

Case report:

Isolated Tuberculous Liver Abscess in an Immunocompromised Adult: A case report

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Abstract:

In Bangladesh tuberculosis (TB) cases are fairly common but isolated hepatobiliary TB cases are extremely rare. Liver abscess due to TB without involvement of any other site causes diagnostic delay and can easily confuse with pyogenic or amoebic liver abscess or hepatocellular carcinoma. We present a case of a 44-years-old diabetic, normotensive male who presented with prolonged high grade fever with chill and rigor with tender hepatomegaly. He was put on treatment for liver abscess but was not responding. Later on, histopathology was done and it turned out to be a case of tuberculous liver abscess.

Keywords: tuberculosis, liver abscess.

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Introduction

Although TB can virtually involve any organ of the body but hepatic involvement is rare. When the liver is involved it occur usually as a part of millitary TB or in presence of active pulmonary TB¹. Hepatic TB is also more common in immunocompromised patients^{2,3}. Other than tuberculous liver abscess, different forms of hepatobiliary TB has been reported like primary hepatic TB^{4,5}, tuberculous hepatitis^{6,7}, tuberculous cholangitis and TB of the bile duct⁸. To the best of our knowledge, only 3 cases of such isolated hepatic TB were reported in Bangladesh till date^{9,10,11}. Due to its rarity and non specific symptoms, tuberculous liver abscess is a diagnostic challenge. The objective of this study is to emphasize on the fact that, tuberculous abscess should always be ruled out in a patient with non resolving liver abscess or unexplained hepatic space occupying lesion (SOL) that may confer early treatment and better outcome.

Case summary

A 44-years-old newly detected type 2 diabetic male got himself admitted with fever, weight loss and severe anorexia for 2 months. His fever was high grade, continued, associated with chill and rigor and drenching sweat, more marked at evening, highest recorded temperature was 106⁰F and lowest was 101⁰F. He lost 10 kilogram weight over the span of

2 months which he attributed to his severe anorexia. He had no history of previous TB or contact with any TB patient. On the day of admission, examination revealed 102⁰F temperature, tender hepatomegaly that was 4 cm from right costal margin along right mid-clavicular line. On admission his random blood sugar was 14.1 mmol/l, there was neutrophilic (83%) leucocytosis (19,500/mm³) with thrombocytosis (6, 50,000/mm³), ESR was 7mm in first hour, chest X-ray and liver function tests were normal. Ultrasonography (USG) showed solitary liver abscess (70mm × 62mm). He was put on injectable ciprofloxacin (500 mg bid) and metronidazole (500 mg tds) and soluble insulin (total 26 units of Actrapid 40 U/ml) and apparently he was improving. After a couple of days, patient's condition deteriorated and total WBC count was raised (26,000/mm³). Repeat USG (Figure 1) reported possible space occupying lesion in the liver that was even larger than the earlier scan (107mm × 92mm). A medical board was formed and viral markers, CEA and alpha-fetoprotein levels were advised. All the reports were normal. Finally, CT guided FNAC (Figure 2) was done that reported chronic abscess suggestive of tuberculosis. Unfortunately, we couldn't present the histopathology slide in here due to technical shortcomings.

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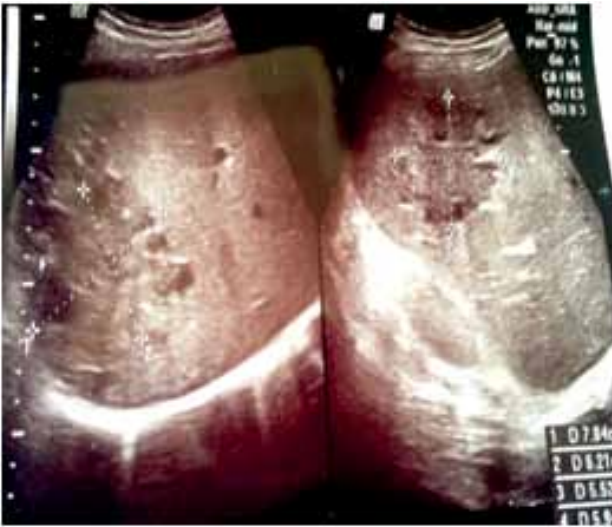


Figure 1: USG showing the liver mass



Figure 2: CT scan showing liver abscess

Discussion

Isolated tuberculous liver abscess (TLA) is extremely rare with a prevalence of 0.34%¹² which is frequently confused with amoebic or pyogenic liver abscess and hepatoma¹³. TLA was first described by Bestowe in 1858¹⁴. Since then, In the literature approximately about 100 cases of tuberculous liver abscess have been described¹⁵. In case of focal tuberculosis of liver

the port of entry for *Mycobacterium Tuberculosis* is the portal vein. The liver responds by granuloma / tuberculoma formation. The clinical diagnosis of tuberculous liver abscess had always been difficult as the symptoms and signs in this condition are nonspecific¹⁶.

Constitutional symptoms in the form of fever, anorexia and weight loss are present in 55%-90% of the patients¹⁷. Our patient presented with all these three symptoms. In some studies they have reported weight loss (50- 84%) and abdominal pain (46-70%) being common symptoms^{18,19,20,21}. Our patient had marked weight loss but didn't report any abdominal pain. Hepatomegaly is the most common physical finding while jaundice is uncommon^{22,23}. Our patient was anicteric and he had tender hepatomegaly.

Imaging technique are not so helpful in establishing the diagnosis of isolated tuberculous hepatic abscess as these are difficult to differentiate from pyogenic or amoebic liver abscess²⁴. Needle biopsy specimen can show epithelioid granuloma formation and can be demonstrated in liver tuberculosis in 80% -100% of cases while caseation necrosis can be found in 30% -83% and AFB on smear examination in 0%-59% of cases²⁵. In case of our patient, CT guided FNAC showed epithelioid granuloma and Langhan's giant cell with caseation necrosis. Tuberculous liver abscess is treated as extrapulmonary tuberculosis lesion with standard anti-tuberculosis drugs²⁶. The present case was put on anti TB drugs following the cytopathologic diagnosis and his clinical parameters started to improve after 5 days of starting therapy. During discharge, patient was afebrile and his appetite was better than previous.

Conclusion

As Bangladesh is an endemic zone for tuberculosis, we should consider tuberculosis as a differential diagnosis of pyogenic or amoebic liver abscess particularly in treatment non-responders. Clinical presentation is often confusing and histopathological investigation is the cornerstone of diagnosis. High index of suspicion is required to diagnose this rare clinical entity to avoid delay in treatment.

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