

Isolated Tuberculosis of Gallbladder: A Case Report

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Abstract

Tuberculosis of the gall bladder, a rarity in itself, is always found associated with gallstones or cystic duct obstruction. It presents as a part of systemic miliary tuberculosis, abdominal tuberculosis, isolated gallbladder tuberculosis and as acalculus cholecystitis in anergic patients. There are no pathognomonic signs; the diagnosis depends on suspicion of tuberculosis, preoperative findings and histological examination. This is case of a 60 year old diabetic smoker male; who presented with features of calculous cholecystitis, but after cholecystectomy, on histopathology was proved to be tuberculous gall bladder. The present case of tuberculosis of the gall bladder is being reported for its extreme rarity as it was associated gallstones and thick walled gallbladder mimicking neoplasm.

Key words: Gallbladder; Tuberculosis; Calculous cholecystitis.

INTRODUCTION

Although involvement of the liver is common, tuberculosis only rarely infects the biliary system¹. The gall bladder is an unlikely gastrointestinal organ to develop primary tuberculosis². Historically, isolated tuberculosis of gall bladder was reported for the first time in 1870 by Gaucher³. Gallbladder Tuberculosis (GT) is a rare disease and only a limited number of patients have been reported⁴. However, hepatobiliary tuberculosis is rare, seen in approximately 1% of all abdominal cases⁵. Pre-operative diagnosis of gall bladder tuberculosis is difficult and post-operative persistence of symptoms due to tuberculosis are sometimes misdiagnosed as the "post-cholecystectomy syndrome"⁶. Hepatobiliary TB is more common in males with a male to female ratio of 2:1 and there is no specific age group but according to one study the majority of patients fall within the age range of 11-50 years⁷. A correct preoperative diagnosis of GT is unusual, and it is frequently confused with various gallbladder diseases⁸. Rarity of tubercular involvement of the gallbladder has been attributed to the high alkalinity of bile and bile acid inhibiting the growth of tubercle bacillus⁹. Here, we report a case of Gallbladder tuberculosis mimicking malignant neoplasm, clinically and sonographically.

CASE REPORT

A 60 years old diabetic smoker male presented with the complaints of dyspepsia, anorexia, right upper abdominal pain on & off for last 6 months which relieved by antispasmodics, associated with low grade fever, occasional vomiting, specially after meal. The examination of abdomen revealed slight tenderness in right hypochondrium but no palpable lump. There was no splenomegaly, lymphadenopathy, jaundice or ascitis. Haematological examination reveals Hb 10gm/dl, TLC 12000/cmm with lymphocytic leucocytosis, ESR 95 mm in 1st hour. Blood sugar, urea, creatinine, liver function tests were normal and stool for OBT negative. Ultrasonogram of abdomen showed thickened gallbladder [mimicking neoplasm] with stone. CXR [P/A view] was normal and sputum for AFB was negative.

In view of the symptomatic cholelithiasis, patient was posted for subcostal laparotomy. Intraoperative gallbladder was thickened and fibrotic, with dense adhesion to surrounding liver and duodenum. An exhaustive examination of the abdominal cavity revealed no ascitis or evidence of tubercles or neoplastic seedling in the peritoneal cavity.

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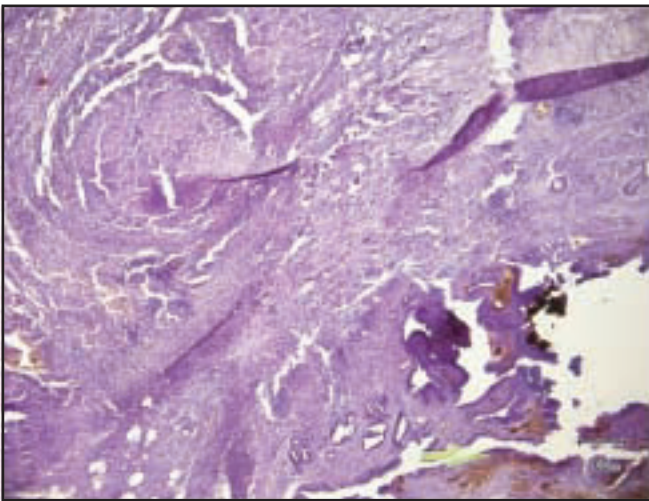


Figure 1: Gallbladder wall with granuloma [Right] [40X]

