Hepatoma and obstructive jaundice

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Summary

Three patients with hepatoma are described whose presenting feature was obstructive jaundice.  
Recognition of this rare manifestation of hepatoma can establish the diagnosis before surgery.

Introduction

Patients with hepatoma may present in many ways. Jaundice, when it occurs, is usually mild but occasionally obstructive jaundice results from invasion of the extra-hepatic biliary system. In this paper, 3 such patients are described.

Table 1. Biochemical features of patients with hepatoma and obstructive jaundice. Normal range in parenthesis

<table>
<thead>
<tr>
<th>Case no.</th>
<th>Age (years)</th>
<th>Sex</th>
<th>Total bilirubin μmol/l (3–14)</th>
<th>Conjugated bilirubin μmol/l (&lt; 3)</th>
<th>Alkaline phosphatase KAU./dl (3–13)</th>
<th>Alpha-fetoprotein</th>
<th>Further investigations</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>18</td>
<td>F</td>
<td>133</td>
<td>100</td>
<td>33</td>
<td>Neg.</td>
<td>Liver biopsy Laparotomy</td>
</tr>
<tr>
<td>2</td>
<td>26</td>
<td>M</td>
<td>390</td>
<td>289</td>
<td>26·5</td>
<td>Pos.</td>
<td>Liver biopsy Laparotomy</td>
</tr>
<tr>
<td>3</td>
<td>30</td>
<td>M</td>
<td>306</td>
<td>249</td>
<td>21·3</td>
<td>Pos.</td>
<td>Liver biopsy Post-mortem</td>
</tr>
</tbody>
</table>

Conversion SI to traditional units: bilirubin 1 μmol/l = 0·06 mg/dl.

Case reports

All patients were admitted to Ahmadu Bello University Hospital, Kaduna, Nigeria, between 1975 and 1977. Hepatoma is a common tumour in this northern savanna region and 162 such patients were admitted in the 2-year period. The details of the 3 patients are shown in Table 1.

The diagnosis of hepatoma was established by liver biopsy or by a positive test for serum α-fetoprotein (AFP), detected by countercurrent immuno-electrophoresis with locally prepared rabbit antiserum. A positive AFP test occurs in 80% of patients with hepatoma in Kaduna and false positives are exceptional. In addition to the details shown in Table 1, all patients had the following features of obstructive jaundice: stools either pale or containing blood; dark urine containing excess bilirubin and no urobilinogen; serum transaminases, SGOT and SGPT, within normal limits. The extra-hepatic obstruction was confirmed at laparotomy or post-mortem in all 3 patients.

Patient one had 2 episodes of obstructive jaundice, the first settling spontaneously. During each episode she developed a tender mass the size of an egg over the liver. At laparotomy this was found to be inflamed omentum overlying the tumour. In addition there was solid tumour compressing the common bile duct. A biopsy was taken and drainage performed but the patient died during convalescence.

In the second patient, a pre-operative diagnosis of hepatocellular carcinoma was made on the basis of a positive AFP and liver biopsy. At laparotomy the common bile duct was infiltrated with tumour and successful drainage was performed.

At post-mortem in the third patient the liver was

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studded with tumour nodules, one of which had eroded into the common hepatic duct.

**Discussion**

Early reviews on hepatoma (MacDonald, 1957) indicate that an obstructive pattern of liver function tests may occur. However, recent literature (Sherlock, 1975) stresses that jaundice is both infrequent and mild. There have been sporadic reports of proved extra-hepatic biliary obstruction and rarely was the diagnosis made pre-operatively. In all, the obstruction was due to necrotic tissue (Ishikawa et al., 1973), tumour (Elsner and Jauregui, 1972; Kuroyanagi et al., 1977; Afroudakis et al., 1978; Wind and Futterman, 1977), or blood clot (Johns and Zimmerman, 1961; Brand et al., 1976), which had gained entrance to and blocked the extra-hepatic ducts. A characteristic of hepatoma is its ability to undergo necrosis and degeneration. Should this occur next to a bile duct, fragments could become detached with a resultant blockage of the duct.

The authors wish to emphasize that hepatoma may cause intermittent or progressive obstructive jaundice and this may be the presenting feature. Estimation of serum AFP or liver biopsy may establish the diagnosis before surgery.

**References**


