

Primitive gallbladder tuberculosis

A case report with review of the literature



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Primitive gallbladder tubercolitic. A case report and review of the literature

Gallbladder tuberculosis is an exceedingly rare disease. A correct preoperative diagnosis of Gallbladder tuberculosis is difficult, and it may be confused with different gallbladder diseases. We present a new case of a patient who underwent surgery with the preoperative diagnosis of cholelithiasis. Diagnosis of gallbladder tuberculosis was obtained with the histological examination of the frozen section.

KEY WORDS: Cholelithiasis, Gallbladder, Tuberculosis

Introduction

Gallbladder tuberculosis is an exceedingly rare disease, there is no specific sign either clinical or radiological which make the preoperative diagnosis difficult and often made on histological examination of the frozen section.

Case Report

A 74-year-old woman presented with a 15-day history of right upper abdominal pain. No fever, jaundice, or weight loss were reported. Physical examination was

entirely normal apart from slight tenderness in the right upper quadrant. There was no evidence of peripheral lymphadenopathy or hepato-splenomegaly.

Liver enzymes, hematological parameters, and chest X-ray were normal. Abdominal ultrasound revealed a gallbladder with many gallstones and dilated bile ducts to 10 mm without an identified obstacle (Fig. 1).

The patient was operated by laparoscopy for cholecystectomy. Exploration per operatively showed a pseudo-tumoral aspect of the gallbladder with diffuse uniform thickened wall. So that, it was decided to convert into right subcostal laparotomy. Cholecystectomy was performed and per-operative cholangiography was normal. As the possibility of malignancy was suspected, the frozen section was sent, which demonstrated features of acute cholecystitis; no malignant cells were seen. The postoperative course was uncomplicated. Histopathological examination found a caseo-folliculaire tuberculosis of the gallbladder in calculous cholecystitis (Figs. 2, 3).

A complete course of anti-tubercular treatment was administered for 6 months (4 drugs during 2 months:

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INH: 4 mg/kg per day; rifampicin: 10 mg/kg per day; pyrazinamide: 25 mg/kg per day and ethambutol: 20 mg/kg per day - and two drugs: INH, rifampicin for the next 4 months). The patient remained asymptomatic after 3 years of follow-up.

Discussion

Described since 1870 by Gaucher, the gallbladder tuberculosis is extremely rare. It represents 1% of abdominal tuberculosis^{3,4}. Less than 120 cases have been reported in the literature¹⁻⁴. Generally speaking, the gallbladder mucosa is highly resistant to tubercular infection, possibly due to the inhibitory effect of concentrated bile acids in the gallbladder lumen and to high alkalinity of bile^{1,5,6}. Cholelithiasis and cystic duct obstruction are considered the most important factors in the development of gallbladder tuberculosis^{1,7,8}. As almost, all reported cases have co-existent gallstones. Literature review revealed only three case reports of tuberculous cholecystitis without associated gall stones or common bile duct obstruction⁹. The infection usually spreads via the hematogenous route or from adjacent caseating lymph nodes or peritoneal tubercles^{1,5,10}.

Gallbladder tuberculosis occurs most commonly in women over 30 years of age^{1,7}, quite similarly, our patient was a 74-year-old lady with cholelithiasis.

Pre-operative diagnosis of gallbladder tuberculosis is difficult, more so 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^{10,11}. Effectively, there is no pathognomonic presentation of gallbladder tuberculosis which may present with features of cholecystitis, a gallbladder mass, with obstructive jaundice due to associated enlarged pericholedochal lymph nodes¹²⁻¹⁴, and with non-specific systemic symptoms such as abdominal pain, weight loss, low-grade fever, anorexia, vomiting, and abdominal mass^{5,6}.

There is no exact statistics in the literature about the association between GT and hepatic tuberculosis.

Ultrasound examination of gallbladder tuberculosis is non-specific^[15]. Xiu-Fang Xu and al had described the computed tomography findings of gallbladder tuberculosis and correlated them with pathologic findings. So that GT has various CT manifestations, and the enhanced CT findings are well matched with pathological features.

