Ductular bilirubinostasis predicts the evolution to acute-on-chronic liver failure in patients suspected with severe alcoholic steatohepatitis

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Introduction
• Current EASL guidelines consider a liver biopsy optional to diagnose severe alcoholic steatohepatitis (ASH).
• Based on clinical criteria (i.e. Maddrey-score / MDF ≥32) patients are initiated on corticosteroids (CS) (EASL guidelines 2012).
• In patients with acute decompensation of alcoholic cirrhosis, making a diagnosis of ASH on clinical grounds may be challenging, since it resembles acute-on-chronic liver failure (ACLF).
• We recently identified ductular bilirubinostasis (DB) as an early risk factor for ACLF¹.

Results

Results I

N=114 (Maddrey≥32)

N=38 (33%) Severe ASH histologically excluded

N=76 (67%) Severe ASH histologically confirmed

N=26 (68%) Ductular bilirubinostasis+

N=34 (45%) Ductular bilirubinostasis-

Results II – Clinical characteristics

<table>
<thead>
<tr>
<th></th>
<th>ASH+ DB+ (n=34)</th>
<th>ASH+ DB- (n=42)</th>
<th>ASH- DB+ (n=26)</th>
<th>ASH- DB- (n=12)</th>
<th>P-value (between groups)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age (years)</td>
<td>52±2</td>
<td>50±2</td>
<td>54±2</td>
<td>54±2</td>
<td>0.54</td>
</tr>
<tr>
<td>Sex (m/f)</td>
<td>23/11</td>
<td>20/22</td>
<td>14/12</td>
<td>6/6</td>
<td>0.35</td>
</tr>
<tr>
<td>Alcohol intake (grams/day)</td>
<td>82±4</td>
<td>88±3</td>
<td>68±5</td>
<td>75±8</td>
<td>0.25</td>
</tr>
<tr>
<td>HVPG (mm Hg)</td>
<td>18.3±1.4</td>
<td>19.0±1.0</td>
<td>18.3±1.3</td>
<td>16.5±0.75</td>
<td>0.77</td>
</tr>
<tr>
<td>MELD</td>
<td>60±5.0</td>
<td>56±3.7</td>
<td>51±4.0</td>
<td>46±3.2</td>
<td>P&lt;0.01</td>
</tr>
<tr>
<td>MDF</td>
<td>28.8±1.4</td>
<td>26.3±1.0</td>
<td>26.7±0.8</td>
<td>22.3±1.2</td>
<td>0.02</td>
</tr>
<tr>
<td>% CS-treated</td>
<td>53% (18/34)</td>
<td>69% (29/42)</td>
<td>27% (7/26)</td>
<td>17% (2/12)</td>
<td>&lt;0.0001</td>
</tr>
<tr>
<td>Lille-score &lt;0.45 (after CS)</td>
<td>44% (8/18)</td>
<td>72% (21/29)</td>
<td>43% (3/7)</td>
<td>50% (1/2)</td>
<td>0.21</td>
</tr>
<tr>
<td>% Evolution towards ACLF**</td>
<td>88% (30/34)</td>
<td>56% (17/24)</td>
<td>81% (21/26)</td>
<td>75% (3/9)</td>
<td>0.03</td>
</tr>
<tr>
<td>Median survival (days)</td>
<td>81 vs. 38*</td>
<td>&gt;180</td>
<td>95 vs. 55</td>
<td>&gt;180</td>
<td>*P&lt;0.05</td>
</tr>
<tr>
<td>CS treated vs. untreated</td>
<td>32/11 (32/42)</td>
<td>34 (9/26)</td>
<td>75 (9/12)</td>
<td>&lt;0.0001</td>
<td></td>
</tr>
</tbody>
</table>

Conclusions
• We confirmed that DB is an early marker of ACLF and independently predicts a poor outcome.
• About one third of patients clinically suspected with severe ASH were misdiagnosed.
• Especially patients with Maddrey ≥32 and histologically confirmed severe ASH and DB benefited from CS treatment.
• This might explain the difference in response observed in trials assessing the value of CS for ASH.