PRIMARY TUBERCULOUS APPENDICITIS: RARE CAUSE OF A COMMON DISEASE

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Summary

Gastrointestinal tuberculosis is quite rare, representing only 3% of all extrapulmonary cases. Primary tuberculosis of the appendix is a clinical rarity. It is usually secondary to tuberculosis elsewhere in the abdomen. Diagnosis is often made only after histopathological examination of the resected specimen. This report describes a 21 year old male with clinical diagnosis of acute appendicitis, who was finally diagnosed as tuberculous appendicitis as the histopathological examination revealed chronic granulomatous inflammation along with caseous necrosis. We made a diagnosis of primary tuberculosis of appendix and the patient was on anti-tuberculosis medication. This article stresses the importance of histopathological examination of the resected appendix.

Key words

Primary; Tuberculosis; Appendix.

Introduction

Tuberculosis is widely known entity to man. No organ has been spared by this disease with few exceptions [1]. Pulmonary tuberculosis is its commonest clinical manifestation [2]. Intestinal tuberculosis is still common in developing countries [3]. Of extra pulmonary cases, the primary TB of appendix is extremely rare and was reported sporadically [4]. Although gastrointestinal TB is common in endemic regions, TB appendicitis is surprisingly rare [5].

The reported incidence of primary TB in performed appendectomies varies from 0.1 to 3.0% [6]. Appendicular TB presenting the signs and symptoms of acute appendicitis is an even rarer occurrence [7].

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Because of its rarity and absence of any specific clinical and radiological finding, diagnosis is made only after histopathological examination of the appendectomy specimen [8]. Herein, we report a case of a 21 year male patient with primary tuberculous appendicitis histomorphologically.

Case Report

A 21 year old male presented to a private clinic with the complaints of pain in the right lower abdomen, associated with vomiting and low grade fever for two days. There was no significant past history of chronic illness or long time intake of medication. On examination he had typical tenderness and localized guarding in the Mcburney's point in the right iliac fossa. On initial works up, his leucocyte count was 17000/cmm, ESR 70 mm in 1st hour. Utrasonogram revealed long appendix with oedematous walls and no other abnormality detected. Since these symptoms and findings were consistent with appendicitis, patient was taken for emergency surgery. On opening a diffuse inflamed, oedematous appendix was found and appendicectomy done. On exploration ileum, caecum and mesentery were normal. In post operative period, he had wound infections, which was managed by regular dressing. Gross examination of the specimen showed oedematous whitish elongated appendix (Fig 1). Histopathological examination of the resected specimen showed multiple caseating epithelioid granuloma with occasional Langhans type giant cells.

Patient was evaluated for other primary sources of TB elsewhere in the body (Fig 2-6). No other sources of primary were found. Patient was started on standard anti TB drugs. So the patient was diagnosed as primary tubercular appendicitis histomorphologically.

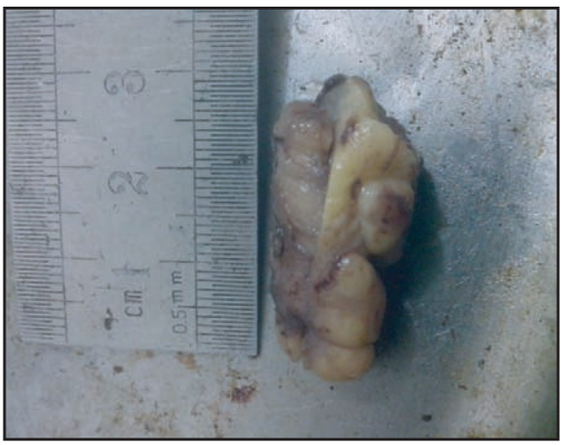

Fig 1: Gross pic of tuberculous appendix

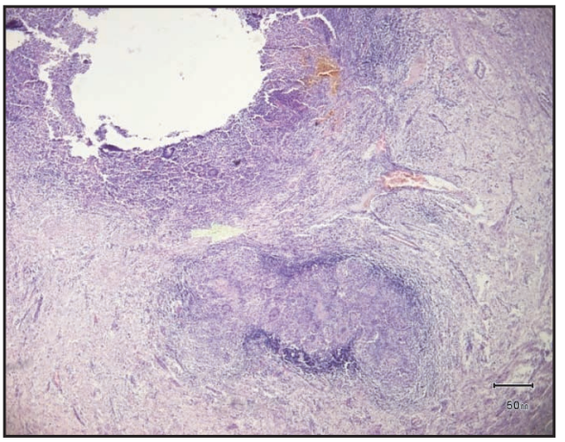

Fig 2: Appendicular lumen & granuloma(40X)

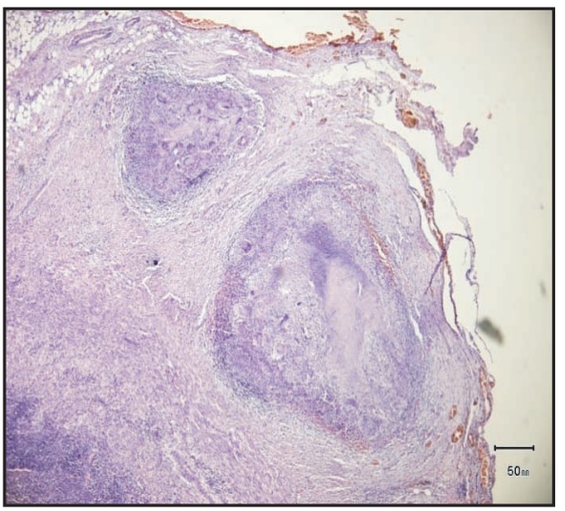

Fig 3: 2 Caseating granuloma (40 X)