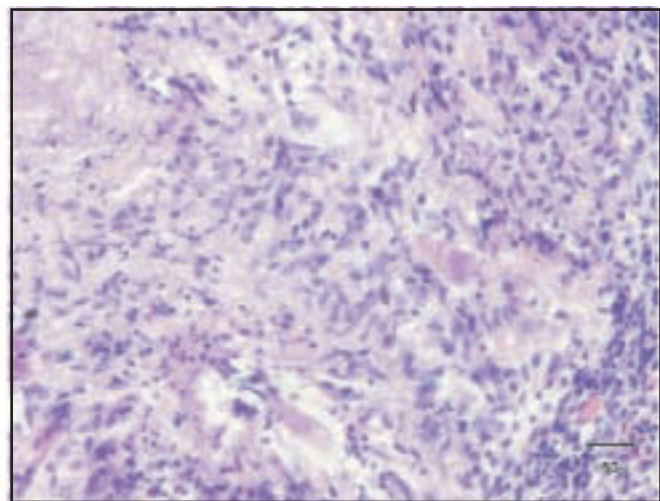


Figure 2: Well formed granuloma [100X magnification]

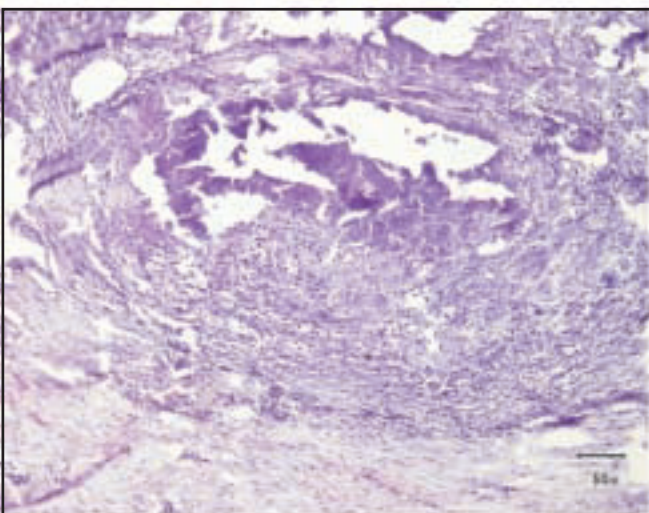


Figure 3 : Caseous necrosis [400X magnification]

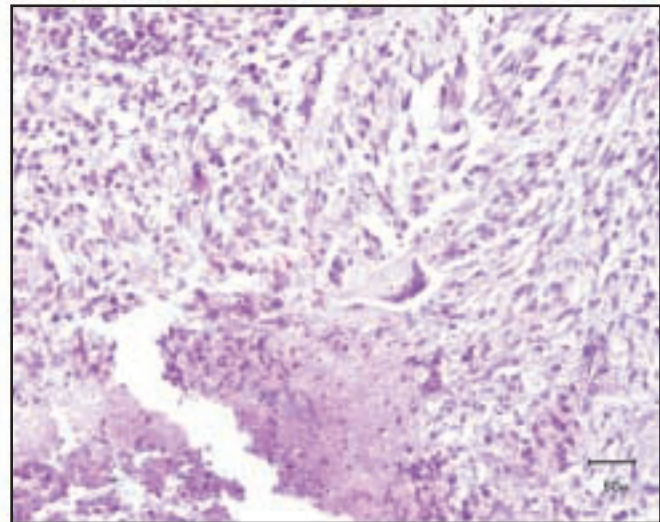


Figure 4 : Epithelioid cell cluster [400X magnification]

