



MILIARY TUBERCULOSIS-AN INCIDENTAL FINDING ON CHOLECYSTECTOMY

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ABSTRACT

Though rare, gall bladder tuberculosis is a well reported entity. It can be seen either as a separate entity or as a component of abdominal or miliary tuberculosis. Diabetes mellitus has been implicated as an important risk factor for tuberculosis and thus gall bladder tuberculosis. Clinical presentation of gall bladder tuberculosis is very non specific hence the diagnosis is mostly made after histopathological examination. We are therefore presenting a case of an elderly diabetic female who was operated for cholecystitis and was then diagnosed with miliary tuberculosis.

KEYWORDS : Gallbladder tuberculosis, Miliary tuberculosis, Diabetes Mellitus.**Introduction:**

Tuberculosis (TB) is a common health problem and an important cause of morbidity and mortality, especially in developing nations.¹ It is an infectious disease caused by *Mycobacterium Tuberculosis*, generally affecting the lung but also other parts of body. Miliary TB is a potentially fatal form of TB that results from massive lymphohematogenous dissemination of *Mycobacterium tuberculosis* bacilli. The epidemiology of miliary TB has been altered by the emergence of the human immunodeficiency virus (HIV) infection and widespread use of immunosuppressive drugs.² In extra-lung TB, abdominal TB is most common. Its prevalence in developing countries is 12%.³ But gallbladder TB is rarest entity even in India where there is a high prevalence of TB.⁴ The gallbladder is relatively immune to tubercular infection.⁵ It may possibly be due to hypovascularity of the GB sac and high alkalinity of concentrated bile inside it.^{6,7} Since the first case of gall bladder TB reported by Gaucher in 1870, very few cases have been reported.³

Hereby we have reported a case of 65 year old diabetic women having miliary tuberculosis, diagnosed postoperatively.

Case History:

A 65 year old female presented to the department of Surgery with abdominal discomfort. Patient was a known case of hypertension and type 2 Diabetes Mellitus. There was no other significant history.

General examination was insignificant. Ultrasonography of abdomen revealed mild hepatomegaly and cholelithiasis. All the other relevant investigations were in normal range. She was diagnosed as a case of cholecystitis with cholelithiasis.

Patient underwent laproscopic cholecystectomy under general anesthesia. Peroperatively it was observed that gallbladder was adherent to adjacent structures and few nodules were found on bowel, peritoneum and gall bladder. The gallbladder was resected from liver bed and sent for histopathological examination.

On gross examination gallbladder was 7x3x1cm. Outer surface was dull and congested with attached fibrofatty tissue. On cut opening bile stained velvety mucosa with multiple yellow stones was seen.

Microscopic examination revealed gallbladder mucosa lined by discontinuous tall columnar epithelium. The underlying fibromuscular layer was infiltrated by chronic inflammatory infiltrate comprising of lymphocytes and plasma cells. Serosal side showed multiple small well formed granulomas comprising of epithelioid cells, langhan's giant cells and peripheral rim of lymphocytes. A diagnosis of Cholecystitis with Cholelithiasis with

evidence of Miliary Tuberculosis was made. After surgery patient was stable and was started on anti-tubercular treatment

Discussion:

Miliary tuberculosis (TB) is the widespread dissemination of *Mycobacterium tuberculosis* via hematogenous spread. Classic miliary TB is defined as millet like (mean, 2 mm; range, 1-5 mm) seeding of TB bacilli. Miliary TB may infect any number of organs, including the lungs, liver, and spleen. Miliary tuberculosis is present in about 2% of all reported cases of tuberculosis and accounts for up to 20% of all extra-pulmonary tuberculosis cases.⁸

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.^{9,10} A correct preoperative diagnosis of gallbladder TB is unusual, and it is frequently confused with various gallbladder diseases.¹¹ Our patient was 65 years old diabetic, non-smoker hypertensive female with upper abdominal discomfort, consistent with usual presentation of other cases.

S.K.Verma et al in 2013 reported a case of gallbladder neck tuberculosis complicated with chronic cholecystitis with cholelithiasis in a 55-year-old woman. Diagnosis was made postoperatively on surgical biopsy.¹²

Gautam Krishmurthy et al also reported 3 cases in 2016 as gallbladder tuberculosis mimicking carcinoma gallbladder of which the first two cases were operated with a presumptive diagnosis of malignancy and the third case was found to have disseminated tuberculosis postoperatively.¹³

Diabetes Mellitus (DM) might have been the cause for miliary tuberculosis in our case as the frequency of DM among active cases of tuberculosis was 5.6% in studies from India.¹⁴ Although Acquired immunodeficiency syndrome (AIDS) is a more potent risk factor for TB, but due to the high frequency of DM, its effect on the TB burden is equal or even greater than AIDS.¹⁵

The relation between DM and TB is more prominent in younger people.¹⁶ It seems that patients with type 1 DM are more susceptible than who have type 2 DM.¹⁷ However our patient was an elderly female and she was suffering from type 2 DM.

Thus it can be concluded that since TB is endemic in india it should

always be suspected in all age groups and sites and also with different presentations. In cases of DM, gall bladder TB should be kept as a possibility if evidence of adhesion or nodules are seen.

Legends of figures:

Figure 1: Gross photographs of the resected gall bladder. The figure on right shows presence of stones on cut section.

Figure 2: Photomicrograph showing presence of a granuloma towards the serosal surface of gall bladder. (H&EX100)

Figure 3: Photomicrograph showing high power view of the granuloma with langhans giant cells. (H&EX400)

Figure 1:

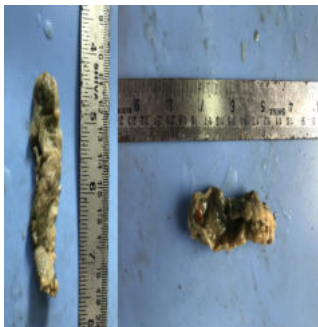


Figure 2:

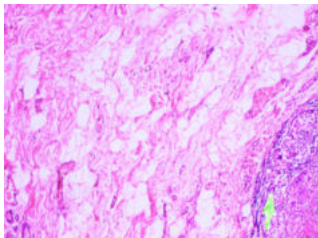
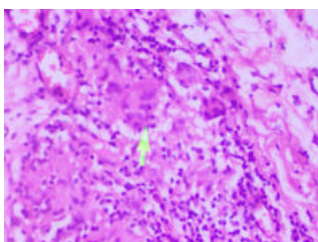


Figure 3:



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