

CASE REPORTS

ISOLATED HEPATIC TUBERCULOSIS

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Abstract:

Pulmonary tuberculosis is one of the commonest infectious diseases in developing countries including Bangladesh. Hepatic involvement is common in disseminated tuberculosis which may be symptomatic or asymptomatic. But isolated hepatic TB without any symptoms is a rare presentation. We report a case of isolated hepatic TB in a 40 year old housewife who presented with low grade fever, vague abdominal pain and weight loss. She had no pulmonary or hepatic complains. We diagnosed the case when ultrasonogram of abdomen showed multiple space occupying lesions from where FNAC was done and sent for histopathology and Z-N staining and revealed hepatic TB.

Key words: Tuberculosis, isolated hepatic tuberculosis.

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Introduction:

Tuberculosis (TB) is a common infection in different countries of Asia and Africa. Liver involvement in tuberculosis, though common both in pulmonary and extra-pulmonary tuberculosis, is usually clinically silent.¹ Hepatic involvement has been described in 90% of miliary TB, 75% of extrahepatic TB and 25% of pulmonary TB.² Presenting symptoms in these settings are mainly those of miliary tuberculosis.² Isolated hepatic tuberculoma (nodular hepatic tuberculosis, macronodular hepatic tuberculosis) is the rarest form of local hepatic tuberculosis.³ A study from South Africa showed that liver tuberculosis accounted for only 1.2% of all cases of tuberculosis diagnosed at a general hospital.⁴ In Bangladesh there are few (only 2)^{5,6} cases of hepatic tuberculosis reported to date. High index of suspicion is required for correct diagnosis.

Here we reported a case of isolated hepatic TB presented with fever, vague abdominal pain and anorexia for prolonged period.

Case Report:

A 40 year old housewife presented to us with low grade fever, vague abdominal pain and

extreme anorexia for 2 months. She had no history of vomiting and her bowel habit was not remarkable and voiding was normal. She also had history of significant weight loss for this time period and also complaints of severe weakness. She gave no history of darkening of skin and episodes of unconsciousness. She had no history of cough, hemoptysis or chest pain and also no history of jaundice. She was normotensive, nondiabetic, non asthmatic, had no history of previous tuberculosis nor had contact with TB patients as none of her family members suffered from any form of tuberculosis.

On examination- she was mildly anemic, non icteric, had glossitis and post cervical lymphadenopathy. Multiple cervical lymph nodes were palpable but size was <1cm and was persisting for the last six months. Her blood pressure was 110/70 mm of Hg without postural drop. Abdomen was tender. Liver was palpable, 1 cm from the right costal margin along the mid-clavicular line, surface was smooth, with rounded border and nontender, upper border of the liver dullness was in the right 5th inter costal space and there was no bruit. But there

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was no splenomegaly or abdominal lymphadenopathy. There was no ascites. She also had bony tenderness and in the skin there was exfoliative dermatitis. She had history of taking several antibiotics like azythromycin.

All the routine examination including CBC, PBF, chest x-ray, urine routine examination was normal; Blood for culture and sensitivity test was negative and was negative for Malarial Parasite. USG of abdomen was normal. Empirical treatment was started with intravenous Ceftriaxone. She was advised to keep the temperature chart and to come for follow up 2 weeks later. But her symptoms were not improved on follow up visit. She was advised to repeat CBC, chest x-ray and ultrasonogram of whole abdomen. The ultrasonogram of abdomen showed multiple hepatic nodules of different sizes. FNAC from the hepatic nodule was performed and sent for histopathology in two separate institutions. Both of which revealed epithelioid granuloma and smears sent for Z-N staining which was positive for AFB. Sputum samples were sent for AFB but were negative.

Discussion:

Liver involvement in tuberculosis, though common both in pulmonary and extra-pulmonary tuberculosis, is usually clinically silent.⁷ Occasionally, local signs and symptoms may be prominent in hepatic tuberculosis, and may constitute the initial or sole presenting feature of the disease. However, even in developing countries, liver tuberculosis accompanied by local symptoms is an uncommon entity. Lack of familiarity with this condition was apparently responsible for the diagnosis of hepatic tuberculosis being made at autopsy or surgery in the past.⁸ Tubercle bacilli reach the liver by way of hematogenous dissemination: in miliary tuberculosis through the hepatic artery whereas in the case of focal liver tuberculosis it is via the portal vein. Irrespective of the mode of entry, the liver responds by granuloma formation. Both caseating and non-caseating granulomas are seen. In focal tuberculosis, various granulomas may coalesce to form a large tumor like tuberculoma. A tuberculoma which has

undergone extensive caseating and liquefaction necrosis forms a tubercular abscess.

