

# A Rare Case Report of Granulomatous Inflammation of Gall Bladder with Review of Literature

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## Abstract

**Introduction:** Gallbladder tuberculosis (GBTB) is an exceedingly rare finding presenting as calculous or acalculous cholecystitis. A correct, preoperative diagnosis of GBTB is difficult, and the literature review highlights the fact that most cases are diagnosed postcholecystectomy or at postmortem. **Discussion:** Mycobacterium tuberculosis can affect any part of the gastrointestinal tract from the mouth to the anal canal along with the other organs of the peritoneal cavity, but the gall bladder is unlikely to be primarily involved. The incidence of localization of the tubercular bacilli in the gall bladder is uncommon as the intact gall bladder mucosa is resistant to the bacterium because of the concentrated bile acids present in the organ. The first case of gallbladder tuberculosis (GBTB) was reported in 1870 by Gaucher, and till now, less than 120 cases have been reported in the English medical literature [4, 5].

**Keywords:** Granulomatous Inflammation, Gall Bladder tuberculosis, postmortem.

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## INTRODUCTION

Cholelithiasis and associated cholecystitis of the gallbladder (GB) is a very common diagnosis made in patients presenting with right upper quadrant abdominal pain. A gallstone occurs as a secondary complication of GB infection. The infecting organisms are of many types, and mycobacterium as the causative organism is rarely found and suspected and much less frequently proven. Isolated tuberculosis (TB) of the GB is extremely rare, and the diagnosis of this disease is almost always overlooked, unless there is a high index of suspicion.

## CASE REPORT

A 37 year female Wall thickness was 3cm, multiple mixed stone seen in the lumen, gallbladder size 4.5x2.5.

Another case of 55 year old male with wall thickness 3cm and gall bladder size of 9x2.5cm and multiple mixed stone inside.

Both the patients presented with a history of right upper abdominal pain associated with episodes of vomiting every 2–3 weeks for the past 1 year. No history of fever, jaundice, loss of appetite, or weight

loss was reported. Physical examination of the patient showed no abnormal findings.

There was no evidence of peripheral lymphadenopathy or hepatosplenomegaly. After taking a detailed clinical history, ultrasonography of the abdomen revealed a thickened gall bladder wall with multiple gall stones, leading to a diagnosis of chronic cholecystitis with cholelithiasis.

An abdominal ultrasound revealed a distended GB with multiple calculi and normal wall thickness.

X-ray of the chest and all other hematological parameters were also normal. The patient underwent a routine laparoscopic cholecystectomy which was uneventful.

**GROSS** -Intraoperatively, the GB was distended with multiple calculi, the cystic duct was short and dilated, and dense adhesions were seen between the duodenum and the GB wall. The liver, the common bile duct, and the rest of the bowel were grossly normal.

**Microscopy-** Histological examination of the Gall Bladder revealed a mucosa showing focal ulcerations and dense chronic inflammation in the subepithelium with few, scattered, noncaseating,

epithelioid cell granulomas with giant cells although acid-fast stain was negative. The surgery was terminated and the histopathology closely followed.

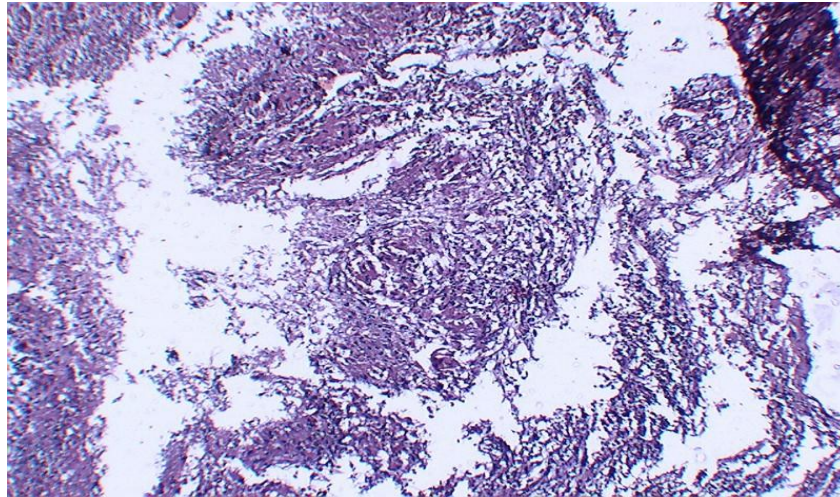
Granulomatous inflammation of gall bladder showing ill formed granulomas with Langhans' giant cells with epithelioid cells and lymphocytes was seen.

