

# ISOLATED APPENDICULAR TUBERCULOSIS

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Tuberculosis is still very common in developing and under developed countries. Each year, 3 million people die of this disease world wide. Tuberculosis can affect almost any part of body. The commonest presentation of abdominal tuberculosis is ileo-caecal disease, but isolated appendicular involvement is also rarely seen. Although many cases have been reported from neighbouring countries, a search on national literature has shown no such report from Pakistan. We report a case of appendicular tuberculosis that presented in Accident and Emergency Department of Pakistan Institute of Medical Sciences, Islamabad.

**Keywords:** Abdominal tuberculosis, Appendicitis, Tuberculosis

## INTRODUCTION

Tuberculosis is one of the world's most widespread and deadly illness. Mycobacterium tuberculosis, the organism that causes tuberculosis infection and disease, infects as estimated 20-43% of the world population. Each year, 3 million people worldwide die from the disease. Tuberculosis occurs in extra pulmonary sites in 10% of non-HIV infected people and up to 70% of those infected with HIV. Tuberculous involvement of the peritoneum remains a significant problem in the developing world. Tuberculosis of appendix occurs as primary or secondary disease, the former being rare with incidence of 0.1% to 0.6%.<sup>1,2</sup> The pathogenesis of this isolated lesion is not clear and presentations are varied and unless histopathological diagnosis of resected specimen is asked for, the true diagnosis is likely to be missed. A high index of suspicion and great clinical acumen is required for preoperative diagnosis, which should always be confirmed by histopathology. Appropriate treatment includes appendicectomy with postoperative antitubercular chemotherapy. Tuberculosis being endemic in our country, it is a must to send all appendicectomy specimens for histopathology examination, so as to prevent misdiagnosis and prevent further complications

## CASE REPORT

A 22 year old boy presented with history of pain in right iliac fossa for one day. Pain started at periumbilical region and after few hours shifted to right iliac fossa. It was severe and colicky in nature and associated with 5 to 6 episodes of vomiting which contained food particles. He had no history of urinary complaints, previous abdominal pain, cough, hemoptysis, and diarrhoea or constipation. On examination, he appeared ill and moderately dehydrated. His abdomen was flat and moving with respiration. There was tenderness over right iliac fossa. Rebound tenderness and muscle guarding was present with audible bowel sounds. Digital rectal examination revealed tenderness on the right side. Rest of the examination was normal.

His hematological investigations were within normal limits. X-ray chest was also normal. He was diagnosed as acute appendicitis and urgent appendicectomy was planned. On exploration, appendix was found inflamed. There was no ascites. Limited exploration of gut and mesentery through the grid-iron incision showed no peritoneal tubercles or mesenteric lymphadenopathy. Ileo-caecal region was also normal. Routine appendicectomy was performed and specimen sent for histopathology which revealed tuberculosis of appendix. 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 with satisfactory outcome.

**Figure-1: Photograph of Appendix showing granuloma with epitheloid cells and caseous necrosis, features of classical tuberculosis**

**Figure-2: High Power Magnification showing granuloma in appendix**

**DISCUSSION**

Tuberculosis of appendix, secondary to the disease of ileo-caecal region, is well known, but cases of localized involvement of appendix are rare. The incidence of isolated tuberculosis of appendix varies from 0.1-0.6%.<sup>1,2</sup> A study from India revealed 3 cases of tuberculous appendicular disease amongst 102 cases of gastrointestinal tuberculosis.<sup>3</sup>

Appendicitis, although a disease of young adults (average age being 30 years), has shown a wide variation in age incidence from 9 months to 62 years. It has greater incidence in women.<sup>4</sup> Three types of presentations have been described: an acute onset type, a chronic type, and incidental. The route for tuberculous infection of appendix may be haematogenous or from contaminated gut contents.<sup>1,5</sup> The tuberculosis of appendix has been described as ulcerative or hyperplastic type: former being more common. The gross appearance may vary for normal to thick walled appendix, very large appendix or a mass, in which the absence of tuberculosis elsewhere in the body or other pathological foci at laparotomy may conclude the diagnosis of primary tuberculous appendicitis.<sup>6</sup> It can only be confirmed on histopathological examination. Some pathologists suggest study of more than 2 sections of each appendix for histopathological examination, so that more cases can be detected in endemic areas.<sup>6</sup>

Tuberculosis is a systemic disease with localized manifestations and complications such as sinus or fistula formation.<sup>5</sup> Hence it is advisable to administer anti-tuberculous therapy in postoperative period.<sup>7</sup> However, some clinicians do not agree to institution of anti-tuberculous drugs when isolated disease is found, because the focus has been removed.<sup>4</sup> 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.<sup>8</sup>

## CONCLUSION

Isolated appendicular tuberculosis is very difficult to diagnose clinically, and only clue to the diagnosis is histopathological examination.

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