

## **Acute isolated Tuberculous Appendicitis is the presenting complaint in a case of pulmonary tuberculosis: A Rare Case Report**

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**Abstract:** Tuberculosis is still a major health burden in many countries worldwide. Every year, millions of people die of tuberculosis worldwide. Tuberculosis can affect almost all part of body. The most common site of the abdominal tuberculosis is ileo-caecal disease, but isolated appendicular involvement is rarely seen entity. Preoperative diagnosis of this condition is extremely rare and is always detected either at laparotomy or after histopathological examination. Its association with pulmonary or gastrointestinal tuberculosis is very much variable. We report a case of isolated tuberculous appendicitis in an adult who was successfully treated by surgery then he was diagnosed pulmonary tuberculosis.

**Keywords:** Tuberculosis, Appendicitis, Tuberculous Appendicitis

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### **INTRODUCTION**

Tuberculosis is one of the world's most widespread and deadly disease affecting as estimated, 20-43% population all over the world. In India, it accounts for 20% of global TB burden. Gastrointestinal TB accounts for 3% of all extrapulmonary TB, the common site of involvement being ileocaecal region [1]. Tuberculosis only affecting the appendix is extremely rare and its diagnosis is very difficult preoperatively. Its reported incidence is 0.1-0.3% [2]. Its correlation with associated pulmonary or gastrointestinal tuberculosis is very variable. A strong suspicion and great clinical sense are required for preoperative diagnosis, which should always be confirmed by histopathology or PCR. Mainstay of treatment includes appendectomy with postoperative antitubercular chemotherapy.

### **CASE REPORT**

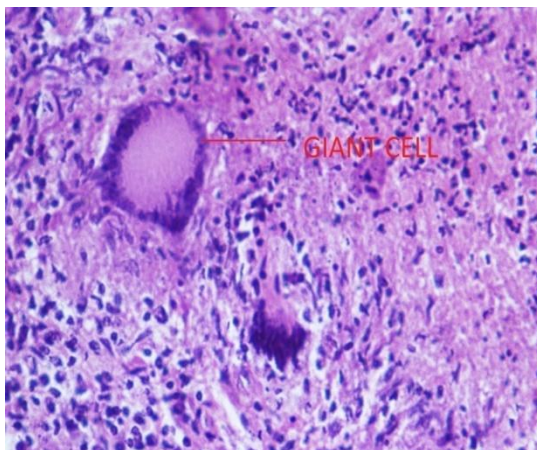
A 40 year old male came to our OPD with clinical signs and symptoms of appendicitis, Patient gave a history of on and off pain in the right iliac fossa for the past 2 months along with low grade fever and nausea. The patient was moderately built with a pulse rate of 64/min, BP: 110/70 mm of Hg and Temp: 100F.

The blood investigations showed Hb: 11.9g/dl, TLC: 21,100/cu.mm. Differential count: Polymorphs: 83, Lymphocytes: 10. ESR=60 mm/hr. On examination, abdomen was soft with minimal guarding and

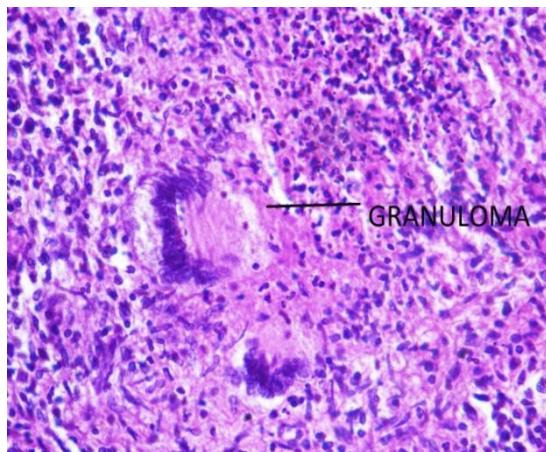
tenderness in the right iliac fossa. No mass was palpable. Bowel sounds were well heard. Examination of respiratory, cardiovascular and central nervous system revealed no abnormality. USG Abdomen suggested a diagnosis of Appendicitis as a blind ended non-compressible, non-peristaltic tubular structure measuring 6.8 mm diameter seen in RIF. Hence, Open appendectomy was planned by McBurney's incision. There were extensive adhesions around the caecum & terminal ileum and the appendix was concealed. 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 meso-appendix was dissected (FIG.1) and sent for histopathological examination. Ileum, caecum, mesentery or mesenteric lymph nodes were found normal on inspection and palpation. Histological examination revealed typical epithelioid cells, lymphocytes, Langhans type giant cells with central caseous necrosis. The histopathological report (FIG.2 & 3) suggested it to be a tubercular appendicitis. Sputum was positive for *Mycobacterium tuberculosis*. Chest X-ray was showing pulmonary involvement. Patient was started on Category I Anti-Tubercular Chemotherapy.



