Editorial

Constitutional Factors in Alcoholic Cirrhosis

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The different sensitivity of the male and the female liver is well established, but there is an obvious
difference in male livers as well. One possible explanation for these differences might be the exis-
tence of genetic peculiarities among patients with alcoholic cirrhosis. In the early twentieth, Chvostek
in Vienna was the first to draw attention to a constitutional element which he believed to be fund-
damental: Absent body hair, absent or extremely sparse hair on the limbs, and public hair of the
female type, i.e. with horizontal upper border (1) (Fig. 1). Chvostek laid special stress on the fact
that these anomalies were of genetic origin and were not a secondary phenomenon do to alcoholism
or cirrhosis. The feminine pattern of hair distribution, the so-called "Chvostek's habitus", is a fre-
cently seen condition but the statistical proof of its association with alcoholic cirrhosis in man is
still missing.

The purpose of our study was to investigate if
1. the feminine pattern of hair distribution in male patients with alcoholic cirrhosis is a genetic
characteristic,
2. this anomaly is more frequently encountered in the alcoholic type than in the posthepatitic
type of cirrhosis,
3. the reported discrepancies of HLA frequencies are due to genetic differences.

MATERIAL AND METHODS

From 1.10.1980 all male patients with alcoholic or posthepatitic cirrhosis admitted to
our department were accepted for this study. The study was concluded when 100 patients
with alcoholic cirrhosis and 50 patients with posthepatitic cirrhosis (45 do to hepatitis B, 5
do to hepatitis NANB) were registered. The stage of conclusion was reached in October
1982. The controls were 50 male patients, admitted over the same period who neither suf-
fered from liver disease nor admitted to drinking alcohol habitually and every day (table 1).

In addition to history, physical examination, biochemical data, sonography, oesophagos-
copy, liver biopsy and/or peritoneoscopy we recorded whether the trunk and the limbs were
obviously hairy (masculine body hair pattern) or whether this hair was strikingly deficient or
absent (feminine body hair pattern) and whether the pubic hair terminated in a horizon-
tal boundary (feminine pubic hair pattern) or tapered upwards toward the umbilicus
(masculine pubic hair pattern). Patients with the feminine type of hair distribution were
carefully questioned if they always looked this way (primary feminine hair pattern) or if the
anomaly was due to a loss of hair (secondary feminine hair pattern).

45 histocompatibility antigens were determined in all patients and compared with those
of 3,000 controls for HLA-A, B and C, and with 160 controls for HLA-DR.

The statistical evaluation of the frequencies was carried out by the four field chi squared
test. In order to avoid type I errors the p-value computed from the four field chi squared
has been multiplied by the number of com-
parisons made when p<0.05 has been observ-
ed for the first time in a given association. In
addition the relative risk (RR) was calculated by Woolf's method.

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RESULTS

Sixty-three patients with alcoholic cirrhosis displayed a feminine body hair pattern; 45 of them insisted that their body hair had not been more abundant in the past, but 18 had noted a loss of hair during their illness. Out of the 50 patients with hepatitic cirrhosis 17 had a feminine body hair pattern; in 10 of them it was primary and in 7 secondary. Among the controls this anomaly of body hair was noted in 6 men only; in none of them was it due to hair loss commencing in later life (figure 1). The primary type of feminine body hair pattern was significantly commoner among patients with alcoholic cirrhosis than in patients with posthepatitic cirrhosis (p < 0.001) or among the controls (p < 0.001) (table 2).

A feminine pattern of pubic hair was found in 70% of the patients with alcoholic cirrhosis, 44% of the patients with hepatitic cirrhosis and 20% of the controls. The difference between patients with alcoholic cirrhosis and those with hepatitic cirrhosis was significant (p < 0.002), as was the difference between the former and the controls (p < 0.001) (table 2).

The abnormality of body hair showed a significant association with feminine public hair pattern (p < 0.001).

The HLA phenotypes stated in the literature to be connected with alcoholic cirrhosis (table 3) revealed as non significant as well as all other associations examined, though it was only after the consideration of Yates’ continuity correction that this fact became clear for the correlations between alcoholic cirrhosis and Aw31 or Bw35. The link between posthepatitic cirrhosis B and Bw35 has been described in the literature more than once and also was apparent among our patients.

CONCLUSIONS

In male patients with alcoholic cirrhosis a feminine body hair pattern was observed in 63% and a feminine pubic hair pattern in 70%.

In 70% of these patients the anomaly was primary, i.e. in born. The incidence of primary feminine body hair pattern was significantly higher in patients with alcoholic cirrhosis than in patients with posthepatitic cirrhosis (p < 0.001) or controls (p < 0.001). Therefore, the observation of Chvostek that males with alcoholic cirrhosis frequently display peculiar genetic characteristics is correct. The livers of men with a primary feminine hair pattern and the livers of women (4) obviously are more susceptible to alcohol than men’s with masculine hair pattern. It must be clarified if this susceptibility is due to a variation in aldehydedehydrogenase isozymes (2, 3).

Attempts to find evidence of some predisposing constitutional factor in the HLA-system were disappointing. Different statements in literature seem to be caused by type I errors.

REFERENCES
### Table 1  
**Material**

<table>
<thead>
<tr>
<th></th>
<th>Alcoholic cirrhosis (n = 100)</th>
<th>Hepatitic cirrhosis (n = 50)</th>
<th>Controls (n = 50)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>AGE</strong></td>
<td>54 ± 11</td>
<td>60 ± 10</td>
<td>56 ± 18</td>
</tr>
<tr>
<td><strong>ALCOHOL (g)</strong></td>
<td>107 ± 57</td>
<td>22 ± 32</td>
<td>42 ± 27</td>
</tr>
<tr>
<td>≥ 60g/d</td>
<td>94</td>
<td>6</td>
<td>-</td>
</tr>
<tr>
<td>&lt; 60g/d</td>
<td>6</td>
<td>44</td>
<td>50</td>
</tr>
<tr>
<td><strong>DURATION (y)</strong></td>
<td>25 ± 21</td>
<td>-</td>
<td>-</td>
</tr>
</tbody>
</table>

### Table 2  
**HLA-antigens possibly related to alcoholic liver disease**

- A2, B8, Bw35, B40
- DR2

### Table 3  
**Comparison of certain constitutional markers, possibly predisposing to alcoholic cirrhosis, among the groups investigated**

<table>
<thead>
<tr>
<th>Marker</th>
<th>Alcoholic cirrhosis (n = 100)</th>
<th>Hepatitic cirrhosis (n = 50)</th>
<th>Controls (n = 50)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Feminine body hair pattern</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>primary</td>
<td>45</td>
<td>10</td>
<td>6</td>
</tr>
<tr>
<td>secondary</td>
<td>18</td>
<td>n.s.</td>
<td>7</td>
</tr>
<tr>
<td>Feminine public hair pattern</td>
<td>70</td>
<td>22</td>
<td>10</td>
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<tr>
<td></td>
<td>p &lt; 0.001</td>
<td>p &lt; 0.01</td>
<td>p = 0.01</td>
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<tr>
<td></td>
<td>p &lt;&lt; 0.001</td>
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<td></td>
<td>p &lt; 0.001</td>
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