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Case Report

Perforated Tubercular Appendicitis: A Rare Case Report

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Abstract

Gastrointestinal tuberculosis is quite rare, representing only 3% of all extrapulmonary cases. Involvement of the appendix is rare, only occurring in about 1% of cases. It is usually secondary to tuberculosis elsewhere in the abdomen. A prompt diagnosis depends on a high index of suspicion as clinical signs may be non-specific and microbiological confirmation is difficult. Histopathologic examination is often the only way to reach a diagnosis and to establish specific antibiotic therapy. In these cases, due to the absence of specific symptoms and signs, the diagnosis is delayed until after surgery.

Key words: Acute appendicitis, Appendicectomy, Tuberculosis

INTRODUCTION

Tuberculosis (TB) is an endemic disease in India. Mycobacterium tuberculosis is the causative agent of TB. Pulmonary tuberculosis is the most common site involved with a number of 5.3 million people all over the world in 2021. Gastrointestinal tuberculosis represents 3% of extrapulmonary TB and concerns the ileocecal region primarily. Primary TB of the appendix is a rare entity with a prevalence of 0.1% to 3% in all appendicectomies performed. Here is a report of case of appendicular tuberculosis, presented with features of acute appendicitis , in the emergency department.

CASE REPORT

Case Description

A 24-year-old girl was admitted through emergency with a complaint of pain in the right lower abdomen along with fever and dysuria for the past 4 days. She also complained of multiple episodes of vomiting for the past 2 days and a history of PCOD.

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On Examination

Mild tenderness was present in the right iliac fossa. McBurney's point was tender.

She was resuscitated with intravenous broad-spectrum antibiotics, analgesics, and fluids. She was referred to a gynecologist for her PCOD, and relevant blood, urine, and radiological investigations were done. Urine routine examination showed 20–25 pus cells/hpf. WBC counts were 17,800/mm^3. Contrast-enhanced CT scan of the whole abdomen was done, which showed acute appendicitis with appendicular abscess [Figure 1]. She was then planned for laparoscopic appendicectomy ± open conversion, which intraoperatively got converted to open appendicectomy because of extensive adhesions and pus. It revealed a perforated appendix along with impacted fecolith [Figure 2]. Appendicectomy was done and the specimen was sent for histopathology [Figure 3]. Thorough gastric lavage was done and the abdomen was closed with intra-abdominal drain in the pelvis.

RESULTS

Histopathology report revealed appendix with transmural mixed inflammation, multiple coalescing and caseating epithelioid cell granulomas, and Langhans' giant cells, consistent with tuberculosis [Figure 4]. After the diagnosis of tuberculosis, she was immediately started on anti-

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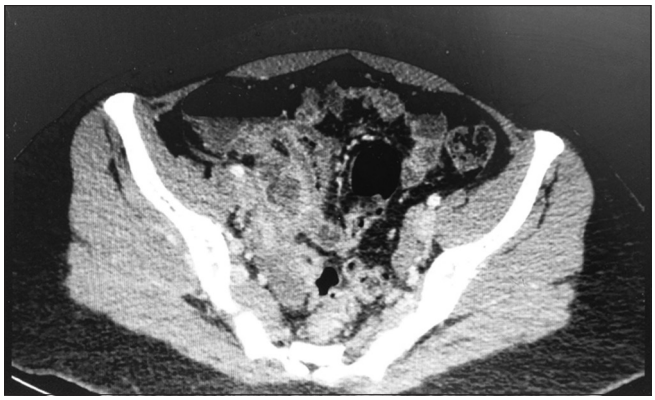


Figure 1: CECT whole abdomen showing "Thickened and enhancing appendix with appendicolith. Collection with enhancing wall is noted"

