Case Report
Open Access
CrossMark

Isolated liver tuberculosis: a case report and review of literature

Abstract

Liver tuberculosis is very rare; it is generally seen as a part of military or abdominal tuberculosis. Isolated liver tuberculosis is even rarer and it does not have any specific signs of symptoms, it may pose difficulty and delay in diagnosis. Commonest differential diagnosis would be primary or secondary liver lesions. Diagnosing isolated liver tuberculosis in a patient without any history of previous tuberculosis requires high index of suspicion. Good quality liver protocol cross sectional imaging helps in suspecting the diagnosis and definitive diagnosis needs histopathological examination. We are presenting a case of isolated liver tuberculosis without any prior history of tuberculosis.

Volume 4 Issue 3 - 2017

Jitendra Mistry
Department of HPB and GI Surgery, India

Correspondence: Jitendra Mistry, HPB and GI Surgeon, Department of HPB and GI Surgery, 60, Sampat Rao Colony, Alkapuri, Vadodara-390007, Gujarat, India, Phone 909+990+376+6, Email jitlap@gmail.com

Received: November 06, 2016 | **Published:** April 26, 2017

Introduction

Liver tuberculosis is generally seen as a part of military tuberculosis or with the pulmonary tuberculosis. Isolated liver tuberculosis is extremely rare[1] and poses diagnostic dilemma especially in absence of any previous history of tuberculosis. Its diagnosis requires very high index of suspicion; and availability of good quality of imaging may help. We are presenting a case of isolated liver tuberculosis which had caused poor quality of life to the patient due to delay in the diagnosis.

The case

We had a 42years old male patient presented with right upper abdominal pain and anorexia with weight loss for 2years. He had consulted many hospitals and undergone many investigations in form of multiple blood reports, multiple ultrasounds of abdomen and a computed tomography scan of abdomen. The consistent findings in blood reports were borderline raise in transaminases, SGOT–2 to 74IU/ml (normal range: 5-40) and SGPT–56 to 68IU/ml (normal range: 7-56). Patient did not have any past history of tuberculosis. He had undergone extensive work up for etiology of liver dysfunction in form of viral markers; autoimmune profile, HIV, iron study, ceruloplasmin, KF ring and hematological work up, all were within normal limits. Multiple ultrasounds of abdomen showed fatty liver with fat sparing at certain areas. One ultrasound revealed soft 2.5mm gall stone and another showed polyp in gall bladder. CECT abdomen done elsewhere showed fatty liver with? fat sparing area ? hypodense area in segment 5. Patient was offered supportive treatment and dietary advice elsewhere. Despite treatment patient did not improved in terms of abdominal pain and patient was also advised laparoscopic cholecystectomy elsewhere.

When patient arrived to us, all previous reports were reviewed. We advised triphasic liver scan (Figure 1A) of abdomen which revealed multiple hypo dense areas non-enhancing on arterial or portal venous phase in liver but clear diagnosis could not be made and so MRI abdomen (Figure 1B & Figure 1C) was done which showed multiple hypoechoic areas with rim enhancement. Based on findings radiologist ruled out possibility of malignancy and suggested high possibility of chronic inflammatory condition. Chest x ray was normal. As one of the large lesions (Figure 1B) was on the surface of the liver near gall bladder fundus and limitations of needle biopsy; we offered patient diagnostic laparoscopy and wedge biopsy from the lesion. During laparoscopy, there were multiple perihepatic adhesions, puckering over liver surface and few nodules over the liver with largest around 2.5cm size near gall bladder fundus (Figure 2A). We took around 2cm of wedge from the lesion near gall bladder fundus. The biopsy showed well formed epithelioid cell granulomas, langhans type of giant cells with caseating necrosis suggestive of tuberculosis (Figure 2B). Patient was started on anti-tubercular treatment and within 15days of treatment patient's abdominal pain disappeared and his appetite improved. Follow up evaluation revealed normalization of transaminases and disappearance of liver lesions.

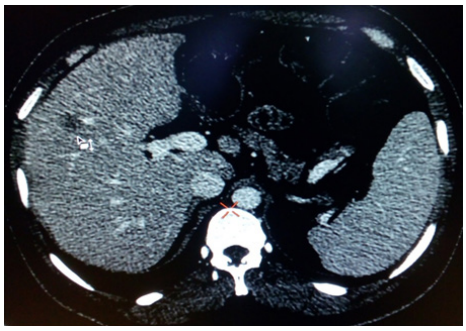

Figure 1A Triphasic liver scan showing a hypodense lesion.

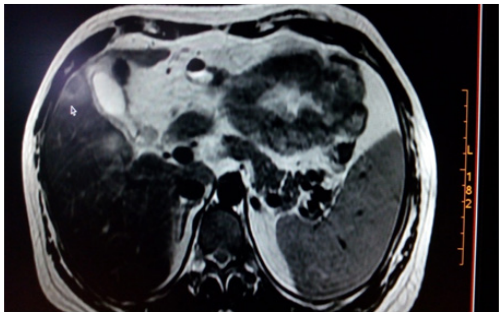

Figure 1B MRI showing a large lesion near gall bladder fundus.

