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Tuberculosis of the Gallbladder

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Analysis of 5 patients with gallbladder tuberculosis who had open cholecystectomy and review of literature have shown that, although still rare 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, peroperative findings and histological examination.

Keywords: Gallbladder, tuberculosis

INTRODUCTION

The gall bladder is an unlikely gastrointestinal organ to develop primary tuberculosis. There are no previous reports of series of gallbladder tuberculosis in cholecystectomy specimens though anacdotal reports in English literature are available since 1972 (Bargdahl and Boquist, 1972 [1]; Abascal *et al.*, 1988 [2]; Hahn *et al.*, 1995 [3]; Jain *et al.*, 1995 [4]; Cacciarelli *et al.*, 1998 [5]; Goyal *et al.*, 1998 [6]; Gupta *et al.*, 1998 [7]). In non-english medical archives, only English translation of their abstracts are available for review, one to two case reports are recorded during the same period. (Vojtistek and Zrustora, 1965 [8]; Burakov, 1965 [9]; Pfiefer and Reiher, 1966 [10]; Tasev, 1967 [11]; Krejezy and Krezezy, 1967 [12]; Mlynek and Engel, 1968 [13]; Erdelyi and Fenyvesi, 1969 [14]; Kretschmar and Rosenkranz, 1969 [15]; Mirki and Zeilnski, 1972 [16]; Ziarek *et al.*, 1973 [17]; Ziarek *et al.*, 1975 [18]; Ziarek *et al.*, 1975 [19]; Luez *et al.*, 1979 [20]; Czerwinski, 1979 [21]; Erokhmam *et al.*, 1982 [22]; Grassimi *et al.*, 1984 [23]; Piper *et al.*, 1987 [24]; Nakajo *et al.*, 1988 [25]; Strelis *et al.*, 1989 [26]; Arlandis *et al.*, 1990 [27]; Henriquez *et al.*, 1992 [28]; Ikai *et al.*, 1996 [29]; Jassem *et al.*, 1996 [30]; D'Agata *et al.*, 1997 [31]). Our 5 case reports of gallbladder tuberculosis, seen at Varanasi, Gorakhpur and Allahabad region of Eastern UP between the period 1995–98, is the largest till date.

CASE REPORTS

1. Female, 26 year, presented with recurrent attacks of pain in the right hypochondrium. There was no history of jaundice, fever, weight loss or malena. Patient was anaemic

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but not malnourished. US gallbladder showed cholelithiasis and cholecystitis. No mass lesion or lymph nodes were seen. Open cholecystectomy was done. The gallbladder was thick walled and it contained a single cholesterol stone. Histology of gallbladder showed tuberculosis of the wall. No other focus of tuberculosis was found.

2. Female, 45 year, presented with recurrent colicky pain in right hypochondrium. She had hysterectomy 4 years previously for a fibroid. US confirmed the clinical diagnosis of cholethiasis. Open cholecystectomy and histopathological examination of gallbladder revealed cholelithiasis and tuberculosis of the wall of gallbladder. There was no other overt focus of systemic or abdominal tuberculosis.
3. A 47 year old male patient presented with pain in the right hypochondrium. The pain was continuous with excecerbation related to meals. Clinical examination showed a firm globular enlargement of the gallbladder. The CT scan diagnosis was carcinoma of the gallbladder. Fine needle aspiration cytology examination was inconclusive. Through a sub-costal incision cholecystectomy was performed. Histopathological examination of the gallbladder showed it to be replaced with a tubercular mass. The postoperative recovery was complete.
4. Female, 21 year, presented with 3 years history of pain in right hypochondrium low grade fever and constipation. The pain was vague, dull and continuous. There was no vomiting. US examination revealed a 1.5 cm calculous and gallbladder wall thickness of 6 mm. Cholecystectomy through midline incision was carried out. Mesenteric lymph node biopsy and appendicectomy was done. Histopathological examination revealed tuberculous cholecystitis and mesenteric lymph node showed reactive hyperplasia. Liver and endometrial biopsy was negative for tuberculosis.
5. Female, 50 year, presented with pain right lower abdomen, irregular bowel habit and distension of abdomen for one month. Physical examination was noncontributory. US examination revealed small contracted gallbladder, single 1 cm stone and irregular thickness of wall. Laparotomy was carried out and cholecystectomy was done. The ileocaecal area was thickened. Histopathological examination of gallbladder revealed tubercular cholecystitis, cystic lymph node was replaced with caseaous material and biopsy of fibrofatty tissue at the ileocaecal area showed tubercular granuloma. In all the 5 patients anti-tubercular treatment (Rifampicin 450 mg, Isoniazid 3–5 mg/kg body weight, Parazinamide 22–35 mg/kg body weight) was given. The follow-up varied from 1–3 years. The symptoms were relieved in all cases.

The diagnosis of tubercular was on histopathological finding of caseaous necrosis.

DISCUSSION

In the last 4 decades the incidence of gallbladder tuberculosis has shown a surge coinciding with re-emergence of abdominal tuberculosis, eight case reports are available for the period 1961–70, 7 each for 1971–80 and 1981–90 and for the period 1991–99, 10 case reports have appeared. The gallbladder is infected by mycobacterium tuberculosis as a part of miliary tuberculosis, abdominal tuberculosis or through the enterohepatic route. Four distinct clinical varieties of gallbladder tuberculosis are recognised [24]: (1) As a component of miliary tuberculosis in children and in adults, (2) As a component of disseminated abdominal tuberculosis [24, 16], (3) Isolated gallbladder tuberculosis without overt tubercular foci elsewhere in the body and (4) Involvement of gallbladder in anergic states due to uraemia [24], cancer [30] or aids [5]. Majority of the case reports are of isolated gallbladder tuberculosis but if post mortem is carried out multiorgan involvement may be

found [28] in more cases. Tuberculosis of bile ducts producing stricture and dilatation [2] may progress to involve gall bladder, lymph node and adipose tissue in the portal tract [27]. Gall bladder harbouring benign lesions are prone to develop tuberculosis. Such association is reported for gallstone [31] diffuse papillomatosis of gallbladder [25] and opisthorchiasis [26]. In some patients the only evidence of gall bladder tuberculosis is on histological examination of the gall bladder [22] specimen after cholecystectomy. Most of 60 cases of gallbladder tuberculosis reported till 1987 were found on post mortem examination.

There is no pathognomonic presentation of gall bladder tuberculosis, it can vary from a surprise, on histological examination [22], to gall bladder perforation [3]. Gallbladder tuberculosis presents with symptoms of tuberculosis such as malaise, anorexia, low grade fever upper abdominal pain jaundice [2, 27], discharge at the umbilicus due to tuberculous seedling [6] gallbladder perforation and intrahepatic biloma [3]. In patients with anergic states due to AIDS acalculus choelcystitis occurs due to tuberculosis and the mycobacterium is found in the bile [5]. In one patient with aids intracellular mycobacterium avium was found in the wall of the gallbladder [5]. There are no specific investigations for gall bladder tuberculosis. Ultrasound examination [4] may show stone, wall thickness or associated liver lesion. Associated abdominal tuberculosis may indicate gallbladder involvement. Suspicion of gallbladder tuberculosis would lead to more cases being diagnosed and gallbladder tuberculosis should now form a routine differential diagnosis of gall bladder disease.

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