Dual-Graft Adult Living Donor Liver Transplantation with ABO-Incompatible Graft: Short-term and Long-term Outcomes


Division of Liver Transplantation and Hepatobiliary Surgery, Department of Surgery, University of Ulsan College of Medicine, Asan Medical Center, Seoul, Republic of Korea

ABO-incompatible (ABOi) dual-graft (DG) adult living donor liver transplantation (ALDLT) is not commonly performed due to its inherently intricate surgical technique and immunological complexity. Therefore, data is lacking on the short- and long-term clinical outcomes of ABOi DG ALDLT.

Introduction

ABO-incompatible (ABOi) dual-graft (DG) adult living donor liver transplantation (ALDLT) is not commonly performed due to its inherently intricate surgical technique and immunological complexity. Therefore, data is lacking on the short- and long-term clinical outcomes of ABOi DG ALDLT.

Methods

January 2008 – Dec 2014: Total ALDLT 2,026 cases

ABO/ABOc cases: 266 cases

ABO incompatible DGALDLT: 202 cases

ABO incompatible ABOc

18 patients 10 patients

ABOc 18 grafts ABOi 28 grafts

Demographic data of recipients

<table>
<thead>
<tr>
<th>Age (years)</th>
<th>ABOi DG (n=38)</th>
<th>ABOc DG (n=145)</th>
<th>P-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>44.2 ± 6.3</td>
<td>46.5 ± 10.7</td>
<td>0.940</td>
<td></td>
</tr>
<tr>
<td>Sex (M/F)</td>
<td>23/21 (52/50)</td>
<td>118/81 (64.2%)</td>
<td>0.924</td>
</tr>
<tr>
<td>Donor health</td>
<td>22/16 (78.6%)</td>
<td>96/49 (66.2%)</td>
<td></td>
</tr>
<tr>
<td>HCV (HIV)</td>
<td>2 (7.1%)</td>
<td>6 (4.1%)</td>
<td></td>
</tr>
<tr>
<td>Combined HCC</td>
<td>8 (23.7%)</td>
<td>40 (27.3%)</td>
<td></td>
</tr>
<tr>
<td>Celiac disease</td>
<td>8 (23.7%)</td>
<td>47 (32.6%)</td>
<td></td>
</tr>
<tr>
<td>MELD Score</td>
<td>12.1 ± 4.6</td>
<td>19.1 ± 11.1</td>
<td>&lt;0.001</td>
</tr>
</tbody>
</table>

Pre-LT conditions

Hospital stay: 17.1 ± 10.4 vs 10 ± 17.1 (p=0.299)

Pneumonia: 0 vs 17 (12.0%) (p=0.047)

ICU stay: 0 vs 17 (12.0%) (p=0.078)

Biliary stricture

1-, 3-year BS free survival rate

ABOi = 94.4% / 91.7%

ABOc = 83.3% / 77.8%

Graft regeneration

Regeneration rate

1m: 17.6 ± 9.2

6m: 11.8 ± 1.6

1y: 5.3 ± 0.5

Conclusion

ABO incompatible graft

Feasible component of Dual graft!!!

⇒ Further expansion of living donor pool