E-ISSN:2454-9894 P-ISSN: 2454-9886
International Archives of
BioMedical and Clinical Research
(An Official Publication of "Ibn Sina Academy of Medieval Medicine & Sciences")
WWW.IABCR.ORG

Case Report

Tuberculosis of Gallbladder – A Case Report

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ABSTRACT

Gall bladder is considered a rare site for occurrence of tuberculosis and is usually found in association with gallstones or cystic duct obstruction. The diagnosis is very difficult prior to surgery unless there is strong suspicion of tuberculosis, with the confirmation being possible only after histopathological examination of gall bladder. Here we present a case of gall bladder tuberculosis in a 40-year-old female, who came with symptoms of chronic cholecystitis due to gallstones. Ultrasound of abdomen revealed a single gall stone located in the fundal region. The patient underwent laparoscopic cholecystectomy and was treated with anti-tubercular drugs.
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Key words: *Gallbladder, Tuberculosis, cholecystitis.*

Section – Pathology

INTRODUCTION

Tuberculosis of gallbladder was reported for the first time by Gaucher in 1870.[1] Till 2003, only 50 cases have been reported in literature.[2] It comprises approximately 1% of all the abdominal cases.[3,4] Gallbladder tuberculosis commonly involves females over 30 years of age.[5,6] The important contributing factors attributed in the development of gallbladder tuberculosis are Cholelithiasis and cystic duct obstruction.[5-7] Here, we report a case of gallbladder tuberculosis in a 40-year-old female patient and review the literature of gall bladder tuberculosis.

CASE REPORT

A 40-year-old female presented with 2 months history of right upper abdominal pain. No fever, jaundice, weight loss or loss of appetite were reported. Physical examination was normal, apart from slight tenderness in the right hypochondrium. Among routine investigations, liver enzymes, hematological parameters, and chest X-ray were normal. Abdominal ultrasound revealed a gallbladder with a single stone measuring 16mm in diameter. The patient underwent laparoscopic surgery for cholecystectomy. The excised specimen was sent for histopathological examination. Grossly the diseased gall bladder measured 5 cm x 2.8 cm x 0.5 cm along with a single 0.5x0.5cm creamish white nodule (? lymphnode) in the neck of gallbladder. Microscopically gallbladder was chronically inflamed along with multiple caseating granulomas within the gallbladder wall as well as involving the lymphnodes, suggesting of a chronic granulomatous lesion of the gall bladder (figure a&b). However, no acid-fast bacilli (AFB) were seen on Zeil Nelson (ZN) staining. The post-operative course was uneventful and anti-tuberculous drug therapy was started. Eventually the patient made a good recovery.

Access this article online	
Website: www.iabcr.org	Quick Response code
DOI: 10.21276/iabcr.2017.3.1.5	

Received:18.01.17| **Revised**:25.01.17| **Accepted**:28.01.17

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DISCUSSION

Gallbladder being one of the extremely rare sites for tuberculosis was first reported by Gaucher in 1870.[1] The reason for resistance of gallbladder to tubercular infection is possibly due to the inhibitory effect of concentrated bile acids in the gallbladder lumen and due to high alkalinity of bile.[2,5] Cholelithiasis and cystic duct obstruction are considered important risk factors for the development of gallbladder tuberculosis.[5-7] According to Sir BOA

Moynihan, a "gall stone is a tomb-stone erected to the memory of the organism within it". The infection usually spreads through hematogenous route or from adjacent caseating lymph nodes or peritoneal tubercles.[5,8] Females over 30 years of age and associated with Cholelithiasis are most commonly affected,[1,6] quite similarly, our patient was a 40-year-old lady with Cholelithiasis. The usual presentation is vague right upper abdominal pain, weight loss, fever, nausea, vomiting &diarrhea. Very rarely, there may be associated palpable abdominal lump.[1]

The diagnosis of gallbladder tuberculosis preoperatively is difficult, especially in calculous cholecystitis, as most of the symptoms are attributed to gallstones and the diagnosis is usually made on histological examination of the gall bladder specimen after cholecystectomy.[9,10]

Ultrasound examination is non-specific.[11] Xiu-Fang Xu et al[4] in 2011 described the computed tomography (CT) findings of gallbladder tuberculosis and correlated them with pathologic findings. Three different CT findings were reported: micronodular lesion of the gallbladder wall, a thickened wall and a gallbladder mass. The micronodular type of gallbladder tuberculosis may mimic gallbladder polyp or early carcinoma on CT, although early gallbladder carcinoma with a polypoid mass is typically larger than 1cm in the short diameter,[12] and gallbladder polyp is usually a narrow-based lesion. While, for the rest two remaining types, the diagnosis should be suggested on an irregularly thickened gallbladder wall or a gallbladder wall mass with multiple-focus necrosis or calcifications accompanied by the typical CT findings of abdominal tuberculosis.[4]

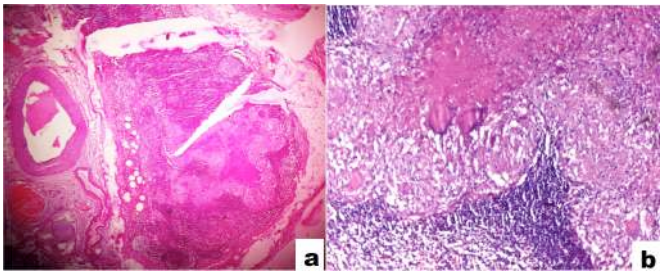

Figure 1-Thickened gall bladder wall with multiple confluent caseating granulomas (H&E X 4x)
2- Multiple confluent caseating granulomas with langhans type giant cells (H&E X40x)

The treatment of gallbladder tuberculosis is antitubercular chemotherapy based on initial treatment involving 2 months of isoniazid (5mg/kg), rifampicin (10mg/kg) and pyrazinamide (25-30mg/kg), followed by maintenance therapy for 4 months of isoniazid and rifampicin,[13] and cholecystectomy when there are symptomatic gallstones. However, the problem of the diagnosing gallbladder tuberculosis is obvious as all the signs, symptoms and investigations are nonspecific.

Sadly, postoperative histopathological confirmation becomes the greatest tragedy of diagnosis because a condition that is curable medically has to follow surgery unavoidably specially in the cases without associated gallstones.[14,15]

CONCLUSION

We would like to emphasize that tuberculosis of gallbladder has no pathognomonic diagnostic imaging or serological features and the diagnosis is usually made on histological examination of the gallbladder specimen after cholecystectomy hence it is important that all cholecystectomy specimens should be subjected for histopathological examination, to rule out the possibility of isolated tuberculosis of gall bladder, to detect and properly manage this rare entity.

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How to cite this article: Saeed N, Vasenwala SM, Rafey M, Khan S. Tuberculosis of Gallbladder - A Case Report. Int Arch BioMed Clin Res. 2017;3(1):16-17.DOI:10.21276/iabcr.2017.3.1.5

Source of Support: Nil, **Conflict of Interest:** None