Three different CT findings: micronodular lesion of the gallbladder wall, a thickened wall and a gallbladder mass⁴. The micronodular type of GT may mimic gallbladder polyp or early carcinoma on CT. But early gallbladder carcinoma with a polypoid mass is typically larger than 1cm in the short diameter¹⁶, and gallbladder polyp is usually a narrow-based lesion, which is different from the CT findings of GT. While, for the two remaining

types, the diagnosis of GT 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 extra-gallbladder TB⁴.

The treatment of gallbladder tuberculosis is based on anti tubercular chemotherapy with an initial treatment of 2 months with associated isoniazid (5 mg/kg), rifampicin (10 mg/kg) and pyrazinamide (25-30mg/kg), followed by a maintenance therapy for 4 months of isoniazid and rifampicin¹⁷ and cholecystectomy when there are symptomatic gallstones. However, the problem of the diagnosis of GT is obvious as all the signs, symptoms and investigations are non-specific. Ironically, postoperative histopathological confirmation becomes the greatest tragedy of diagnosis because a condition that is curable medically has to follow surgery unavoidably specially in the case without associated gallstones^{9, 18}.

In conclusion we emphasize that GT has no pathognomonic diagnostic imaging features and the diagnosis is usually made on histological examination of the gall bladder specimen after cholecystectomy. There is no study about the surgical approach of the gallbladder tuberculosis with cholelithiasis. In addition, the question is how to confirm the diagnosis in the case of acalculous gallbladder tuberculosis without histological proof?



Fig. 1: Ultrasound: cholelithiasis.

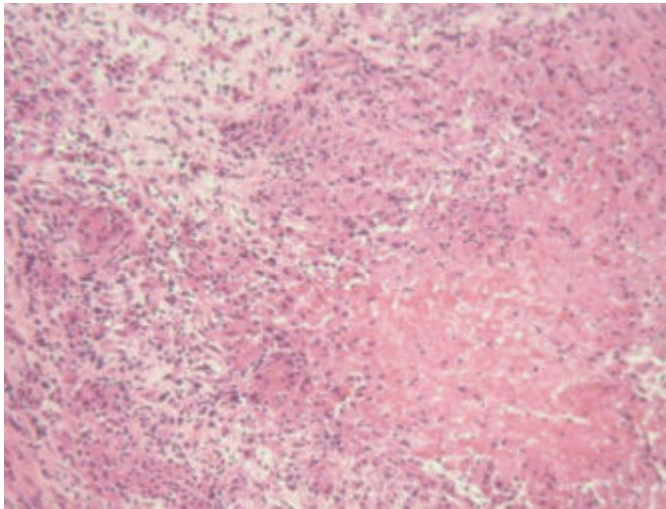


Fig. 2: tuberculoid granuloma with caseous necrosis in the center and two multinucleated giant cells(X200).

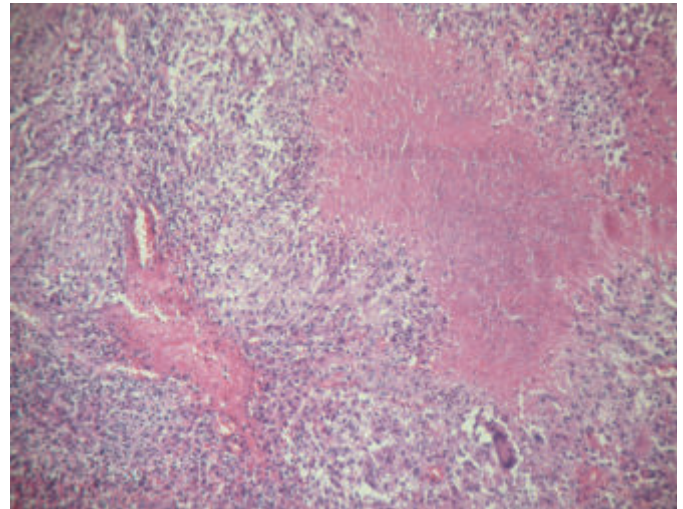


Fig. 3: To the right: inflammatory reaction granulomatous and necrotizing at the level of the gallbladder wall; to the left the biliary epithelium (X50).

