Hepatic tuberculosis mimicking as hepatocellular carcinoma

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Abstract
A middle aged male having right upper quadrant pain along with undocumented fever and weight loss with deranged Liver function test (LFT) was found to have a space occupying lesion (SOL) on abdominal ultrasonography. CT scan abdomen tri-phasic showed arterial enhancing lesions which were washout on venous phase and became isodense on delayed phase. Multiple enlarged lymph nodes were noted at porta hepatis. Viral markers, serum CEA, AFP levels were within the normal limits. A liver biopsy was conducted, which showed features suggestive of tuberculosis. The patient was started on anti-tuberculous therapy and his follow up scan showed regression of the lesions along with improvement in his symptoms.

Keywords: Hepatic tuberculosis, Liver biopsy, Caseation necrosis, Suspected SOL liver, Hepatocellular carcinoma

Introduction
Tuberculosis (TB) is an infection that can involve any organ of the body. Its infection of the liver is known as hepatic TB, which is an extra-pulmonary manifestation of TB (1). Involvement of the liver is seen in both the primary as well as the secondary forms of TB (2).

Case Presentation
A 44-year old male patient, having no known disease, referred to the hospital with right upper abdominal pain along with undocumented fever and weight loss since the last three years. There was no history of jaundice, itching or clay colored defecation. Additionally, there was no history of food poisoning or diarrhea. His initial laboratory tests revealed a hemoglobin of 9.9 g/dL, platelet count of 431/µL and TLC; 13.4k. Liver function test (LFT) showed raised levels of both GGT of 148 U/L and alkaline phosphatase of 157 U/L. Moreover, his renal function test (RFT), and coagulation profile were within normal limits. Furthermore, viral markers were negative. Serum CEA and Serum AFP levels were both within normal limits. His chest x-ray was unremarkable. For further evaluation we conducted an abdominal ultrasonography which revealed a soft tissue density in segment VIII of the liver. An abdominal triphasic CT-scan was detected a liver size of 16.3 cm with ill-defined arterially enhancing lesion noted in segment VIII, extending to segment IV of the liver, showing venous phase washout and becoming isodense on delayed phase (Figure 1). Multiple enlarged lymph nodes at the porta hepatis were also noted.

According to this finding, we planned to conduct a liver lesion biopsy. The result of pathology examination was of well-formed epithelioid granulomas with central early caseation necrosis and Langerhans giant cells. Neither fungal element nor any evidence of malignancy was detected. Thus, pathology findings were suggestive of chronic caseation granulomatous inflammation, most likely suggestive of TB (Figure 2).

He was started on anti-tuberculous therapy (ATT) therapy. Patient's respond to ATT therapy was appropriate. Additionally, the follow-up CT-scan showing marked regression of lesion and improvement in his overall symptoms.

Discussion
Importantly hepatic TB usually remains silent clinically (3). Its occurrence in the absence of military TB is also rare (4). Because of its rarity and the lack diagnostic tests, hepatic TB is usually misdiagnosed (3). The main symptoms include fever, abdominal pain,
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Implication for health policy/practice/research/medical education
Renal disorders are considered one of the most common complications of diabetes. Metformin is the most drug widely used to treat type 2 diabetes through reducing the blood glucose concentration and other mechanisms. However, patients should be more cautious about consumption this medication and more investigation target on the current topic.

respiratory symptoms and weight loss. While an enlarged liver is usually noted on examination (5), laboratory investigations reveal a raised GGT and ALP. The main imaging modality suitable to diagnose is abdominal CT scan, while the most specific test for its diagnosis is a liver biopsy, along with a nucleic acid isotopic scan of the patient (5).

Li et al reported a case of hepatic TB in a 54-year-old female which was mimicking intrahepatic carcinoma (6). The treatment protocol remains as the same as other TB infections. Treatment period lasted for 6 to 12 months (5). Hepatic TB is a curable disease and has a good outcome if diagnosed and treated early (7). We recommend that clinicians working in TB endemic areas keep a degree of suspicion for hepatic TB. Physicians working in countries that have a high burden for TB should have a high degree of suspicion for hepatic TB particularly when patients present with complains of fever, weight loss abdominal pain and deranged LFT (1).

Authors’ contribution
SAK and ZM managed the patient and wrote the initial draft of the manuscript, MAK, IKA, SML and NHK wrote the final draft. MM was responsible for the histopathological imaging.

Conflicts of interest
There were no points of conflicts.

Ethical considerations
Ethical issues (including plagiarism, data fabrication, double publication) have been completely observed by the authors. The patient has given his informed consent regarding this case report.

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References