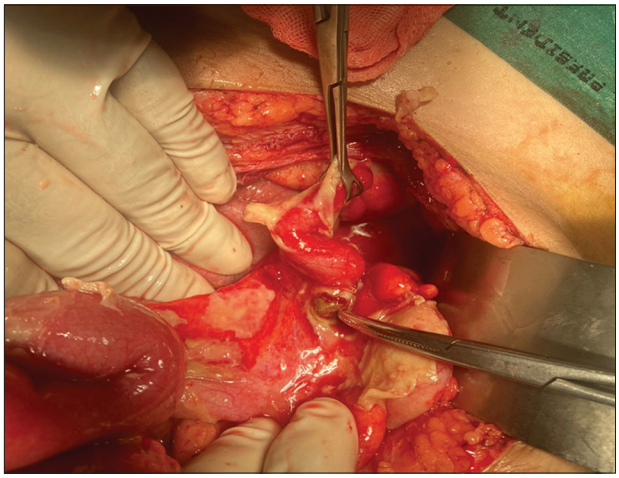


Figure 2: Intra-operative finding of perforated appendix with fecolith

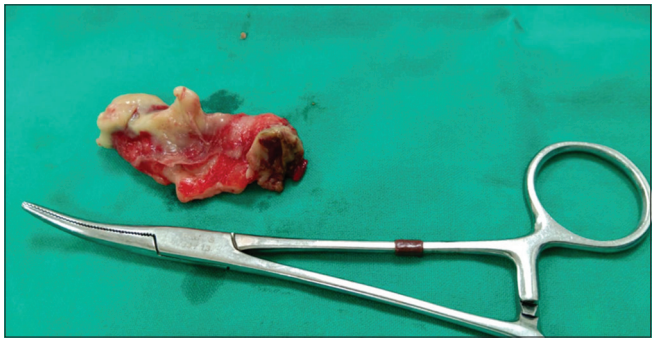
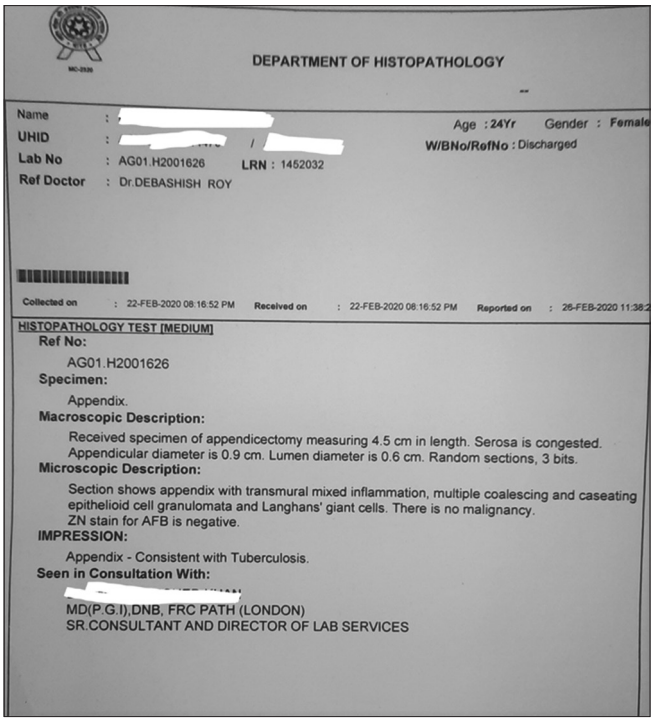


Figure 3: Appendicectomy specimen which was sent for HPE

tubercular drug course for 6 months. She recovered well and was discharged on post-operative day 14.

DISCUSSION

Gastrointestinal (GI) tuberculosis is quite rare, representing only 3% of all extrapulmonary cases. Involvement of the appendix is rare, only occurring in about 1% of cases.



DEPARTMENT OF HISTOPATHOLOGY

Name : [redacted]
UHID : [redacted]
Lab No : AG01.H2001626 LRN : 1452032
Ref Doctor : Dr.DEBASHISH ROY
Age : 24Yr Gender : Female
W/BNo/RefNo : Discharged

[redacted]
Collected on : 22-FEB-2020 08:16:52 PM Received on : 22-FEB-2020 08:16:52 PM Reported on : 26-FEB-2020 11:38:2

HISTOPATHOLOGY TEST [MEDIUM]

Ref No:
AG01.H2001626
Specimen:
Appendix.
Macroscopic Description:
Received specimen of appendicectomy measuring 4.5 cm in length. Serosa is congested. Appendicular diameter is 0.9 cm. Lumen diameter is 0.6 cm. Random sections, 3 bits.
Microscopic Description:
Section shows appendix with transmural mixed inflammation, multiple coalescing and caseating epithelioid cell granulomata and Langhans' giant cells. There is no malignancy. ZN stain for AFB is negative.
IMPRESSION:
Appendix - Consistent with Tuberculosis.
Seen in Consultation With:
[redacted]
MD(P.G.I),DNB, FRC PATH (LONDON)
SR.CONSULTANT AND DIRECTOR OF LAB SERVICES

Figure 4: HPE report of the excised appendix, consistent with tuberculosis

It is usually secondary to tuberculosis elsewhere in the abdomen.[1] TB of GI tract most commonly involves ileocecal region. Rarity of appendicular involvement is due to minimal contact of appendicular mucosa with the intestinal contents.[2] Symptoms of the disease are commonly non-specific and a presumptive diagnosis is really difficult to make.[1] Appendicular TB is believed to be more commonly presenting as a chronic form with acute flare-up of appendicitis secondary to TB. It most commonly presents with mild-moderate abdominal pain.[3] The diagnosis of appendicular TB is usually made after the histopathologic examination of the appendectomy specimen.[4] The characteristic histologic findings to make the diagnosis of tuberculous appendicitis include caseating granulomas, epithelioid histiocytes, and Langhans giant cells.[5] There are no distinctive clinical or radiological features to suggest tubercular appendix preoperatively.[6]

CONCLUSION

A pre-operative chest X-ray can be considered if the surgeon has a high index of suspicion for tuberculous appendicitis. Due to the often urgent nature of appendicitis, the young age of affected patients, and typical lack of notable medical history, a chest X-ray is frequently not performed. However, if there is a high index of suspicion for tuberculous etiology in a hemodynamically stable patient with appendicitis, a pre-operative chest X-ray can be performed to support clinical

judgment. Characteristic chest X-ray findings for tuberculosis include infiltrates, consolidations, cavitating nodules, with or without mediastinal/hilar lymphadenopathy.[7]

Initial management of acute appendicitis even if tubercular etiology is an appendectomy. ATD should be started early after histopathological diagnosis.[2]

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