**INTRODUCTION**

**MATERIAL & METHODS:**
All patients operated who received a porcine pulmonary bioprosthesis, between 1999-2014. Prosthetic dysfunction criteria: replacement by new surgical / percutaneous procedure, or presence by echocardiographic peak gradient > 50 mmHg, or hemodynamic > 40 mmHg, or pulmonary regurgitation > II.

**RESULTS**

**Inhospital results:**
91 bioprosthesis in 91 patients were performed.
Male: 49 (54%). Age: 30 13 years (1-61). Older than 18 years: 73 patients.
Two types of porcine bioprosthesis implant: 21 (23%) Biocor (St Jude™); 70 (77%) Mosaic (Medtronic©)
Prosthesis size: numbers 19-29. More frequently implanted in cohort older than 18, number 27; cohort ≤ 18 year old, number 25.

Main surgical indication was pulmonary regurgitation: 62 (68%) patients. Double pulmonary lesion: 25 (27,5%) cases.
Pulmonary stenosis: 4 (4,5%) patients.
Associated surgical procedures in 67(74%) patients, more common a tricuspid valvuloplasty.
Mortality 2 (2,2%). **No mortality in isolated pulmonary replacement.**

**P value for patient s age, sex, cardiopulmonary by-pass and aortic cross-clamp times, number of previous surgeries, number of associated procedures, right and left ventricle function, were no significant for mortality.**
Morbidity in 30 (33%) patients, more often a temporary or permanent tachyarrhythmia.

**Follow-up:**
3,8 3,7 years (0,1-15). No lost patients. Late mortality 1(1,1%) related to prosthetic endocarditis.
Echocardiography peak transpulmonary gradient: 20 9 mmHg (4-53).
No reoperations related to bioprosthesis (3 patients needed a new surgery owed to other causes).
Interventional catheterizations: 4 (2 valve in valve, 2 no bioprosthesis related).
Prosthetic dysfunction: 4 (2 valve in valve, 1 peak gradient > 50 mmHg, 1 pulmonary regurgitation III).
**None of the dysfunction criteria was statistically significant (p value > 0.05)**
Incidence of late prosthetic endocarditis: 3 (3,3%) cases.
**Improved right ventricular volumes after surgery resulted significant (p < 0.001).**
**Neither right (p = 0.14) nor left (p = 0.76) ventricular ejection fraction improvement were significant.**

**Conclusions**
- Surgical repair of dysfunctional right ventricular outflow tract by porcine bioprosthesis is performed with low mortality.
- Unlike percutaneous techniques, surgery lets the option to perform associated procedures.
- Prosthetic valve endocarditis is uncommon.
- The survival curve without bioprosthesis related reoperation, nowadays reaches 15 years.

<table>
<thead>
<tr>
<th>Primary heart disease</th>
<th>n</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fallot situation</td>
<td>76</td>
</tr>
<tr>
<td>Pulmonary atresia/stenosis with intact ventricular septum</td>
<td>11</td>
</tr>
<tr>
<td>TGA with ventricular septal defect and pulmonary stenosis</td>
<td>2</td>
</tr>
<tr>
<td>Truncus</td>
<td>1</td>
</tr>
<tr>
<td>Ross surgery sequela</td>
<td>1</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th></th>
<th>Presurgery</th>
<th>Postsurgery</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>RVESV (ml/m²)</td>
<td>119</td>
<td>51</td>
<td>&lt;0,001</td>
</tr>
<tr>
<td>RVEDV (ml/m²)</td>
<td>198</td>
<td>74</td>
<td>&lt;0,001</td>
</tr>
<tr>
<td>RVEF (%)</td>
<td>38</td>
<td>10</td>
<td>0,14</td>
</tr>
<tr>
<td>LVEF (%)</td>
<td>59</td>
<td>9</td>
<td>0,76</td>
</tr>
</tbody>
</table>