Alcoholic Liver Disease in Punjab

K ROY, L S CHAWLA, B D SABHARWAL, K SINGH, J WHIG

Department of Medicine, Pathology and Biochemistry, Dayanand Medical College and Hospital, Ludhiana 141 001

Abstract
Thirty two chronic alcoholic males (age group 20-66 years) consuming different types of alcohol were studied to assess clinical, biochemical and hepatic changes in chronic alcoholics in Punjab.

Pain in the abdomen was the commonest presenting feature (65.6%), followed by anorexia, weight loss and vomiting. Jaundice was observed in six patients (18.7%) only. The commonest clinical finding at the time of admission was hepatomegaly (78.1%). Only 6 (18.7%) patients manifested signs of hepatic cellular failure.

Biochemistry revealed raised serum bilirubin in 34.3% and hypoalbuminaemia in 15.6%. BSP retention was significantly higher in a majority of patients (87.5%). Mean values of triglycerides and free fatty acid were significantly elevated in alcoholics (764.6 mg/l) as compared to controls (497.3 mg/l).

Fatty change was the most frequent morphological change seen (21 cases, 65.6%). Cirrhosis was seen in 4 cases (12.5%) only. Two cases showed normal histology on biopsy. No correlation between amount, type and duration of alcohol consumption to cirrhosis was found in the study.

Key word: Alcoholic liver disease

Introduction
Although several studies on alcoholic liver disease have been reported from the USA and Europe, very little is known about the nature and outcome of this disease in India. The present work was carried out to study the clinical, biochemical and histopathological features of alcoholic liver disease in Punjab, and to correlate these with the type, duration and quantity of alcohol consumption.

Material and Methods
The study was conducted at Dayanand Medical College and Hospital, Ludhiana which serves a population of approximately 2 million in and around the city.

Thirty-two chronic male alcoholics presented to the hospital between August 1978 and July 1979. Patients were taken for study only if they gave history of drinking more than 160 g/day of alcohol for at least five years. A detailed interview of the patient and the close relations was carried out.

Haemoglobin estimation, total and differential blood counts, urine analysis for bile salts and bile pigments, estimation of SGOT and SGPT, total and differential serum proteins, serum bilirubin and serum alkaline phosphatase were done. Bromosulphalein (BSP) retention test, serum triglycerides estimation and percutaneous liver biopsy by either Vim Silverman's or Menghin's needle were performed.

Results
The age of the patients ranged between 20 and 66 years (mean 40 years). Eight of 32 patients consumed alcohol for 5-10 years and 9 for more than 21 years. Seventeen (53.1%) patients consumed more than 200 g of alcohol per day, the maximum daily consumption being 1000 g by 4 (12.5%) patients. The other fifteen consumed between 160 g and 200 g/day. Thirteen (40.6%) patients consumed country liquor and 12 (37.5%) consumed a combination of country liquor with whisky or rum.

An adequate nutritional history was available from the patients or their families in 24 cases, with an average non-alcoholic intake of 2000 calories and protein intake of over 80 g/day. Food intake was average in 5 and poor in 3 patients.

The major presenting symptoms and signs are shown in the Table. The three most common complaints were pain in the abdomen, anorexia and weight loss. The three common signs found were hepatomegaly, anaemia and jaundice.

Liver function tests in our patients with alcoholic liver disease showed serum albumin level less than 3 g/l in five (15.6%) patients only. Serum bilirubin was raised in 11 (34.3%) and alkaline phosphatase in 8 (25%) cases whereas serum transaminase showed abnormal rise in only 7 (21.8%). BSP retention test, done in 25 cases (the others had bilirubin levels above 2 mg/dl), showed mean levels of 9.5% against an estimated normal of 5% (P<0.01).

Table: Clinical features in chronic alcoholic patients (n = 32)

<table>
<thead>
<tr>
<th>Symptoms/Signs</th>
<th>No of cases</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pain in abdomen</td>
<td>21</td>
<td>65.6</td>
</tr>
<tr>
<td>Anorexia</td>
<td>17</td>
<td>53.1</td>
</tr>
<tr>
<td>Weight loss</td>
<td>13</td>
<td>40.6</td>
</tr>
<tr>
<td>Nausea</td>
<td>12</td>
<td>37.5</td>
</tr>
<tr>
<td>Vomiting</td>
<td>11</td>
<td>34.3</td>
</tr>
<tr>
<td>Diarrhoea</td>
<td>7</td>
<td>21.8</td>
</tr>
<tr>
<td>Jaundice</td>
<td>6</td>
<td>18.8</td>
</tr>
<tr>
<td>Fever</td>
<td>16</td>
<td>50.0</td>
</tr>
<tr>
<td>Haematemesis or melaena</td>
<td>5</td>
<td>15.6</td>
</tr>
<tr>
<td>Hepatomegaly</td>
<td>25</td>
<td>78.0</td>
</tr>
<tr>
<td>Splenomegaly</td>
<td>2</td>
<td>6.2</td>
</tr>
<tr>
<td>Anemia</td>
<td>20</td>
<td>62.5</td>
</tr>
</tbody>
</table>

Request reprints—L S Chawla, Professor and Head of the Department of Medicine.

