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 system\textsuperscript{1}. The gall bladder is an unlikely gastrointestinal organ to develop primary tuberculosis\textsuperscript{2}. Historically, isolated tuberculosis of gall bladder was reported for the first time in 1870 by Gaucher\textsuperscript{3}. Gallbladder Tuberculosis (GT) is a rare disease and only a limited number of patients have been reported\textsuperscript{4}. However, hepatobiliary tuberculosis is rare, seen in approximately 1% of all abdominal cases\textsuperscript{5}. 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”\textsuperscript{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 years\textsuperscript{7}. A correct preoperative diagnosis of GT is unusual, and it is frequently confused with various gallbladder diseases\textsuperscript{8}. 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\textsuperscript{9}. 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 [PA 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 adhesions surrounding liver and duodenum. An exhaustive examination of the abdominal cavity revealed no ascitis or evidence of tubercles or neoplastic seeding in the peritoneal cavity.
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 Langhans type giant cells suggestive of tuberculosis of gallbladder. The postoperative course was uneventful, discharged on 4th postoperative 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 gallstones. 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. 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 lymphnodes in the vicinity. The gallbladder is infected by mycobacterium tuberculosis as a part of miliary tuberculosis, abdominal tuberculosis or through the enterohepaticroute. 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 AIDS. About 70% of GT cases are accompanied by gallstones.

The route of infection may be peritoneal, hematogenous 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 infection. As tuberculosischolecystitis is difficult to diagnose, all resected cholecystectomy specimens should be sent for histopathological examination for evidence of tuberculosis. 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 unavoidably.

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

DISCLOSURE
All the authors declared no competing interest.

REFERENCES