Case Report:

Primary tuberculosis appendix as acute abdominal emergency

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Abstract: Primary tuberculosis appendicitis can be an uncommon cause of acute abdomen as Tuberculosis tends to manifest as chronic pathology. Many case reports on extrapulmonary involvement of Tuberculosis have been published widely but primary involvement of appendix have been very rarely reported as it accounts for only 0.6-2.9% of gastrointestinal tuberculosis in the absence of tuberculous foci elsewhere. We report this rare case of Primary Tuberculosis Appendicitis.

Keywords: Primary tuberculosis appendicitis, Tuberculosis

Introduction:

The disease tuberculosis is widely known entity to man. No organ has been spared by this disease with few exceptions. Involvement of ileocaecal region is well known and it accounts for 75% of all gastrointestinal tuberculosis. When Tuberculosis appendix presents with clinical picture resembling acute appendicitis, diagnosing becomes far more difficult in the absence of Tuberculous foci elsewhere. Therefore, the diagnosis of appendicular tuberculosis is usually made on histopathological examination of appendicectomy specimen, which is often sent well after the patient has been discharged. Diagnosis becomes necessary in such patients as antitubercular therapy is the mainstay in treatment along with surgery.

Case report:

A 20 yr old boy came with complaints of pain in abdomen and low grade fever for two days and nausea for a day. No significant past history of any chronic illness or long term intake of medication. On examination he had typical tenderness and localized guarding in the Mc Burneys point in right iliac fossa. On investigation hemoglobin and total WBC count were normal. His ESR was raised(42mm/1st hr). USG confirmed fairly long appendix with edematous walls with mesenteric lymphadenopathy with minimal free fluid. Appendicectomy was planned and abdomen was opened with Mc burneys incision which was later converted to Rutherford Morrisons muscle cutting incision. On opening haemorrhagic fluid and peritoneum was studded with white tubercles were noted, edematous, congested.
Caecum, ileum, mesentry were studded with tubercles. Appendix was paracaecal in position studded with white tubercles (Fig-1). Appendicectomy was done and stump was buried. Post operatively patient did well and was discharged on 7th postoperative day. Histopathological report came as Tuberculosis of Appendix and peritoneum(fig 2 & fig 3). Patient was put on antitubercular treatment and was healthy after 2 years of follow up.

Photograph 1: Appendix in paracaecal position studded with white tubercles

Photograph 2: 4x H&E – An epithelioid cell granuloma in the serosa of appendix showing hyperplastic lymphoid follicles and thinned out muscle coat

Photograph 3: 4x H&E – Tuberculous serositis with epithelioid cell granuloma in the serosa with Langhan giant cell.

Discussion:
Gastrointestinal tuberculosis is not uncommon in India and South eastern countries. The affliction of this disease with appendix is however a rare entity seen(1). The recorded incidence of tuberculosis found after appendicectomy varies from 0.1% to 3% (2). About 30% of patients suffering from tuberculosis were found to have involvement of appendix on autopsy (2). Researchers have even reported incidence of 46% to 70% of secondary tuberculosis of appendix in patients suffering from Intestinal Tuberculosis (3). Thus the burden of tuberculosis primarily involving appendix is hard to diagnose preoperatively. Involvement 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. Although ileocaecal involvement is the commonest in gastrointestinal tuberculosis, involvement of appendix in this scenario has been explained by minimal contact of luminal mucosa of appendix with intestinal contents. Primary appendicular tuberculosis is extremely rare in absence of foci elsewhere in the body. The
presentation of this condition may be varied forms. It may present in chronic form of right iliac fossa or as acute condition mimicking appendicitis or even as latent disease diagnosed incidentally. The presence of chronic abdominal pain of long duration in young adults, pulmonary tuberculosis, poor nutritional status, weight loss and the presence of chronic diarrhea have been said to be indicative of tuberculosis of the appendix (1,4), but these symptoms are of doubtful value as Tuberculosis and amoebiasis are common here(5). As there are no pathognomonic clinical features of appendicular tuberculosis, a preoperative diagnosis is almost impossible. The diagnosis is often made after histopathological examination of the appendicectomy specimen, as in this case. Antitubercular therapy is the mainstay in these cases along with surgery and it must be started in the post operative period if the biopsy reveals tuberculosis.

**Conclusion:**

Primary appendicular tuberculosis is a rare entity with a great difficulty to diagnose preoperatively. Histopathological diagnosis becomes necessary in these cases as Antitubercular therapy needs to be started early to decrease the morbidity in these patients. Thus tuberculosis needs to be kept in mind when a patient presents with acute abdomen.

**Conflict of interest:** nil

**References:**