The nomenclature of hepatic tuberculosis is confusing. Multiple terms like tubercular hepatitis,⁹ local tuberculosis,^{8,10} secondary tuberculosis,¹⁰ isolated tuberculosis,¹¹ and atypical tuberculosis,¹¹ have been used by various authors. Local tuberculosis of the liver may either mean a lesion >2 mm diameter on gross examination¹⁰ or a selective involvement of the liver without clinically apparent disease of other organs.⁸ Hepatic tuberculosis presents in three forms.¹³ The most common form is the diffuse hepatic involvement, seen along with pulmonary or miliary tuberculosis, in 50-80% of patients dying of pulmonary tuberculosis. Despite the diffuse involvement of the liver pathologically, symptoms of liver disease are absent. The second form is a diffuse hepatic infiltration without recognizable pulmonary involvement (granulomatous hepatitis). The third much rarer form presents as a focal/local tuberculoma or abscess. Hepatic granulomas have varied aetiology and tuberculosis is the commonest cause in India.¹⁴ Therefore, the finding of liver granulomas histologically, even in the absence of caseation, necrosis/AFB, is accepted as evidence of tubercular aetiology in most parts of Asia and Africa unless proven otherwise.^{14,15} Fever is the commonest symptom (63-99%), followed by weight loss (50-84%) and abdominal pain (46-70%).^{9,10,14,16} Hepatomegaly is present in more than half the patients whereas splenomegaly is present in one third.^{9,14,16} Needle biopsy is an excellent method for making the diagnosis; none of the imaging modalities (ultrasound, CT and MRI) is useful because of the small size (2mm) of the granulomas.

Local hepatic tuberculosis, defined as tubercles >2 mm in diameter, usually occurs along with a tuberculous focus elsewhere.¹⁷ Isolated hepatic tuberculoma (nodular hepatic tuberculosis, macronodular hepatic tuberculosis) is⁷ the rarest form of local hepatic tuberculosis since less than 25 cases had been reported in world literature till 1990.⁸ Local

hepatic tuberculosis has mostly been reported from South Africa and the Philippines^{10,13}. Constitutional symptoms in the form of fever, anorexia and weight loss were present in 55-90% of the patients. Abdominal pain is present in 65-87% of patients^{8,10} but jaundice is uncommon. Hepatomegaly and splenomegaly are the commonest findings, being present in 70-96%^{8,10,15} and 25-55%^{10,15} of patients respectively. Liver is hard and nodular in about half the cases.^{15,1} Findings from liver function tests are non-specific with the notable exception of an elevated alkaline phosphatase level in 50-87%^{8,10} of patients. Calcification in the hepatic region on plain x-ray of the abdomen may occasionally be seen in local hepatic tuberculosis.¹⁵ Imaging techniques (radionuclide scan, ultrasonography, CT and MRI scans) are useful in making the diagnosis of tuberculoma or tubercular abscess.

The diagnosis of hepatic tuberculosis rests on histopathologic evidence of caseating granuloma or demonstration of AFB on smear or culture of biopsy specimen. Using needle biopsy specimen, epithelioid granuloma formation can be demonstrated in liver tuberculosis in 80-100% of cases; caseation necrosis in 30-83% and AFB on smear examination in 0-59% of cases.^{9,10,14,19} PCR may required for confirming hepatic tuberculosis.

Diagnosis of hepatic tuberculosis requires a high index of suspicion. The presence of hepatomegaly with or without right upper quadrant pain in a patient with pyrexia of unknown origin (PUO) should merit consideration of hepatic tuberculosis. The demonstration of granulomas on liver biopsy remains the most sensitive diagnostic procedure. Hepatic tuberculosis is a potentially curable disease. Good results have been obtained with four drug regimens without any added risk of hepatotoxicity .

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