Isolated Tuberculous Appendix Presenting as Acute Abdominal Emergency – A Rare Case Report

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ABSTRACT

Tuberculosis is a common health problem in developing countries. Primary tuberculosis of the appendix is a rarity despite the high prevalence of gastrointestinal tuberculosis. We report a rare case of primary tuberculosis of appendix in twenty two year old male who presented with acute abdominal pain in emergency ward of our hospital.

Keywords: Acute abdomen, appendix, isolated tuberculosis appendix

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Conflict of interest: None

INTRODUCTION

Tuberculosis is one of the world's most widespread and deadly infection. Mycobacterium tuberculosis, the infectious organism that causes tuberculosis infection and disease, infects as estimated 20-43% of the world population. According to global tuberculosis report, 2013,1.6 million people died in 2012 from tuberculosis. Incidence of extrapulmonary infection is seen in 10% cases of non HIV infected individuals and 70% of HIV infected individuals. Tuberculosis of appendix occurs as primary or secondary disease, the former being rare with incidence of 0.1% to 0.6%.[1] A prompt diagnosis warranties 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.

CASE REPORT

A 22 year old male patient presented with complaint of pain in right iliac fossa for one day. Pain started at periumbilical region and after few hours shifted to right iliac fossa. Pain was severe, intermittent and colicky in nature and was associated with 5 to 6 episodes of vomiting. On examination,

the patient was thin built and poorly nourished. Examination of his respiratory and cardiovascular systems was normal. Abdominal examination revealed tenderness and rebound tenderness in the right iliac fossa without any palpable mass. Routine hematological and urine examination were normal except for leukocytosis and neutrophilia.

Ultrasonogram abdomen confirmed inflammed appendix with edematous walls and mesenteric lymphadenopathy. The patient was subsequently subjected to appendicectomy through McBurney's incision On exploration, appendix was found inflamed.. Limited exploration of gut and mesentery through the grid-iron incision was done and no peritoneal tubercle was found. Routine appendicectomy was performed and specimen was sent for histopathological examination. Gross examination of the specimen showed an exudate covered appendix with periappendicular fibro fatty tissue measuring about 5 cm in length.(Figure 1)

Figure 1: Exudate covered appendix with periappendicular fibro fatty tissue

Cut surface showed the narrowed lumen of the appendix with thickened wall. No mucosal ulceration was seen grossly. Microscopic examination of the appendicectomy specimen revealed caseating granulomas in muscle layer and near serosa of the appendix consisting of

epitheloid cells, Langhan's giant cells, lymphocytes, mononuclear cells and central area of caseous necrosis. (Figure 2&3)

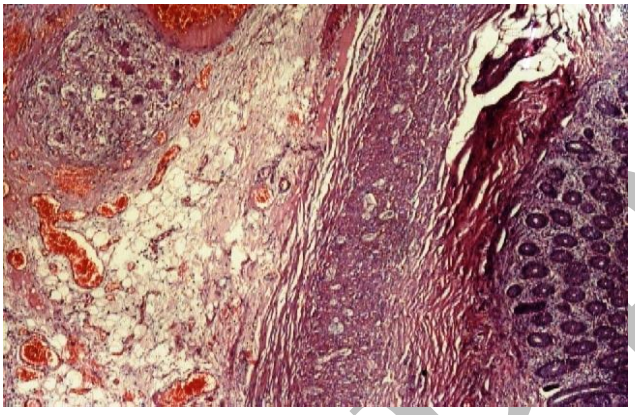

Figure 2: caseating granulomas in muscle layer and near serosa of the appendix (H&E, 100x)

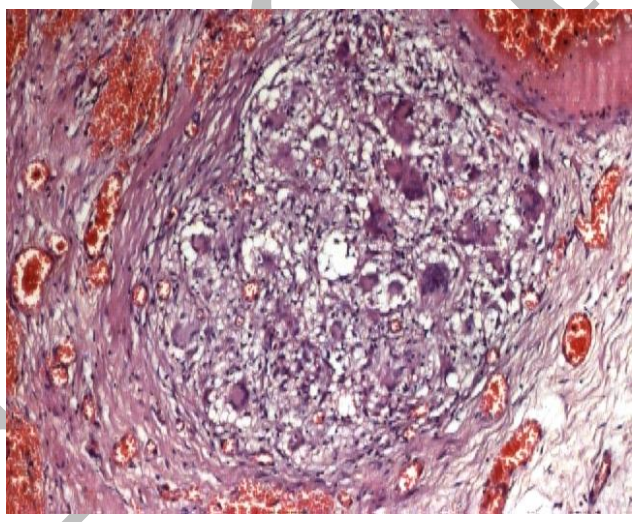

Figure 3: caseating epitheloid cell granuloma (H&E, 400x)

Periappendicular tissue did not show any tubercular lesion. Recovery was uneventful except for mild wound infection that settled conservatively with daily dressing changes. Patient was put on anti-tuberculous treatment and followed for 6 months. Patient was also subjected to medical examination in postoperative period for search of a primary focus, which did not yield any contributory results.

DISCUSSION

The incidence of primary tuberculosis of the appendix in appendicectomies performed varies from 0.1

to 3.0%.[2,3] The, clinical presentation of tuberculous appendicitis can be acute, chronic and latent. The acute form has a presentation which is clinically indistinguishable from pyogenic appendicitis until histologically proven. Patients with chronic tuberculous appendicitis present 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 latent type of tuberculous appendicitis is found accidentally on histopathological examination.[4]

Tubercular infection of the appendix can either cause ulcerative or hyperplastic lesion; former being more common. Grossly, appendix can be normal to thick walled; according to some pathologists, more than two sections of all the appendicectomy specimens should be taken for histopathological examination, so that more cases can be detected in endemic areas.[5]

The exact mechanism of tubercular involvement of the appendix remains unclear. The various ways by which the appendix can be involved are ; hematogenous, by infected intestinal contents, and, by contiguous spread of disease from neighbouring ileocaecal or genital tuberculosis.[5] Secondary involvement of the appendix can occur either as a local extension of ileocaecal tuberculosis, as retrograde lymphatic spread from distant lesions, or as appendicular serositis and periappendicitis in peritoneal tuberculosis .[6] However, despite the ileocaecal junction being the most common site of involvement in intestinal tuberculosis, the comparative low incidence of appendicular tuberculosis can be explained by the minimal contact of the luminal mucosa of the appendix with the intestinal contents .[6,7,8]

Tuberculosis is a systemic disease with localized manifestations and complications such as sinus or fistula formation.[9] Hence it is advisable to administer anti-tuberculous therapy in postoperative period. However, some clinicians do not agree to institution of anti-tuberculous drugs when isolated disease is found, because the focus has been removed.

CONCLUSION

As tuberculosis is endemic in our region, all specimens of appendix must be

submitted for histopathological examination. This will prevent missed diagnosis, avoid complications, and ensure complete care of the patient.

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