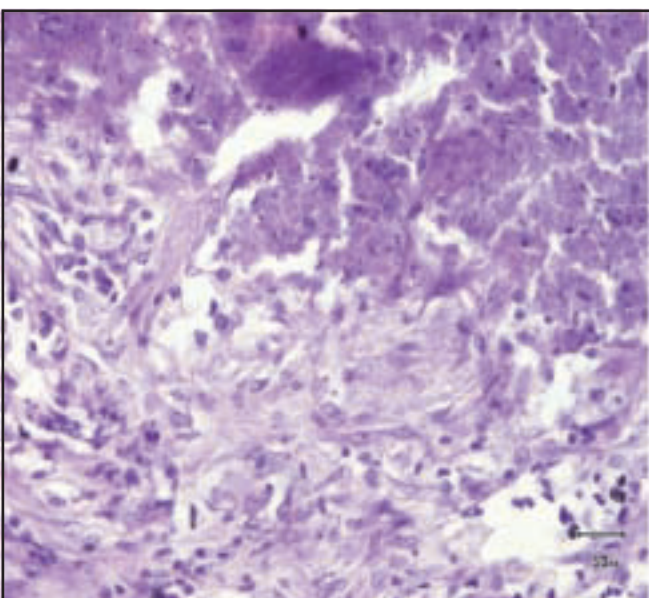


Figure 5 : Langerhans type giant cells[400X magnification]
[Haematoxylin& Eosin stain]

Cholecystectomy was performed, which required a difficult dissection due to dense adhesion. The excised specimen was sent for histopathological examination. The diseased gallbladder was 4X2.5X2 cm and there was a large stone. Histopathological examination revealed multiple caseating granuloma composed of caseation necrosis, aggregates of epithelioid cells and occasional Langerhans type giant cells suggestive of tuberculosis of gallbladder. The postoperative course was uneventful, discharged on 4th post-operative day, antitubercular drug therapy was started and eventually patient made a good recovery.

DISCUSSION

Despite a high prevalence of tuberculosis of the gastrointestinal tract, tubercular involvement of the gallbladder is very rare. Rarity of tubercular involvement of the gallbladder has been attributed to the high alkalinity of bile and bile acid inhibiting the growth of tubercle bacillus. It has been suggested that cystic duct obstruction leads to the disappearance of bile acid from the gall bladder and therefore to a lowered resistance against this infection. Previous damage to the gallbladder lining epithelium

due to gall stones seems to be a prerequisite for the development of tuberculous cholecystitis as almost all reported cases have coexistent gallstones⁹. Isolated gall bladder tuberculosis generally occurs in women over 30 years old. The usual presentation is vague right upper abdominal pain, weight loss, fever, nausea, vomiting & diarrhea. Very rarely, there is a palpable abdominal lump.³ Our patient was 60 years old diabetic, nonsmoker male with chronic right upper abdominal pain, consistent with usual presentation of other cases.

According to Sir BOA Moynihan, a “gall stone is a tomb-stone erected to the memory of the organism within it”. Infecting organisms reach gall bladder via blood stream or lymphatics from a focus nearby.

So, mycobacteria can also be a cause of cholelithiasis and/or cholecystitis, particularly when tuberculosis is disseminated to the peritoneum and lymph nodes in the vicinity⁶. The gallbladder is infected by mycobacterium tuberculosis as a part of miliary tuberculosis, abdominal tuberculosis or through the enterohepatic route. Four distinct clinical varieties of gallbladder tuberculosis are recognised: (1) As a component of miliary tuberculosis in children and in adults, (2) As a component of disseminated abdominal tuberculosis, (3) Isolated gallbladder tuberculosis without overt tubercular foci elsewhere in the body and (4) Involvement of gallbladder in anergic states due to uraemia, cancer or AIDS². About 70% of GT cases are accompanied by gallstones.

The route of infection may be peritoneal, haematogenous or lymphatic. The differential diagnosis of GT includes acute and chronic cholecystitis, polypoid lesions and gallbladder carcinoma. The presence of a mass that fills the gallbladder associated with cholelithiasis is indistinguishable from carcinoma of the gallbladder. Moreover, both GT and carcinoma can give rise to regional lymph nodes. The presence of liver metastasis or liver infiltration suggests the presence of a gallbladder carcinoma. On the other hand, lung lesions or mesenteric thickening is frequent in patients with tubercular infection⁸. As tuberculous cholecystitis is difficult to diagnose, all resected cholecystectomy specimens should be sent for histopathological examination for evidence of tuberculosis⁶. The problem of the diagnosis of tubercular involvement of the gall bladder is obvious as all the signs, symptoms and investigation are non-specific. Ironically, postoperative histopathological confirmation becomes the greatest tragedy of diagnosis because a condition that is curable medically has to follow surgery unavoidably⁹.

CONCLUSION

This case highlights the need to be aware of GIT and hepatobiliary tuberculous disease in endemic areas of tuberculosis, and in patients with chronic GIT symptoms.

DISCLOSURE

All the authors declared no competing interest.

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