Hepatic tuberculosis in absence of disseminated abdominal tuberculosis

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Synopsis

Liver involvement in tuberculosis in absence of miliary tuberculosis is rare. This study was performed to analyse the spectrum and response to treatment of hepatic tuberculosis in the absence of miliary abdominal tuberculosis. Retrospective analysis of seven cases of hepatic tuberculosis without miliary abdominal tuberculosis who presented at the single tertiary referral center were analyzed. All patients presented with fever and hepatomegaly. Five of them had pain in upper abdomen and vomiting. HIV serology was positive in one patient. All patients had normocytic normochromic anaemia, raised erythrocyte sedimentation rate (Mean 65). Mild elevation of liver enzymes and low albumin (Mean 2.4 gm%) with reversal of albumin globulin ratio (Mean 0.6) were seen in all. Two had jaundice. Prothrombin time was normal in all and lactate dehydrogenase values were elevated in all (Mean 794 IU/L). On ultrasonography, 2 had multiple hypodense lesion, 1 had coarse echotexture of liver, 1 had hyperechoic pattern and 3 had just hepatomegaly. Complete resolution of liver lesions on treatment with 4-drug anti-tuberculous drug chemotherapy was seen. In conclusion, liver tuberculosis has protean manifestations with nonspecific alteration of liver function tests and is best diagnosed on liver biopsy. Overall response to therapy is satisfactory.

Key words: Liver, granuloma, MTuberculosis.
Table I.

<table>
<thead>
<tr>
<th>Test</th>
<th>No. abnormal</th>
<th>Mean</th>
<th>Range*</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hemoglobin</td>
<td>7</td>
<td>9.0 g/dL</td>
<td>6.9-11.8 g/dL</td>
</tr>
<tr>
<td>Erythrocyte sedimentation rate</td>
<td>7</td>
<td>65 mm at 1 hour</td>
<td>35-105 mm</td>
</tr>
<tr>
<td>Aspartate aminotransferase</td>
<td>5</td>
<td>67 U/L</td>
<td>45-91 U/L</td>
</tr>
<tr>
<td>Alanine aminotransferase</td>
<td>4</td>
<td>97 U/L</td>
<td>55-159 U/L</td>
</tr>
<tr>
<td>Hyperbilirubinemia</td>
<td>2</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Alkaline phosphatase</td>
<td>6</td>
<td>445 IU/L</td>
<td>109-626 IU/L</td>
</tr>
<tr>
<td>Albumin</td>
<td>7</td>
<td>2.4 g/dL</td>
<td>1.3-3.1 g/dL</td>
</tr>
<tr>
<td>Albumin: Globulin</td>
<td>7</td>
<td>0.6</td>
<td>0.4 –0.9</td>
</tr>
<tr>
<td>Prothrombin time</td>
<td>nil</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Lactate dehydrogenase</td>
<td>7</td>
<td>794 IU/L</td>
<td>402-1597 IU/L</td>
</tr>
</tbody>
</table>

* In patients with abnormal levels

Discussion

Involvement of the liver alone by tuberculosis is uncommon. Its true incidence is difficult to assess but appears to be rare. Literature suggests that the presentation is as a protracted illness frequently associated with fever, malaise, weight loss, jaundice and hepatomegaly, however, some reports indicate that this may mimic common liver diseases such as abscess, tumour and at times may present with isolated elevated alkaline phosphatase. Most of our patients presented with fever, anorexia, weight loss and upper abdominal pain.

Physical findings in such cases are variable. Hersch described hepatomegaly in 95% of cases having liver involvement and splenomegaly was described in 18-55% of cases. All of our patients had hepatomegaly. All of our patients had mild elevation liver enzymes, which was also described by Gupta et al. Only two patients had raised bilirubin levels, which may be due to direct destruction of parenchyma.

Radiological investigations in cases of hepatic tuberculosis usually mimic that of other common disease. Histopathological examination alone of tissue obtained cannot be considered the gold standard for diagnosis. Only one of our patients showed characteristic caseating granuloma in the biopsy specimen. Hepatic epitheloid cell granuloma alone can occur in primary biliary cirrhosis, sarcoidosis, Crohn’s disease, chronic active hepatitis, drug hypersensitivity and extra-hepatic biliary obstruction. Therefore, it is important to demonstrate the presence of acid fast bacil-
li. Alvarez\textsuperscript{11} had described the importance of presence of acid-fast bacilli in specimen in the absence of caseation, but presence of this is rarely reported in literature.\textsuperscript{12} We had 5 out of 7 patients showing AFB positivity by smear or culture in the biopsy specimen. Where doubt exists between tuberculosis and sarcoidosis, other means of achieving the diagnosis like ACE levels or transbronchial biopsy need to be resorted to. The final proof is only a response seen to anti tuberculous therapy, which was seen in all survivors in this series. AFB culture positivity would be a good clue, however, the diagnosis is rarely suspected even in endemic areas so tissue is rarely sent for this. Treatment is similar to that used for pulmonary tuberculosis. Quadruple therapy (using four anti-tuberculous drugs) is recommended. Most of our patient had good outcome (6 of 7). One of our patients who had lymphoproliferative disease died due to acute respiratory distress syndrome.

In summary, liver tuberculosis has protean manifestations and must be suspected in patients coming from endemic areas with nonspecific alteration of liver function tests. This is best diagnosed on liver biopsy. Overall response to therapy is satisfying with reversal of structural and biochemical abnormalities.

References