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Primary Pseudotumoral liver tuberculosis: A great mimicker!!

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Abstract: Tuberculosis remains a worldwide health problem. Abdominal tuberculosis is frequent; however liver tuberculosis is uncommon especially in the absence of miliary tuberculosis. We report a case of a 56-year-old woman with type 2 diabetes who presented with pain in right hypochondria and weight loss. CT scan of abdomen showed hypodense mass lesion involving segments II and III with heterogenous enhancement.
Histopathological examination revealed granulomatous inflammation with suppurative necrosis and confirmed the diagnosis of hepatic tuberculosis. It was concluded a case of isolated hepatic tuberculosis without evidence of other primary sites involvement. Anti-tuberculosis therapy was started. The patient is doing well at the time of the last follow up.

Keywords -*About five key words in alphabetical order, separated by comma*

I. INTRODUCTION

Primary hepatic tuberculosis (TB) is the involvement of the liver by the mycobacterium tuberculosis without any evidence of tuberculosis elsewhere. (1) it is an uncommon clinical entity even in countries where the disease is highly prevalent, accounting for 3% of all extra- pulmonary tuberculosis and 9% of intra-abdominal locations.(2) Pseudotu moral hepatic TB (PTHT), is extremely rare and the diagnosis is challenging owing to nonspecific clinical and radiological findings.(3) It may be mistaken as malignancy (4) or pyogenic abscess. (5) However, the biopsy is confirmatory (6)
We present the case of isolated pseudotumoral hepatic TB without extrahepatic involvement managed successfully with antituberculous therapy (ATT) after Histopathological diagnosis confirmation.
clinicians should be aware of this clinical entity of hepatic tuberculosis to start prompt treatment and prevent undue morbidity and mortality.

II. CASE PRESENTATION

A 56-year-old female patient with a prior medical history of diabetes mellitus presented with a 5 month history of abdominal pain in the right upper quadrant without particular irradiation, weight loss of 10kg in 6months

and asthenia. There was no history of cough or chest pains and there was neither history of previous jaundice nor gastrointestinal bleeding. She denied previous history of Tuberculosis or open tuberculosis contact in the past. Family history was non-significant.

At admission the patient was stable, afebrile.Abdominal examination revealed tender hepatomegaly 3 cm below the costal margin. No splenomegaly or ascites or palpable lymphadenopathy or any other masses found. Rest of the systemic examination was unremarkable.

Laboratory data showed hemoglobin - 10.2 g/dL, (normocytic normochromic anemia), elevated white blood cell count - 18690 hypoal bumina emia and elevated C reactive protein (CRP) level of 209,4.

Liver function tests were normal aspartate aminotransferase 6 and alanine transaminase 21. total bilirubin 8.7 mg/L, alkaline phosphatase 456 mg/Land gammaglutamyl transfer as e 228 were within normal limits.

serologic diagnosis of hydatid disease and amoebic hemagglutination were all negative

Viral markers for human immunodeficiency virus (HIV), hepatitis B, and C were negative.

Tumor marker studies including carcinoembryonic antigen, carbo- hydrate antigen and serum alpha-fetoprotein were within normal limits. Tuberculin skin test was positive 13 mm.

Ultrasonography showed an irregular avascular heterogenous hypoechoeic mass located in segment II and III measuring 46x 49 mm without dilatation of biliary tree

Contrast-enhanced CT scan (CECT) abdomen showed an hypodense mass lesion of size 66 mm × 49 mm involving segments II and III with heterogenous contrast enhancement and compression of the portovenous architecture.Upper digestive endoscopy and colonoscopy were unremarkable

In view of the dilemma of differentiating between abscess and tumor, magnetic resonance imaging was done, which showed T1 hypointense T2 hyperintense signal lesion of 60x42 mm involving segments II and III with heterogenous enhancement after injection of gadoliniumimaging findings were not specific for any particular pathology. USG-guided biopsy from the hypoechoic lesion was performed. Microscopic examination found agranulomas composed by epithelioid and giant cells with suppurative necrosis. TB culture was not done. The diagnosis of hepatic tuberculosis was made. Chest x-ray was normal.

