ABSTRACT

Tuberculosis is still very common in developing and under developed countries worldwide. Each year, 3 million people die of this disease worldwide. Tuberculosis can affect almost any part of body. The commonest presentation of the abdominal tuberculosis is ileo-caecal disease, but primary (isolated) appendicular involvement is also rarely seen. Preoperative diagnosis of this condition is extremely difficult and is always detected either at laparotomy or after histopathological examination. Its correlation with associated pulmonary or gastrointestinal tuberculosis is very variable. We report a case of primary tuberculous appendicitis in an young adult who was successfully treated by surgery and antitubercular chemotherapy.

KEYWORDS: Tuberculosis, Appendicitis, Primary Tuberculous Appendicitis.

INTRODUCTION

Tuberculosis is one of the world’s most widespread and deadly illness affecting as estimated, 20-43% of the world population. India accounts for one fifth of global TB incident cases.[1] Tuberculosis occurs in extra pulmonary sites in 10% of non-HIV infected people and up to 70% of those infected with HIV.[2,3] Gastrointestinal TB accounts for 3% of extrapolmonary TB, the common site of involvement being iliocaecal region.[1] Tuberculosis primarily affecting the appendix is extremely rare and its diagnosis is very difficult preoperatively. Its reported incidence is 0.1-0.3%.[4] Its correlation with associated pulmonary or gastrointestinal tuberculosis is very variable. A high index of suspicion and great clinical acumen is required for preoperative diagnosis, which should always be confirmed by histopathology or PCR. Appropriate treatment includes appendicectomy with antitubercular chemotherapy to avoid postoperative complications.

CASE REPORT

A 28 year old male came to our OPD with clinical signs and symptoms of appendicitis. Patient gave a history of on and off pain in the right iliac fossa for the past 1½ months along with fever and nausea. The patient was moderately built with a pulse rate of 80/min, BP: 132/82 mm of Hg and Temp: 100°F. The blood investigations showed Hb: 11.6g/dl, TLC: 9600/cu.mm. Differential count: Polymorphs: 62, Lymphocytes: 34. ESR=80mm/hr. On examination, abdomen was soft with minimal guarding and tenderness in the right ilioc fossa. No mass was palpable. Bowel sounds were well heard. Examination of respiratory, cardiovascular and central nervous system revealed no abnormality.

USG Abdomen suggested a diagnosis of Appendicitis. Hence, Open appendicectomy was planned for the patient. The abdomen was opened using a McBurney`s incision. There were extensive adhesions around the caecum & terminal ileum and the appendix was concealed. The incision was extended for better access using a Rutherford-Morrison extension. The appendix was found to be as a mass in the right paracolic gutter. The adhesions were gently released and the appendix along with the mesoappendix was dissected off as a single mass and sent for histopathological examination. No pathology was detected in ileum, caecum, mesentery or mesenteric lymph nodes on inspection and palpation.

Histological examination revealed typical epithelioid cells, lymphocytes, Langhans type giant cells with central caseous necrosis. The histopathological report suggested it to be a tubercular appendicitis. Sputum and appendix AFB were negative. Chest X- ray was normal. TB-PCR of appendicular tissue was positive for tuberculosis.
Patient was started on Category I Anti-Tubercular Chemotherapy. At the latest follow-up 2 months after surgery, patient was comfortable and had no symptoms.

**DISCUSSION**

Despite tuberculosis being not uncommon in India, affliction of the appendix with the disease remains a rarity. [1] The reported incidence of appendicular tuberculosis in all appendicectomies performed varies from 0.1% to 0.3%. A few authors have reported up to 46 to 70% involvement of the appendix in patients with intestinal tuberculosis. [5]

Despite the ileocaecal junction being the most common site of involvement in intestinal tuberculosis, the relative infrequency of involvement of the appendix in
intestinal/ileocaecal tuberculosis has been explained by the minimal contact of the luminal mucosa of the appendix with the intestinal contents.[2] 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.[2,3] The mode of infection in these cases is considered to be ingestion of contaminated foods.[3]

The disease can present with recurrent episodes of right iliac fossa pain, vomiting, diarrhoea, as acute appendicitis, or as a latent type that is detected incidentally.[2,3] The acute presentation occurs due to severe pyogenic infection that is superimposed on the tubercular appendix. Non-pulmonary tuberculosis is found with different frequencies in different countries of the world. It seems that these differences are the result of differences in rates of diagnosis and registration of new tuberculosis cases.[6]

As there are no pathognomic clinical features of appendicular tuberculosis, a pre-operative diagnosis is difficult.[7] The diagnosis is usually made after histopathological examination of the appendectomy specimen after ruling out other granulomatous diseases like Crohn’s disease, sarcoidosis and foreign body induced inflammation[8] and the most confirmatory test is TB-PCR analysis; though expensive, it is the most sure method. Detection of AFB in the appendicular specimen can be negative as reported by other studies also.[9,10] The combined use of clinical diagnosis, histopathology, and PCR has 100% sensitivity and 100% specificity.[10] Anti-tubercular therapy must be started in the post-operative period if the investigations reveal tuberculosis to avoid post operative complications like ileocutaneous fistula.[9]

CONCLUSION

Tuberculosis of appendix is a rare but important cause of appendicitis. Tuberculosis being endemic in our country and due to resurgence of TB and HIV, it is a must to send all appendectomy specimens for histopathological examination and or TB-PCR, so as to prevent misdiagnosis and prevent further complications.

REFERENCES


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