomy. The aspect was a diffusely inflammatory mass with tenacious adhesions, especially in the appendix–ileum. A diagnosis of TB was confirmed by histopathologic examination. It described the presence of "granulomatous nodular epithelioid appendicitis and mesenteritis with gigantic and Langhans cells and diffuse caseous necrosis" [Figure 1]. The patient's postoperative course was uncomplicated.

After definitive diagnosis, antituberculous treatment was

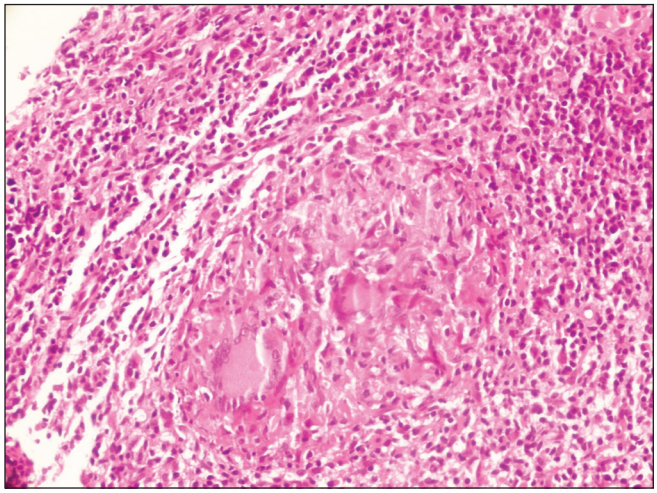

Figure 1: Histopathologic aspects of tuberculosis: multiple epithelioid cell granulomas in the submucosa

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started for 6 months. At two and a half years follow up, he has had no recurrence of TB disease.

Case 2

A 30-year-old female patient was admitted for investigation after complaining of a vague abdominal pain for 6 months and acute pain for 2 days with occasional nausea but no vomiting, asthenia, and a light evening temperature. Examination of her abdomen revealed rebound tenderness over the right iliac fossa. The leukocyte count was 11,400/mm^3. The patient was kept under observation. A few days later an acute flare-up occurred and an abdominal computed tomography demonstrated an inflammatory mass in the ileocecal zone. Operation was performed, and it was found that the wall of appendix was thickened and the lumen contained grayish white necrotic material. The examination of the gastrointestinal tract did not specify the primary or secondary site of the tubercular infection.

A diagnosis was confirmed by definitive histopathologic examination. Antituberculous treatment was started in the immediate postoperative period. She was discharged on the third day without complication. She is presently well on a follow-up of 19 months.

DISCUSSION

In extrapulmonary TB, appendicular TB has been regarded as a rare form of TB, and usually secondary to infections elsewhere in the abdomen. Although the ileocecum is involved in over 40% of cases of abdominal TB, the appendix is involved in only about 1%.[2] Appendicular TB may be primary if there is an absence of any evidence of TB after thorough investigations or at laparotomy. It may also be secondary to tuberculous infection in another part of the body. The secondary form is frequently associated with intestinal TB, particularly of the cecum.[2]

Does appendicular TB antedate or follow infection of the cecum?

Many authors, including Scott and James,[3] report that in their experience appendicular TB is practically always associated with the same infection in the cecum, whereas most observers are familiar with ileocecal or intestinal TB being frequently found with no involvement of the appendix suggesting that the latter is usually secondarily affected. A few authors reported that tuberculous infection of the appendix might result not only from contiguity to a neighboring lesion due to the minimal contact of the luminal mucosa of the appendix with the intestinal contents[4] but also by either the obvious hematogenous route from a distant focus, such as a pulmonary or bronchial lymph node, or by the infected contents of the intestinal tract. Symptoms of the disease are commonly nonspecific and a presumptive diagnosis is really difficult to make, none of our patients had a preoperative diagnosis of appendicular TB. Diagnosis was made after histopathologic examination, while an early diagnosis could avoid surgical treatment.[5]

Laboratory and radiologic findings of appendicular TB have a low specificity. Histopathologic examination showed lymphoid hyperplasia with associated caseating granulomas. Surgery is advocated as the treatment of choice for appendicular TB because antituberculous drugs alone cannot control recurrent attacks of inflammation; consisting of isoniazid 5 mg/kg per day, ethambutol 15 mg/kg per day, and rifampicin 10 mg/kg per day.[6] Many authors suggest combining corticosteroid administration with specific antibiotic treatment to reduce the complications of abdominal TB.[6]

In conclusion, appendicular TB is rare. It is usually secondary to TB elsewhere in the abdomen. It is diagnosed only after histopathologic examination. The only way to resolve this problem is prophylaxis and prevention worldwide.

REFERENCES

1. Dinler G, Sensoy G, Helek D, Kalayci AG. Tuberculous peritonitis in children: report of nine patients and review of the literature. World J Gastroenterol 2008;14:7235-9.
2. Rasheed S, Zinicola R, Watson D, Bajwa A, McDonald PJ. Intra-abdominal and gastrointestinal tuberculosis. Colorectal Dis 2007;9:773-83.
3. Scott JR. Tuberculosis of the Appendix. Ann Surg 1917;66:648-53.
4. Mittal VK, Khanna SK, Gupta NM, Aikat M. Isolated tuberculosis of the appendix. Am Surg 1975;41:172-4.
5. Gupta SC, Gupta AK, Keswani NK, Singh PA, Tripathi AK, Krishna V. Pathology of tropical appendicitis. J Clin Pathol 1989;42:1169-72.
6. Alrajhi AA, Halim MA, al-Hokail A, Alrabiah F, al-Omran K. Corticosteroid treatment of peritoneal tuberculosis. Clin Infect Dis 1998;27:52-6.

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