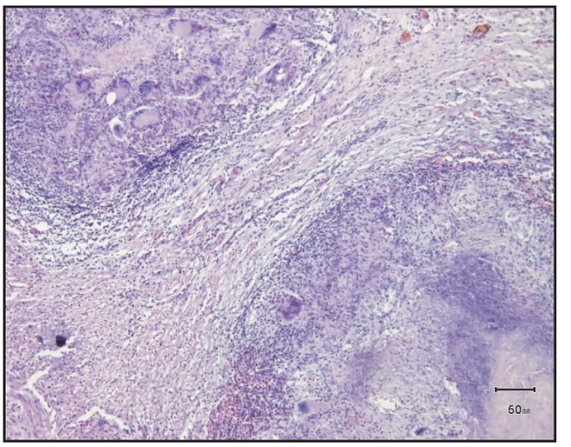

Fig 4: 2 interfacing tubercle (100 X)

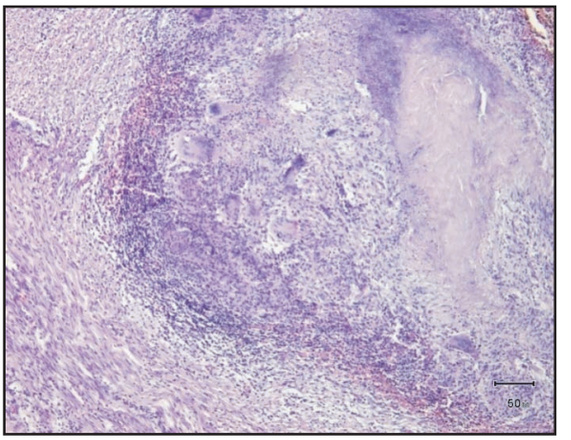

Fig 5: Caseating granuloma (200 X)

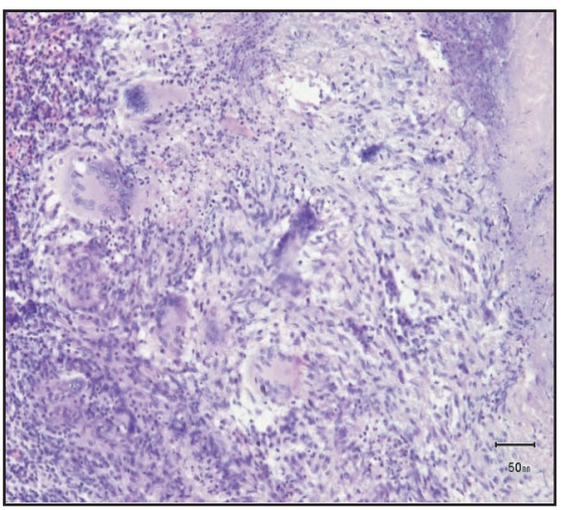

Fig 6: Langhans giant cells with epithelioid cell (400X)

Discussion

Abdominal tuberculosis is a major cause of morbidity and mortality in children. Ileocaecal region is most common site with involvement in about 40% of cases. Appendicular tuberculosis is very rare as primary in- volvement of appendix is found only in 1% of cases [9]. The rarity of primary tuberculosis of the appendix may be due to the fact that there is minimal contact of appendicular mucosa with intestinal contents. Three clinical types of tuberculous appendicitis have been described in literature. The first type presents as an acute form indistinguishable from pyogenic appendicitis until histologically proven. The second clinical type is a chronic form presenting with vague pain, occasional history of vomiting, diarrhoea and a mass in the right iliac fossa. These cases are indistinguishable from cases of ileocaecal tuberculosis. The third type is a latent one found accidentally on histopathological examination [10]. nvolvement of appendix in tuberculosis can be by various routes, the commonest being hematogenous or it can be as a local extension of ileocaecal tuberculosis, as retrograde lymphatic spread from distant lesions [1]. The disease commonly present as a chronic disease with long standing or recurrent episodes of right iliac fossa pain, vomiting and diarrhea. Our case also presented tous in this way. It may also present as acute appendicitis, or as a latent type that is detected incidentally. As there is no pathognomic clinical feature of isolated appendicular TB, it can only be confirmed by histopathological examination [2]. The diagnosis is usually made by histopathological examination of the appendectomy specimen. It showed typical granuloma, with caseous necrosis surrounding the epithelioid cells and the Langhans giant cells. In this case, the appendix and the mesenteric mass also showed the TB infection [4]. Because tuberculosis is a systemic disease with localized manifestations, anti-tubercular therapy must be started in all patients either post-appendectomy or non-appendectomy patients [3]. Primary tuberculosis of the appendix has no detectable focus of infection anywhere else in the body, and is extremely rare. Ideally, to make the diagnosis of primary appendicular tuberculosis, a post mortem would be required, but for clinical purposes, this diagnosis can be made if there is an absence of any evidence of tuberculosis after thorough investigations or at laparotomy [6].

In conclusion, primary (isolated) tuberculosis of appendix may or may not be associated with specific clinical features, and diagnosis is often made only after histopathological examination. Therefore, it is strongly recommended that all appendicectomy specimens should be subjected to histopathological examination to exclude tuberculosis and other pathology.

Disclosure

All the authors declared no competing interest.

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