Gastrointestinal tuberculosis usually presents as involvement of the peritoneum, intestine, or the lymph nodes, and isolated tuberculosis of the gall

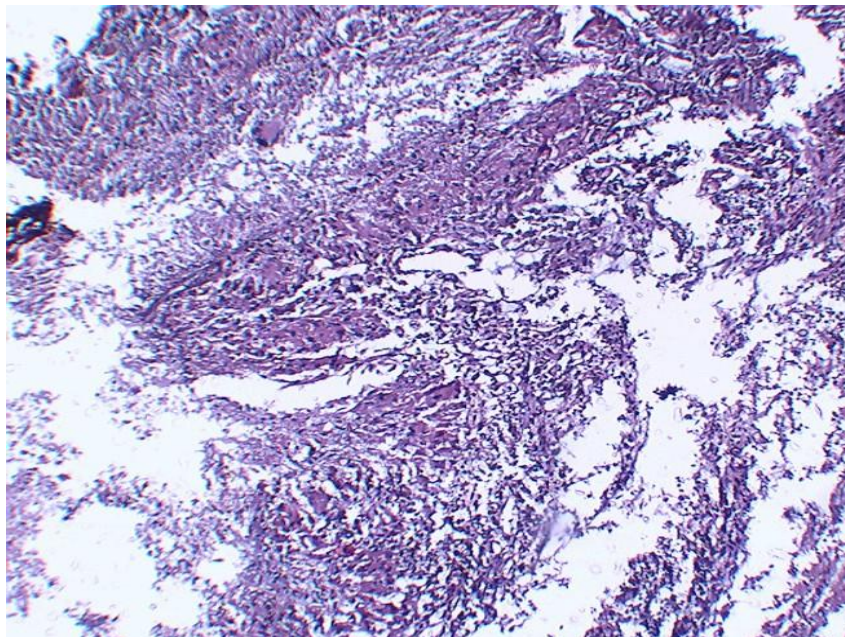
bladder is extremely rare with only about 50 cases reported in literature [1].

The rarity of the disease involving the gall bladder could be attributed to the fact that bile is thought to have an inhibitory effect on the gall bladder mucosa for the development of tuberculosis.

Cholelithiasis and cystic duct obstruction are considered important factors for its development [2, 3] as seen in our patient.



ILL Formed Granulomas and Giant Cells (Granulomatous Inflammation) 100X, H&E



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## DISCUSSION

GBTB represents 1% of the abdominal TB cases [4]. Cholelithiasis and cystic duct obstruction are considered as the most important factors in the development of GBTB, with cholelithiasis being present in 70% of the cases [6].

GB mucosa is highly resistant to tubercular infection, possibly because of the inhibitory effect of the concentrated bile acids in the GB lumen and the high alkalinity of the bile [7].

GBTB can be manifested by a relatively nonspecific clinical presentation (abdominal pain, weight loss, low-grade fever, anorexia, vomiting, and

abdominal mass), as seen in our case. It occurs most commonly in women over 30 years of age [2], Gallbladder tuberculosis (GT), especially the isolated GT, is an exceedingly rare disease entity [8]. GT often occurs along with other intra-abdomen tuberculoses, which reach the gallbladder via the lymphatics or bloodstream, and GT mostly happens in women over the age of 30 [9, 2]. Around 70% of GT cases are accompanied by gallstones [10]

## CONCLUSION

In our cases stain for acid fast bacilli was negative but the most common cause of granulomatous inflammation of gall bladder is tuberculosis.

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