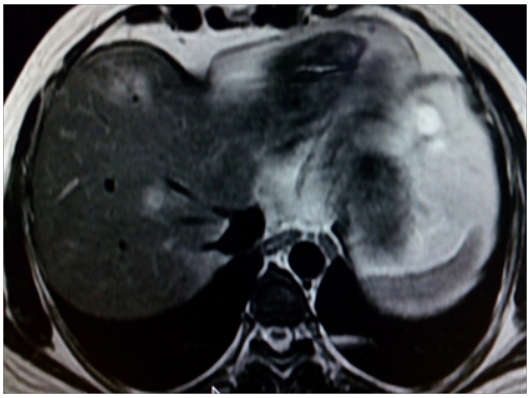

Figure 1C MRI showing multiple lesions.

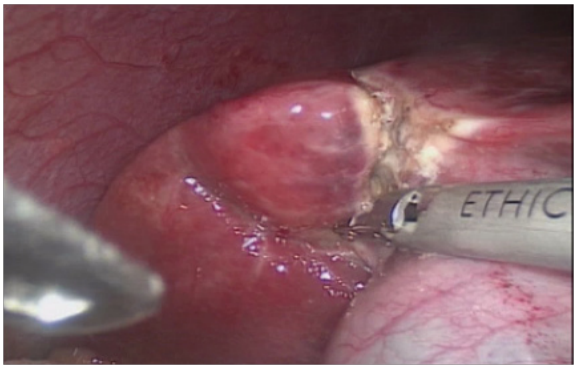

Figure 2A Picture showing laparoscopic biopsy from the large lesion near the gall bladder fundus.

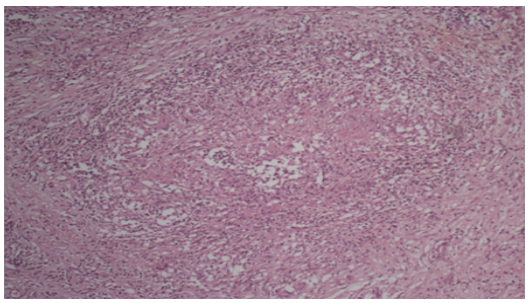

Figure 2B Biopsy picture showing epithelioid granuloma with necrosis.

Discussion

Liver tuberculosis is extremely uncommon and it contributes 1.2% of all tuberculosis cases.[2]

There are three patterns of liver tuberculosis:

1. As a part of military tuberculosis.
2. Along with pulmonary tuberculosis.
3. Isolated liver tuberculosis which can be either diffuse or localized nodular kind. Among these isolated liver tuberculosis is the rarest.[1]

The mode of presentation of isolated liver tuberculosis is nonspecific: abdominal pain (50%), weight loss (60%), fever (70%), and abnormal liver function (80%).[1–3] Nonspecific symptoms poses main problem in diagnosing isolated liver tubeberculosis especially in a patient without any contributory history of tuberculosis as in our, and it needs high index of suspicion. Isolated liver tuberculosis may mimic primary or secondary neoplastic lesion of the liver and at times it becomes very difficult to diagnose even on imagine. But CT scan study done with liver protocol and adding MRI definitely helps in narrowing down the differential diagnosis. In our case despite previous CECT, on repeating triphasic liver scan revealed more numbers of lesions MRI provided hint that it is less likely to be a malignant one and more possibility of chronic inflammatory condition. The definitive diagnosis of isolated liver tuberculosis needs histopathology evidence, which can be done with either core needle biopsy or laparoscopic wedge liver biopsy. As this patient was struggling to have definitive diagnosis, considering limitations of needle biopsy and a large lesion on liver surface we offered laparoscopic liver biopsy. Advantages of laparoscopic liver biopsy would be we could inspect whole peritoneal cavity and could get large piece of biopsy from the lesion. Common features of tuberculosis are epithelioid granuloma (80-100%), caseating necrosis (30-83%), and acidfast bacilli on smear (0-59%).[4] In our case, epithelioid granuloma and caseating necrosis was seen. As there was a mild isolated transaminases elevation in our case; we treated the patient with standard 4 drug antitubercular regimen (considering extrapulmonary tuberculosis) consisted of isoniazid, rifampicin, pyrazinamide and ethambutol without any modification. In presence of severe liver dysfunction there may need to modify the antitubercular regimen.

Summary

Isolated liver tuberculosis is extremely rare and diagnosis needs high index of suspicion. Good quality imaging especially triphasic liver scan and addition of MRI in difficult cases help in narrow down the differential diagnosis. Biopsy from the liver lesion is definitive answer to the diagnosis.

Acknowledgements

None.

Conflict of interest

The author declares no conflict of interest.

References

1. Shashtri M, Kausadikar S, Jariwala J, et al. *Australasian Medical Journal [AMJ]*. 2014;7(6):247–250.
2. Essop AR, Posen JA, Hodkinson JH, et al. Tuberculosis hepatitis: a clinical review of 96 cases. *Q J Med*. 1984;53(212):465–477.
3. Amarapurkar DN, Patel ND, Amarapurkar AD. Hepatobiliary tuberculosis in western India. *Indian J Pathol Microbiol*. 2008;51(2):175–181.
4. Puri AS, Nayyar AK, Vij JC. Hepatic tuberculosis. *Indian J Tuberc*. 1994;41:131–134.