OUTCOMES OF TRUNCUS ARTERIOSUS REPAIR IN CHILDREN

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Congrès médico-chirurgical de la FCPC

14 septembre 2018
Declaration of interest

• None
Patient Characteristics

- From January 2000 to February 2018

<table>
<thead>
<tr>
<th>Variable</th>
<th>Number (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>DEMOGRAPHIC CHARACTERISTICS</strong></td>
<td></td>
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<tr>
<td>Total patients</td>
<td>n = 147</td>
</tr>
<tr>
<td>Prenatal diagnosis</td>
<td>75 (51%)</td>
</tr>
<tr>
<td>Male/Female</td>
<td>72 (48.9%) / 75 (51.1%)</td>
</tr>
<tr>
<td>Premature</td>
<td>10 (6.8%)</td>
</tr>
<tr>
<td>Associated comorbidity</td>
<td>17 (11.6%)</td>
</tr>
<tr>
<td>Genetic syndrom</td>
<td>32 (21.7%)</td>
</tr>
<tr>
<td>22q1.1</td>
<td>26 (17.7%)</td>
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</tbody>
</table>
Survival

Number at risk

- **Group CAT A1**
  - 89
  - 84
  - 82
  - 76
  - 72
  - 67

- **Group CAT A2**
  - 32
  - 28
  - 26
  - 24
  - 23
  - 22

- **Group CAT A3**
  - 8
  - 6
  - 6
  - 6
  - 6
  - 5

- **Group CAT A4**
  - 17
  - 12
  - 11
  - 11
  - 8
  - 7

\(p < 0.01\)
Risk factor of mortality

Multivariate analysis for mortality

- TV quadricuspidia  HR = 3.15  [1.20-8.31]  p=0.02
- Xenograft bovine  HR = 2.38  [0.86-6.42]  p=0.04

Univariate analysis for mortality

Anatomy

- TV quadricuspidia  HR = 2.9985  [1.15 - 7.77]  p = 0.0239
- Coronary anomalies  HR = 8.1811  [3.14 - 21.25]  p < 0.0001
- Type A4  HR = 4.7471  [1.75 - 12.86]  p = 0.0022

Biventricular repair strategy

- Age at repair < 15 days  HR = 4.4335  [1.55 - 12.60]  p = 0.0052
- Bovine valved xenograft  HR = 3.03  [1.17 - 7.88]  p = 0.0225
Re intervention

| Group CAT A1 | Number at risk | 32 | 14 | 4 |
| Group CAT A2 | 32 | 12 | 4 | 3 |
| Group CAT A3 | 8 | 3 | 0 | 0 |
| Group CAT A4 | 17 | 5 | 1 | 0 |

p = 0.65
Freedom from reintervention compare autologous connection by left atrial appendage and xenografts

Number at risk

<table>
<thead>
<tr>
<th></th>
<th>Autologous connection</th>
<th>Xenograft</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number at risk</td>
<td>50</td>
<td>65</td>
</tr>
<tr>
<td>5 years</td>
<td>21</td>
<td>17</td>
</tr>
<tr>
<td>10 years</td>
<td>5</td>
<td>6</td>
</tr>
<tr>
<td>15 years</td>
<td>2</td>
<td>3</td>
</tr>
</tbody>
</table>

p < 0.01
Univariate analysis for reintervention

RVOT reconstruction

Bovine valved xenograft  HR = 1,6267  [1,12 - 2,51]  p = 0,0470

Porcine valved xenograft  HR = 2,4633  [1,54 - 3,92]  p = 0,0002

Autologous connection  HR = 0,2461  [0,12 - 0,47]  p < 0,0001
Conclusion

Survival:

- Overall survival of CATs is quite good
- TA A4 have a significantly lower survival than other types
- Main risks factors of mortality: Quadricuspid truncal valve, coronary anomalies and bovine xenograft

Re intervention:

- They become an homogeneous population concerning the timing of re intervention
- Main risk factor of re intervention: Xenograft