The patient was managed with anti-tuberculosis treatment including rifampicin 600mg, pyrazinamide, ethambutol 1500 mg and isoniazid 300mg during 2 months with close monitoring of liver function tests. the therapy was continued with isoniazid and rifampin to achieve 4 months treatment.

The Patient tolerated the ATT well and improved after 6 months of treatment. No complications were reported.

III. DISCUSSION

Isolated hepatic tuberculosis presenting as pseudotumoral mass is a rare entity with an overall incidence of about 0.3%. (4,7) and less than <100 cases in the literature, (8) first reported in 1858 by Bristowe. (2) this can be explained by the lack of oxygen in the liver making it unfavorable for the growth of mycobacteria.(9)

Levine classified hepatic tuberculosis as miliary tuberculosis, most common form occurring in 50%–80% of cases, (3) pulmonary tuberculosis with hepatic compromise, primary hepatic tuberculosis without involvement of other organs, focal or tuberculous abscess and tuberculous cholangitis (1)

Hepatic involvement is by either hematogenous spread via hepatic artery from other organs or through portal venous route from the ingested bacilli in bowel and rarely by direct spread from adjacent organs such as lung or pleura. (4) the present case had isolated liver tuberculosis without evidence of tuberculosis elsewhere .The granulomas are usually periportal in location(3)

Immune-compromised situations, such as acquired immunodeficiency syndrome, corticosteroid therapy, chronic renal failure, and diabetes mellitus (5) as in our patient contribute to the rise in extra pulmonary TB cases (8).

Clinical presentation and imaging features are nonspecific and depend on TB pattern in the liver. the most common symptoms being fever, night sweats, abdominal pain, weight loss and anorexia. (5) Jaundice may be present due to extra- or intrahepatic compression of the bile ducts by a local process (tuberculoma). (5) Hepatomegaly is seen in up 50% of patients (6) Our patient presented with abdominal pain and Hepatomegaly with alteration in the general condition.

On laboratory tests, cholestasis and/ or cytolysis may be observed (2)
On imaging, two type have been described. micronodular form characterized by granulomas of 0.6 mm to 2 cm in size and calcification in the chronic stage. In this case sarcoidosis should be considered as a differential diagnosis. The macronodular form is characterized by granulomas >2 cm in diameter (6). Lesions may mimic malignancies of the liver or liver abcess. The present case corresponded to the macronodular pattern. The accuracy of MRI is similar to that of CT for diagnosing hepatic TB. (9)
Biopsy is often necessary to confirm the diagnosis (6) due to the polymorphism of the clinical and imaging findings. The presence of epithelioid granuloma (80%–100%) with caseation (33%–100%)on histopathological examination of liver biopsy specimens(8) or demonstration of mycobacteria by acid-fast staining (,15%), culture (33%) or PCR (58%) in tissue samples establishes the definitive diagnosis (3)

systemic antituberculous drugs are recommended in liver tuberculosis despite their potential hepatotoxicity (1)

The standard regimen of anti-TB drugs includes isoniazid, rifampicin, ethambutol and pyrazinamide during the initial 2 months, followed by isoniazid and rifampicin for the next 4 months to complete 6 months of treatment. (8)

IV. CONCLUSION

Isolated pseudotumoral liver tuberculosis is rare and represents a diagnostic challenge.

There is no pathognomonic features of liver tuberculosis. Therefore, in case of high degree suspicion, a liver biopsy is required for definitive diagnosis.
A greater awareness of this rare clinical entity and prompt antiturbeculosis treatment may prevent complications and permit favourable outcome.

V. CONCLUSION

A conclusion section must be included and should indicate clearly the advantages, limitations, and possible applications of the paper. Although a conclusion may review the main points of the paper, do not replicate the abstract as the conclusion. A conclusion might elaborate on the importance of the work or suggest applications and extentions. (10)

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