

Isolated Appendicular Tuberculosis (TB) Presented As Peritonitis

FR Chowdhury,¹ Md R Amin,² KH Khan,³ Md B Alam² and HAMN Ahasan²

Corresponding author: Dr. Fazle Rabbi Chowdhury, Atlantic Topaz, Flat-3/B 262, Elephant Road, Dhaka-1205, Bangladesh, e-mail: mastershakil@hotmail.com

ABSTRACT

Tuberculosis is very common entity in both developing and under developed countries. Each year 3 million people worldwide died of the disease. Among extra pulmonary TB, alimentary system accounts for about 3.0% cases. The Commonest presentation of alimentary tuberculosis is Ileo-caecal disease, but isolated appendicular involvement is very rarely seen. Although some cases have been reported from our neighboring countries, there is still no such report from Bangladesh. We are here for the first time reporting a case of isolated appendicular tuberculosis which presented to us with peritonitis.

Keywords: Tuberculosis, appendix, Bangladesh.

CASE PRESENTATION

Tuberculosis (TB) is very common entity in both developing and under developed countries. Each year 3 million people worldwide died of the disease.¹ pulmonary tuberculosis is its commonest clinical manifestation, but the disease can involve any organ including abdominal structures. Among them Appendix is a very rare site of tuberculosis which led us to report the case.

Mr. Harun Sheikh a boy of 18 years was born and brought up in the rural environment of Munshigonj district. He grew up with the prevalent environment of the village and did not have the opportunity to acquire formal education. Lack of education pushed him to take the job of a day laborer. One day evening after returning from his work he experienced abdominal pain in the Para umbilical region. For the first three days he didn't take it in to account rather tolerated and continues to work as because he is the only earner of the five member family (2 brother and parents). But on the fourth day pain became severe. It was dull aching, persistent in nature and radiates to lower abdomen and right iliac fossa and no relation with intake of food or bowel movement. The symptom was further augmented by high grade continuous fever. With this complaint he went to a local registered practitioner who prescribed him Tramadol, Omeprazole and Paracetamol for 5 days. After taking these drugs pain and fever slightly subsided. The next day after completion of five day course, he was again experienced severe abdominal pain and high grade fever. This time fever was associated with chills and rigor. He had history of several episode of vomiting containing food particle and also passed stool mixed with mucous for 2-3 times. As the condition further deteriorates he was brought to Dhaka Medical College Hospital on 12th day of his illness. On admission we found him in highly toxic

state. He was anxious looking with 103^o F temperature, pulse-112/min, B.P-100/65 mm of Hg and also mildly anaemic and dehydrated. Abdomen was distended with intense rigidity. There was severe tenderness on superficial palpation of the whole abdomen particularly on McBurney's point with very sluggish bowel sound. Rest of the examination was normal. Routine hematological and biochemical tests were normal except Neutrophilic leucocytosis (17500/cu mm) and raised ESR (85 mm in 1st hour). Radiological examination of abdomen shows multiple air fluid level and free gas under diaphragm. We diagnosed the case acute peritonitis due to burst appendix and sent him for emergency surgery. On exploration appendix was found gangrenous with perforated tip. There was huge peritoneal collection. After removal of the appendix peritoneal toileting was done. Gut and mesentery showed mild inflammation but no peritoneal tubercle or mesenteric lymphadenopathy. Ileo-caecal region was also normal. Histopathology of the appendectomy specimen revealed multiple epithelioid granulomas with caseation necrosis compatible with Tuberculosis (Fig. 1 and 2). Efforts to detect a primary focus of tuberculosis elsewhere in the body were unsuccessful. Patient was put on Anti-TB treatment and followed for 6 months with satisfactory outcome.

