



# Letter: Hepatic Tuberculosis Diagnosed by Xpert MTB/RIF Ultra Testing on Liver Biopsy

Rakesh Kumar Barik<sup>1</sup> Sanjib Kumar Kar<sup>1</sup> Subhasri Subhadarsini<sup>1</sup> Sudhasmita Rauta<sup>1</sup>  
Biswojeet Bisworanjan Sahoo<sup>1</sup> Suchismita Srichandan<sup>1</sup>

<sup>1</sup>Department of Gastroenterology, Indian Institute of Gastroenterology and Hepatology, Gandarpur, Cuttack, Odisha, India

Address for correspondence Rakesh Kumar Barik, MBBS, MD, DM, Indian Institute of Gastroenterology and Hepatology, Service Road, NH-16, Gandarpur, Cuttack 753003, Odisha, India (e-mail: rakeshkumarbarik.88@gmail.com).

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A 35-year-old male presented with episodic vomiting, anorexia, weight loss, and fever for the last 6 months. The fever was low grade, intermittent in nature, and was not associated with night sweats. There was no past history of tuberculosis. Physical examination showed mild hepatomegaly. He had a hemoglobin of 11.1 gm/dL, erythrocyte sedimentation rate 35mm/hr, total bilirubin 0.5 mg/dL, serum glutamic-oxaloacetic transaminase 40 IU/L, serum glutamic-pyruvic transaminase 30 IU/L, and elevated alkaline phosphatase 281 IU/L (normal value 44–147 IU/L). Viral serological tests were negative for hepatitis B, hepatitis C, and human immunodeficiency virus. Chest X-ray and computed tomography of the chest were normal. Ultrasound of the abdomen revealed hepatomegaly and multiple periportal lymph nodes, largest of 2 cm × 1.2 cm diameter. Mantoux test was negative. On computed tomography (CT), the liver (18.5 cm) and spleen (18.4 cm) were enlarged with a dilated portal vein (13 mm) and splenic vein (12 mm). There were multiple enlarged periportal, peripancreatic, splenic hilar, and aortocaval lymph nodes with no necrosis (► Fig. 1A). CT-guided fine-needle aspiration from peripancreatic lymph node was inconclusive. Diagnostic laparoscopy with biopsy was done from the left lobe of the liver and lymph node. Histopathological examination of the biopsy specimen of liver showed multiple well-defined epithelioid granulomas, caseation necrosis, and many multinucleated Langhans-type giant cells surrounded by chronic lymphoplasmacytic infiltration in the benign hepatocytes (► Fig. 1B). Ziehl-Neelsen stain for acid-fast bacillus was negative. The diagnosis was confirmed as a tuberculous lesion by positive Xpert MTB/RIF ultra assay of the biopsy sample. Histopathology of lymph node also showed epithelioid granuloma and multinucleated giant cells.

He was treated with category 1 antitubercular therapy (ATT). His condition improved within 2 weeks of therapy. He was followed up clinically as well as by ultrasonography and liver function test at 8 weeks; he gained around 10 kg and now asymptomatic and doing well. He was advised to continue ATT and to be followed up closely.

Diagnosing primary hepatic tuberculosis is a challenging task for a physician. Nonspecific symptoms and rarity of the condition make diagnosis difficult even in an endemic region like India. Common clinical presentations include fever, weight loss, abdominal pain, hepatomegaly, and elevated alkaline phosphatase.<sup>1–3</sup> As in our case, patient had nonspecific symptoms without any prior history of tuberculosis, which led to prolonged duration of illness before the diagnosis was made. Imaging manifestations may include diffuse nodularity with scattered granulomas and hepatomegaly, isolated abscess, or nodules confused with primary or secondary malignancy.<sup>1–3</sup> Hepatic tuberculosis is usually associated with pulmonary tuberculosis, but isolated hepatic tuberculosis is uncommon.<sup>1,2</sup> Diagnostic yield of laparoscopic biopsy with histopathology has been reported to be good.<sup>4</sup> In our case, we had done a laparoscopic biopsy, which showed granulomatous hepatitis and acid-fast bacilli were absent, but polymerase chain reaction (PCR) was positive for *Mycobacterium tuberculosis*. As per our knowledge, there has not been any previous report of Xpert PCR positive on liver biopsy sample, although positivity has been reported in tubercular liver abscess.<sup>5</sup> An empiric therapeutic trial of ATT should be considered in granulomatous hepatitis, particularly when there is no etiological diagnosis residing in endemic areas and the clinical suspicion is very high.<sup>5</sup>

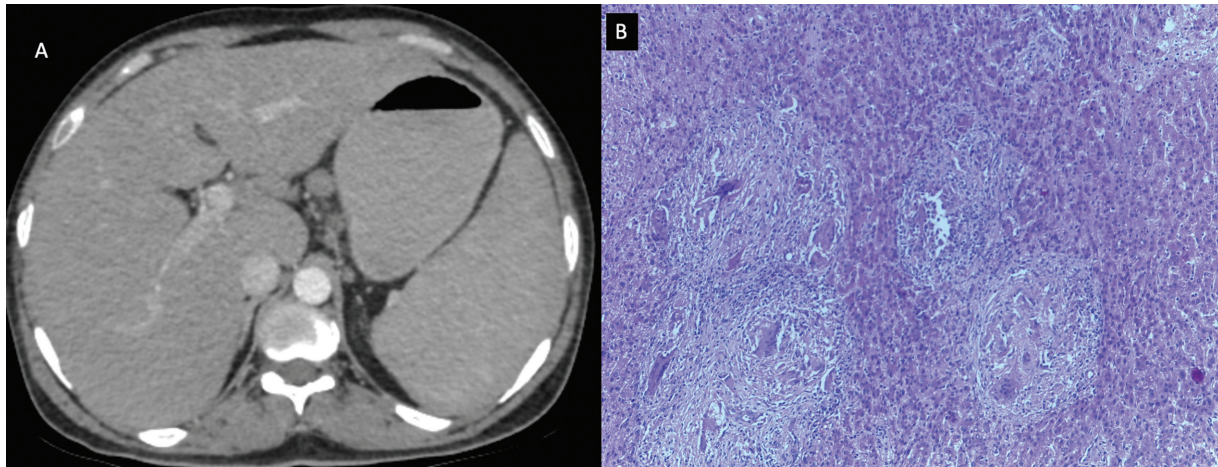
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**Fig. 1** (A) Computed tomographic scan showing hepatosplenomegaly with multiple enlarged periportal, peripancreatic, splenic, hilar, and aortocaval lymph nodes. (B) Photomicrograph showing multiple necrotizing epithelioid granulomas and Langhans-type giant cells surrounded by lymphocytes, histomorphology of tuberculosis of liver.

Hepatic tuberculosis is, although, rare but a treatable condition. The present case highlights how newer microbiological tools may help clinch a confirmed diagnosis in these difficult cases.

#### Ethical Statement

Informed written consent was taken from the patient.

#### Author Contributions

R.K.B. and S.S. were involved in drafting and submission of the work. S.K.K. contributed substantially to the conception or design of the work and final approval of the version to be published. B.B.S. and S.S. provided radiological diagnosis, while S.R. provided histological diagnosis.

#### Data Availability Statement

There are no additional data with this manuscript.

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None.

#### Conflict of Interest

None declared.

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