PATIENTS AND METHODS

Retrospective review:
- January 2000 to December 2010
- 552 LTx were performed with complete follow-up (12 to 132 months).
  (end of follow-up 31/12/2010)
- Exclusion criteria:
  - < 18 yo
  - Combined transplantations
  - Split and living donation

Definition of EAD post-LTx (Olthoff) (1):
- Bilirubine > 10 mg/dL on day 7 and/or
- International normalized ratio (INR) > 1.6 on day 7 and/or
- AST or ALT > 2000 UI/L within the first 7 days after LTx.

LTx recipients who don’t full fill EAD criteria are defined as immediate functioning (IF) LTx. Primary non function (PNF) is defined as the need for retransplantation within one week post LTx due to a non-life-sustaining liver graft function.

RESULTS

INCIIDENCE OF EAD

2000 – 2010
552 LTx

EAD N=150
27%

IF N=402
73%

NO PNF

VARIABLES IDENTIFIED AS INDEPENDENT PREDICTORS TO DEVELOP EAD MULTIVARIABLE LOGISTIC REGRESSION MODEL

<table>
<thead>
<tr>
<th>Variable</th>
<th>OR (95% CI)</th>
<th>p Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Procurement team</td>
<td>0.51 (0.31 – 0.84)</td>
<td>&lt;0.01</td>
</tr>
<tr>
<td>Importation</td>
<td>0.53 (0.31 – 0.91)</td>
<td>0.02</td>
</tr>
<tr>
<td>Preservation solution type</td>
<td>1.17 (1.04 – 1.32)</td>
<td>0.01</td>
</tr>
<tr>
<td>Cold ischemic time (hrs)</td>
<td>1.06 (1.01 – 1.12)</td>
<td>0.02</td>
</tr>
<tr>
<td>Lab MELD score</td>
<td>1.23 (1.06 – 1.42)</td>
<td>0.01</td>
</tr>
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</table>

OUTCOMES

<table>
<thead>
<tr>
<th>IF N=402 (73%)</th>
<th>EAD N=150 (27%)</th>
<th>p Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>ICU stay (days)</td>
<td>3 (2 – 6)</td>
<td>6 (3 – 19)</td>
</tr>
<tr>
<td>Hospital stay (days)</td>
<td>18 (14 – 27)</td>
<td>25 (18 – 44)</td>
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PATIENT AND GRAFT SURVIVAL

CONCLUSION & DISCUSSION

In our series, EAD incidence is 27%

Independent risk factors of EAD post-LTx in our series are:
- Imported livers
- Cold ischemic time
- Length of surgery
- HTK
- Lab MELD score

Surprisingly, Extended Criteria Donor (ECD) & Donation after Circulatory Death (DCD) were not associated with EAD post-LTx.

EAD is associated with a significant:
- Longer ICU and hospital stays
- Higher risk of patient death

EAD is not an innocent temporary phase. This study highlights the importance of immediate function post LTx and its impact on LTx recipient survival.

Strategies to reduce EAD are therefore urgently needed. They should primarily focus on: improving procurement strategies, re-questioning HTK preservation, reducing cold ischemia time. In addition, optimizing preservation techniques (e.g. machine perfusion) and pharmacological modulation of IRI in recipient need to be studied.