Case Report

Tubercular Cholecystitis Masquerading as Chronic Cholecystitis: A Rare Case Report

Chowdhury MA[1], Tabassum M[2], Acharjee A[3], Tamanna N[4]

ABSTRACT

Tubercular cholecystitis is an extremely rare form of abdominal tuberculosis. It is a rare entity that often masquerading as chronic cholecystitis. We report a case of a 40-year-old male hospitalized with chronic upper abdominal pain, fever, and cough and subsequently diagnosed as a case of chronic cholecystitis through routine investigations and imaging procedures in a private medical college hospital in Bangladesh. Histopathological examination after cholecystectomy revealed classical features of tuberculosis including granulomas with caseous necrosis and Langhans giant cells. The patient was initiated on anti-tubercular therapy postoperatively and showed excellent recovery. To our knowledge, there are very few reported cases of gallbladder tuberculosis from Bangladesh, particularly from private medical hospital settings. This case underscores the importance of considering tuberculosis in gallbladder pathology in endemic areas. Early recognition and initiation of antitubercular therapy lead to an excellent patient outcomes.

Keywords: *Tubercular cholecystitis, abdominal tuberculosis, granulomatous inflammation, antitubercular therapy.*

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INTRODUCTION

Tuberculosis (TB) can affect pulmonary or extrapulmonary organs[1]. Abdominal TB is one of the extrapulmonary TB that is commonly found, but the hepatobiliary involvement is only less than 1% of all abdominal TB cases in worldwide[2]. Gallbladder tuberculosis (TB) is exceedingly rare. The Route of spreading TB germs to the gall bladder can be through peritoneal, hematogenous, or lymphatic. However, pathogenesis remains unclear, attributed either to hematogenous spread or direct extension from adjacent foci[2,3]. Clinically, it mimics more common gallbladder diseases such as chronic cholecystitis or carcinoma that make histopathological evaluation critical for its diagnosis[2,3]. Since tuberculosis remains endemic in Bangladesh, gallbladder tuberculosis is still rarely reported, particularly from private medical hospital settings. We present a rare case of tubercular cholecystitis that initially diagnosed as chronic cholecystitis in a private medical college hospital in Gazipur, Bangladesh.

CASE SUMMARY

A 40-year-old male patient was hospitalized with intermittent right upper quadrant abdominal pain, low-grade fever, and chronic cough of one month duration. Clinical examination was unremarkable. Laboratory evaluation revealed normal complete blood counts and mildly elevated liver function tests. Ultrasonography of the abdomen showed findings consistent with chronic cholecystitis; no gallstones or suspicious masses were noted. The patient underwent elective laparoscopic cholecystectomy. Intraoperatively, the gallbladder appeared thickened and fibrotic without obvious adhesions or mass lesions. Histopathological examination of the gallbladder showed: i) mucosal ulceration with

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underlying epithelioid granulomas (Fig. 1), ii) central areas of caseous necrosis (Fig. 2), iii) numerous epithelioid histiocytes forming confluent granulomas (Fig. 3), multiple Langhans type giant cells (Fig. 4). No acid-fast bacilli (AFB) staining was performed initially. However, based on the classical histological features, diagnosis of tubercular cholecystitis was made. Postoperatively, the patient was given antitubercular therapy and has shown significant clinical improvement at follow-up visit after three-months.

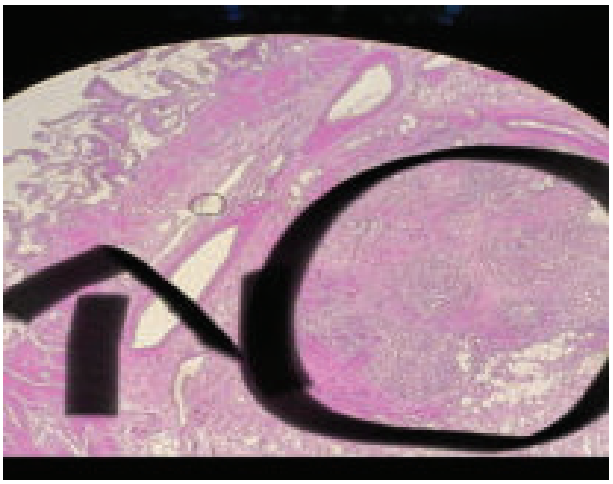

Fig. 1: *Gallbladder mucosa showing ulceration with underlying well-formed epithelioid granuloma (arrow: mucosa, circle: granuloma).*