Consent

Written informed consent was obtained from the patient for publication of this case report and accompanying images.

Riassunto

La tubercolosi della colecisti è estremamente rara. La sua diagnosi preoperatoria è difficile e può essere confusa con diverse patologie della colecisti.

Il caso presentato riguarda una paziente sottoposta a colecistectomia per una diagnosi di calcolosi della colecisti. La diagnosi di tubercolosi si è basata sull'esame istologico su sezioni al congelatore.

References

1. Abu-Zidan FM, Zayat I: *Gallbladder tuberculosis: Case report and review of the literature*. Hepatogastroenterology, 1999; 46:2804-806.
2. Saluja SS, Ray S, Pal S, Kukeraja M, Srivastava DN, Sahni P, et al.: *Hepatobiliary and pancreatic tuberculosis: A two decade experience*. BMC Surg, 2007; 7:10.
3. Kumar K, Ayub M, Kumar M, Keswani NK, Shukla HS: *Tuberculosis of the gallbladder*. HPB Surg, 2000; 11:401-404.
4. Xiu-Fang Xu, Ri-Sheng Yu, Ling-Ling Qiu, JianShen, Fei Dongand Ying Chen. *Gallbladder Tuberculosis: CT Findings with Histopathologic Correlation*. Korean J Radiol, 2011; 12(2):196-202.
5. Yu R, Liu Y: *Gallbladder tuberculosis: Case report*. Chin Med J 2002; 115:1259-61.
6. Kapoor S, Sewkani A, Naik S, Sharma S, Jain A, Varshney S:

Myriad presentations of gall bladder tuberculosis. Indian J Gastroenterol, 2006; 25:103-04.

7. Duan JG, Liu CL, Chen Y: *One case of gall bladder tuberculosis*. Clin J Radiol, 1992; 26:379-80.
8. Jain R, Sawhney S, Bhargava D, Berry M: *Gallbladder tuberculosis: sonographic appearance*. J Clin Ultrasound, 1995; 23:327-79.
9. Tanwani R, Sharma D, Chandrakar SK: *Tuberculosis of gall bladder without associated gallstones or cystic duct obstruction*. Indian J Surg, 2005; 67:45-46.
10. Essop AR, Posen JA, Hodgkinson JH, Segal I: *Tuberculosis hepatitis: A clinical review of 96 cases*. Q J Med, 1984; 53:465-77.
11. Eroukhmanoff P, Bazelly B, Cohen-Solal JL, Milleron B, Favre M, Flabeau: *Tuberculosis of the gallbladder: About one case with histological identification*. Nouvelle PresseMedicale, 1982; 11(51), 3795-96.
12. De Melo VA, De Melo GB, Silva RL, Piva N, Almeida ML: *Tuberculosis of the cystic duct lymph node*. Braz J Infect Dis, 2004; 8:112-14.
13. Ben RJ, Young T, Lee HS: *Hepatobiliary tuberculosis presenting as a gallbladder tumour*. Scand J Infect Dis, 1995; 27:415-17.
14. Elayyan El-Sarsour: *TB of the gall bladder causing biliary obstruction- an unusual case: Case Report with Review of the Literature*. Jordan Med J, 2007; Vol. 41 (3):179-183.
15. Soufi M, Benamer S, Chad B: *Pseudo tumoral gallbladder tuberculosis*. La Revue de médecine interne 32 (2011) e32-e33.
16. Kim SJ, Lee JM, Lee JY, Choi JY, Kim SH, Han JK, et al.: *Accuracy of preoperative T-staging of gallbladder carcinoma using MDCT*. AJR Am J Roentgenol, 2008; 190:74-80.
17. El Malki H O, Benkabbou A, Mohsine R, Ifrine L, Belkouchi A, Balafrej SJ canchir, Vol. 49, No 2, avril 2006
18. Mukherjee S, Ghosh AK, Bhattacharya U: *Tuberculosis of gall bladder: Problem of diagnosis*. Indian J Tub, 2001; 48:151-52.