**Fig. 1: Resected specimen of tuberculous appendicitis**



**Fig. 2: HPE in 40X shows giant cell**



**Fig. 3: HPE in 40X shows granuloma**

## DISCUSSION

Although gastrointestinal tuberculosis is common in India, the only affection of appendix with disease remains a rare entity. Incidence of isolated tuberculous appendicitis is 0.1 to 0.3% as reported [3]. This rare clinical entity is more prevalent in endemic region for TB. In our patient, TB-induced inflammation, luminal obstruction and superimposing infection were the most likely causes of the acute appendicitis. The disease usually presents with recurrent episodes of right iliac fossa pain, vomiting, diarrhoea, as acute appendicitis. It may have latent type that is detected

incidentally [3, 4]. The acute presentation is probably because of severe secondary pyogenic infection. Tuberculous appendicitis was diagnosed based on the report of caseating epithelioid granulomas in a histopathological examination of the resected appendix, together with positive mycobacterial staining of the sputum.

As there are no specific clinical features of appendicular tuberculosis, a preoperative diagnosis is difficult [5]. The diagnosis is usually made after histopathological examination of the resected specimen after ruling out other granulomatous diseases like Crohn's disease, sarcoidosis and foreign body induced inflammation [6] 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 [7, 8]. The combined use of clinical diagnosis, histopathology, and PCR has 100% sensitivity and 100% specificity [8]. Anti-tuberculous therapy must be started in the postoperative period. It is to avoid postoperative complications like ileocutaneous fistula [7].

## CONCLUSION

As we all know India is an endemic region for tuberculosis so we should keep in mind that the Tuberculosis of appendix is a rare but important cause of appendicitis. Due to resurgence of TB and HIV, it is must to get histopathological report of all appendectomy specimens and or TB-PCR, so one can prevent misdiagnosis and avoid further complications.

## REFERENCES

1. Singh MK, Arunabh Kapoor VK; Tuberculosis of the appendix -a report of 17 cases and a suggested aetiopathological classification. *Postgrad Med J.*, 1987, 63: 855-857.
2. Sharath Chandra BJ, Girish TU, Thrishuli PB, Vinay HG; Primary tuberculosis of the appendix: A rare cause of a common disease. *J Surg Tech Case Report*, 2013; 5: 32-34.
3. Tauro LF, Aithala S, George SRC, Hanumanthappa, Martis J. Primary Tuberculosis of the Appendix. *OMJ* 2010; 25(3). Available at [http://www.omjournal.org/CaseReports/FullText/201007/FT\\_7PrimaryTuberculosisoftheAppendix.html](http://www.omjournal.org/CaseReports/FullText/201007/FT_7PrimaryTuberculosisoftheAppendix.html).
4. Bobrow ML, Friedman S; Tuberculous appendicitis. *Am J Surg*, 1956; 91:389-393.
5. Gupta S, Kaushik R, Kaur A, Attri A; Tubercular Appendicitis. *World J Emergency Surgery*, 2006; 1:2

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6. Gupta SC, Gupta AK, Keswani NK, et al. ; Pathology of tropical appendicitis. J Clin Pathol, 1989; 42:1169-72.
  7. Chong VH, Telisinghe PU, Yapp SKS, Chong CF; Tuberculous appendix: a review of clinical presentations and outcomes. Singapore Med J, 2011; 52(2) : 90
  8. Kesarwani RC, Pandey A, Misra A, Singh AK; Polymerase chain reaction (PCR): Its comparison with conventional techniques for diagnosis of extra- pulmonary tubercular diseases. Indian Journal of Surgery 2004;66(2):84-88.