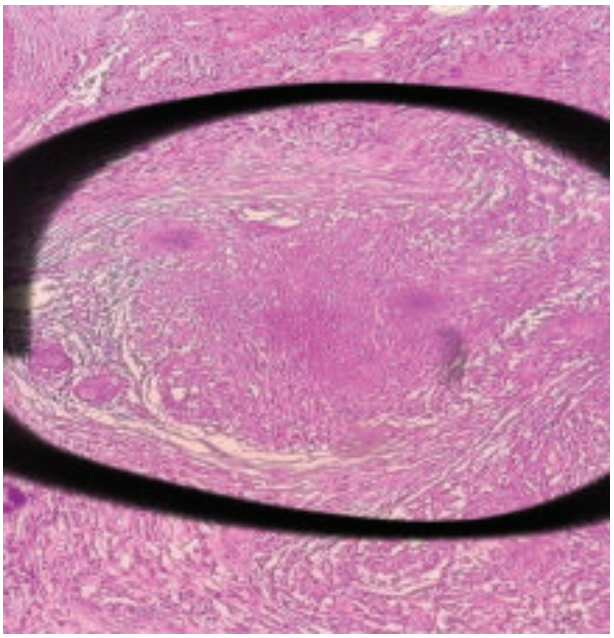

Fig. 2: *Central area of caseous necrosis surrounded by epithelioid histiocytes, characteristic of tuberculous inflammation.*

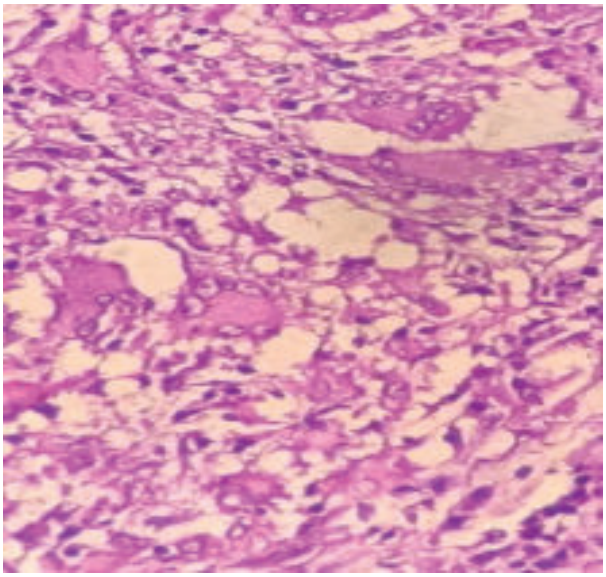

Fig. 3: *Dense collection of epithelioid histiocytes forming confluent granulomas.*

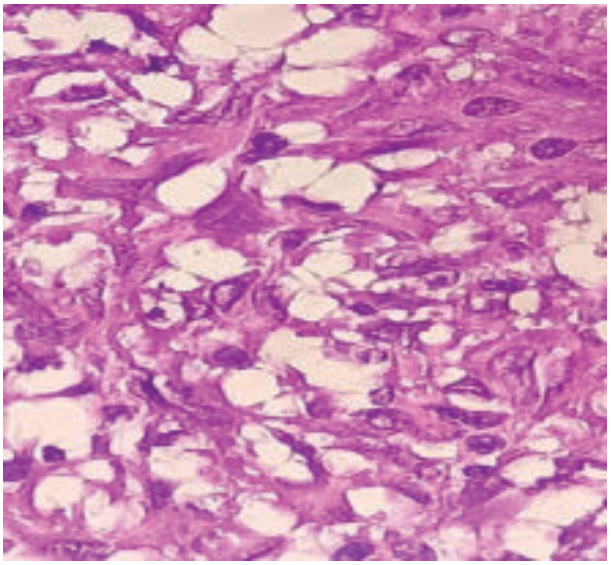

Fig. 4: *Numerous Langhans-type giant cells with peripheral nuclei arrangement, a classic finding in tubercular granulomas.*

DISCUSSION

Gallbladder tuberculosis remains a diagnostic dilemma due to its rarity and nonspecific presentation[1]. The gallbladder generally immune to TB infection due to its thick walls and natural conditions of alkaline bile. The Essential nature of bile inhibits the growth of Mycobacterium Tuberculosis due to its bacteriostatic effect. The presence of gallstone and chronic inflammation may

compromise the mucosal barrier, allowing mycobacterial infection[1,4,5]. Clinically and radiologically, gallbladder TB often mimics chronic cholecystitis or carcinoma. Histopathological examination is necessary for the definite diagnosis. Histological hallmarks such as granulomas, caseous necrosis, and Langhans-type giant cells are critical for diagnosis[1,6,7], as seen in this case. Fewer than 200 cases were observed worldwide since it was first reported in 1870 by Gaucher[8]. In such cases, preoperative diagnosis is not possible due to lack of specific diagnostic tests; however, a high index of clinical suspicion and awareness is required. Besides, it signifies a need for heightened importance on routine histopathological examination in all cholecystectomy specimens.

CONCLUSION

Gallbladder tuberculosis is a rare diagnosis confirmed by histopathology. It poses a diagnostic challenge to the clinicians during preoperative evaluation. The tragedy of this disease is the requirement of a surgery to confirm the diagnosis despite the advances in diagnostic modalities. Tuberculosis should be considered in the differential diagnosis of chronic cholecystitis, especially in TB-endemic countries like Bangladesh. Routine histopathological examination is crucial in diagnosing unexpected cases, ensuring timely initiation of therapy and favourable outcomes. Increase in awareness and proper investigation might help in adequate diagnosis and management of gallbladder tuberculosis. This report reiterates the value of histopathological examination of the resected specimen, that is still lacking in many of the developing countries.

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