DISCUSSION

Tuberculosis (TB) is endemic in Bangladesh for long time. Emergence of multi drug resistant (MDR-TB) has added to the momentum of the disease in many countries including ours.¹ It may affect primarily all organs and tissues of the body, although some of these show high immunity against the infection. The most common forms of non-pulmonary tuberculosis are tuberculosis of bones and joints (30.0%), urinary system (24.0%), lymph nodes (13.0%), sexual organs (8.0%), cerebrospinal meninges

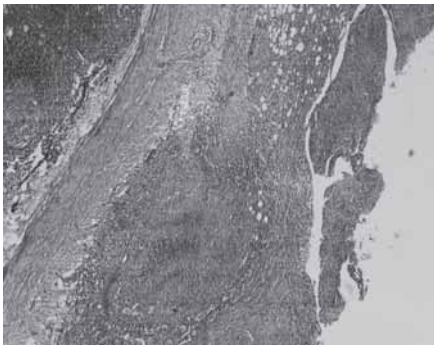


Fig. 1. Showing wall of appendix consists of Tuberculous Granuloma.

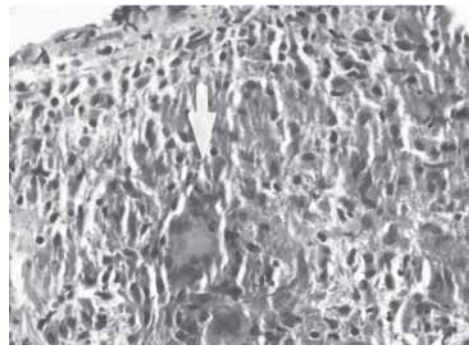


Fig. 2. Showing Epithelioid cell, Langhans type of giant cell and Caseation necrosis.

(4.0%), and alimentary system (3.0%).² Tuberculosis of spleen is also previously reported from Bangladesh.³ The commonest presentation of abdominal tuberculosis is ileocecal disease, but isolated appendicular involvement is also rarely seen, occurring in only 0.1-0.6% of cases in the absence of pulmonary or other abdominal involvement.⁴

The exact mechanism of involvement of the appendix remains unclear. Appendix can be involved in various ways like via hematogenous route or by infected intestinal contents or by extension of disease from neighboring ileocaecal or genital tuberculosis.⁵ A few authors consider the hematogenous route to be the common mode of spread, whereas others feel that secondary involvement of the appendix is commoner. Secondary involvement of the appendix can either occur as a local extension of ileocaecal tuberculosis or as retrograde lymphatic spread from distant lesions or as appendicular serositis and peri-appendicitis in peritoneal tuberculosis.⁵ 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. The mode of infection in these cases is considered to be ingestion of contaminated foods which probably happened in our case as well.⁶

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 to

us 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. Some pathologists suggest study of more than two sections of each appendix so that more cases can be detected in endemic areas.⁷ Dilemma exists regarding treatment as well. Some clinician suggest administration of Anti-TB drug in post operative period where as others do not agree to institute drug when isolated disease is found, because the focus has been removed.⁴ As tuberculosis is endemic in our region all specimen of appendix should be sent for histopathological examination, so that we can prevent missed diagnosis, avoid complication and ensure complete care of the patient.

REFERENCES

1. Ahasan HAMN, Hossain MA Drug defaulters in pulmonary tuberculosis. *Specialist* 1997; 15: 175-9.
2. Park SW, Lee HL, Lee OY *et al.* A case of appendicular tuberculosis presenting as acute appendicitis. *Korean J Gastroenterol* 2007; 50: 388-92.
3. Ahasan HAMN, Karim SR, Ahasan SKM. Tuberculosis of spleen-an uncommon cause of pyrexia of unknown origin. *Bangladesh J Med* 1999; 10: 103-4.
4. Waqar SH, Zafar IM, Zahid MA. Isolated appendicular tuberculosis. *J Ayub Med Coll Abbottabad* 2005; 17: 88-9.
5. Gupta S, Kaushik R, Kaur A, Attri AK. Tubercular appendicitis-a case report. *World J Emerg Surg* 2006; 1:22.
6. Shalaby AMR. Tuberculous appendicitis. *Internet J Pathol* 2007; Available from: URL: <http://www.ispub.com/ostia/index.php>. Accessed on Feb 2008.
7. Mital VK, Khanna SK, Gupta NM. Isolated tuberculosis of appendix. *Ann Surg* 1975; 41: 172-4.