All 32 cases showed increased serum lipid levels (mean 784 mg/dl) as compared to controls (497 ± 4 mg/dl) (P < 0.01).

The histopathological findings were as follows: fatty change 21 (65.6%), bile stasis 17 (53.1%), kyle necrosis 13 (40.6%), portal fibrosis 8 (25.0%), alcoholic hepatitis 7 (21.8%), early cirrhosis 2 (6.25%) and frank cirrhosis 2 (6.25%). Hyaline necrosis was seen in only one case (3.1%) and no histological abnormality was detected in 2 (6.25%) cases.

The youngest individual to develop cirrhosis was 22 years old with a history of moderate alcohol intake for the last 7 years, whereas another patient with a history of daily intake of more than 350-500 g of country liquor for 25 years showed only moderate fatty changes in the liver.

Discussion

Per capita liquor consumption in Punjab has been shown to be extremely high, next to the UK and Ireland and much more than some Scandinavian countries. In this paper we studied only steady drinkers. Country liquor, being cheap and easily available, was consumed by 78% of the patients either alone or mixed with whisky/rum.

Our findings confirm that hypertriglyceridaemia occurs in association with chronic alcoholism.2 BSP retention was also elevated in 87.5% of patients, a figure much higher than the 56% reported by Habibullah et al.4

Richard et al7 found 84% cases with albumin level below 3.5 g/l. The lower incidence in our series can be explained by the adequate protein intake by most of our patients.

Serum bilirubin was normal in 20.4% of our patients whose liver biopsy showed changes of alcoholic hepatitis. Other workers have also shown that hyperbilirubinaemia is not necessary for the diagnosis of alcoholic hepatitis. A significant increase in alkaline phosphatase was observed in 3 patients with fatty infiltration of the liver, as also noted by Ballard et al.9 The levels of SGOT and SGPT were raised in only 21.8% of patients whose liver biopsy showed necrosis, inflammatory infiltration and cholestasis; this is similar to previous findings.6

Fatty liver was the commonest (65.6%) morphological change in our study. This is comparable with studies by other workers.8,10 The distribution was focal or diffuse. The cases of alcoholic hepatitis in our series had no sign, symptom or laboratory feature which could be considered specific and a correct diagnosis could be made only histologically. This is in sharp contrast to earlier studies.1,12 In the present study, 15-57% of alcohoholics showed evidence of precirrhosis, early cirrhosis or cirrhosis. This figure is low as compared to those reported by others.6,10,19 There was no correlation between the amount and duration of alcohol intake and cirrhosis. This is compatible with the suggestion that host susceptibility affects the development of alcoholic liver disease.1,12 There was also no correlation of cirrhosis with the type of beverage consumed.

References


NEWS AND NOTICES

ANNUAL CONFERENCES ISGIG/SIGGI

The 26th Annual Conference of the Indian Society of Gastroenterology in conjunction with the 9th Annual Conference of the Society of Gastrointestinal Endoscopy of India and 4th Annual Conference of the Liver Study Group of India is scheduled at Madras between 1st & 4th November 1985. There will be a CME Programme on 1st November 1985. A liver demonstration session (Facility: Drs Stephen Jeffery and M Y Shankar, USA), Endoscopy training programme (Facility: Drs Yoshi Saka, Japan, and Abhijit Sinha, UK, Claude Liguory, Paris) and Urology demonstration and training (Facility: Prof A Garg and Dr S Suresh) are scheduled on 3rd November 1985.

162 INDIAN J GASTROENTEROL Vol 4 No 3 JULY 1985

Abstracts for the scientific papers (Oral/Poster/Plenary) must be submitted before 30th July 1985. The last date for registration is 30th August 1985.

Please address your questions and suggestions to:

Dr B Krishna Rau
Organising Secretary

XXVI Annual Conference of Indian Society of Gastroenterology
Lady Wellington Nursing Home
21, Pycroft Gardens, Madras-600 006

ALCOHOLIC LIVER DISEASE—ROY ET AL

NEWS AND NOTICES