Rheumatic Mitral Valve Disease: Should the Valve Be Repaired?

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Con

Cartagena - 2017
DISCLOSURE

PROCTOR FOR LIVANOVA
EPIDEMIOLOGY

PREVALENCE = 16 MILLION (80% LOW AND MID INCOME COUNTRIES)
REPAIR X REPLACEMENT

THE RATIONAL?

FREEDOM FROM REDO

X

SURVIVAL
SPECTRUM OF THE DISEASE

- CHILDREN
- ACUTE PHASE
- YOUNG ADULTS
- OLDER(INSIDIOUS)
- ECHO ANALYSIS
- ISOLATED/MS + MR
- ASSOCIATION
- PROPHYLAXIS
Case 1
VNAPS, 62Y, FEMALE
MS = PBV 19Y AGO
NYHA = III LAST YEAR
ECHO= MS + MR
Case 2
IFS, 36Y, MALE
M COMISSUROTOMY IN 1994. MV REPAIR 2011
AF + NYHA = III LAST YEAR
ECHO= MS
WHERE ARE THE EVIDENCES?

- Paucity of prospective clinical trials
- Most are retrospective single centres
- Small numbers
- Most Level of evidence C
Single Native Valve Disease

Etiology

B. Iung et al. Eur Heart J 2003;24:1231-43
Type of Intervention in MR

Regional Variation

<table>
<thead>
<tr>
<th>Region</th>
<th>N</th>
<th>Repair</th>
<th>Bioprostheses</th>
<th>Mech Prosthesis</th>
</tr>
</thead>
<tbody>
<tr>
<td>Northern</td>
<td>19</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Eastern</td>
<td>37</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Western</td>
<td>59</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Medit.</td>
<td>40</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>155</td>
<td></td>
<td>47</td>
<td>10</td>
</tr>
</tbody>
</table>
## BRAZIL

<table>
<thead>
<tr>
<th>YEAR</th>
<th>2008</th>
<th>2009</th>
<th>2010</th>
<th>2011</th>
<th>2012</th>
<th>2013</th>
</tr>
</thead>
<tbody>
<tr>
<td>REPLACEMENT</td>
<td>7371</td>
<td>7280</td>
<td>6939</td>
<td>7192</td>
<td>7411</td>
<td>7160</td>
</tr>
<tr>
<td>REPAIR</td>
<td>607</td>
<td>604</td>
<td>599</td>
<td>814</td>
<td>700</td>
<td>644</td>
</tr>
</tbody>
</table>

REF: DATASUS
## Table 3 Association between different RHD-related valve disease requiring surgical management

<table>
<thead>
<tr>
<th></th>
<th>% (95% CI)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>1 valve</strong></td>
<td></td>
</tr>
<tr>
<td>Mitral valve only</td>
<td>40.3 (37.7 – 42.9)</td>
</tr>
<tr>
<td>Aortic valve only</td>
<td>22.9 (20.7 – 25.2)</td>
</tr>
<tr>
<td>Tricuspid valve only</td>
<td>1.2 (0.7 – 2.0)</td>
</tr>
<tr>
<td><strong>2 valves</strong></td>
<td></td>
</tr>
<tr>
<td>Mitral and aortic valves</td>
<td>20.6 (18.5 – 22.8)</td>
</tr>
<tr>
<td>Mitral and tricuspid valves</td>
<td>8.5 (7.1 – 10.1)</td>
</tr>
<tr>
<td>Aortic and tricuspid valves</td>
<td>0.7 (0.3 – 1.3)</td>
</tr>
<tr>
<td><strong>3 valves</strong></td>
<td></td>
</tr>
<tr>
<td>Mitral, aortic and tricuspid valves</td>
<td>5.4 (4.2 – 6.7)</td>
</tr>
</tbody>
</table>

Russell et al. BMC Cardiovascular Disorders 2014, 14:134
A REVIEW OF VALVE SURGERY FOR RHEUMATIC HEART DISEASE IN AUSTRALIA

Russell et al. BMC Cardiovascular Disorders 2014, 14:134
Outcomes and associated risk factors for mitral valve replacement in children

Seminars in Thoracic & Cardiovascular Surgery: Pediatric Cardiac Surgery Annual
Volume 15, Issue 1, Pages 80-87 (January 2012)
Comparative Long-Term Results of Mitral Valve Repair in Adults With Chronic Rheumatic Disease and Degenerative Disease: Is Repair in ‘Burnt-Out' Rheumatics Still Inferior to Degeneratives in the Current Era?

Comparative Long-Term Results of Mitral Valve Repair in Adults With Chronic Rheumatic Disease and Degenerative Disease: Is Repair in ‘Burnt-Out' Rheumatics Still Inferior to Degeneratives in the Current Era?

Mean fup = 4y (too short)
Pat age > 40y
Only 40% pat > 40y had MV repair

VERY LATE OUTCOMES FOR MITRAL VALVE REPLACEMENT WITH THE CARPENTIER-EDWARDS PERICARDIAL BIOPROSTHESIS: 25-YEAR FOLLOW-UP OF 450 IMPLANTATIONS

Bileaflet mechanical valve replacement: an assessment of outcomes with 30 years of follow-up
Repair vs Replacement: specific aspects in rheumatic disease

- It is a surgical challenge.
- It is a surgical dilemma.
- Role of echo is critical.
- Young population.
- Severity of lesions which influence suitability for repair and timing (early referral).
- Left ventricular issue.
- Surgeon experience.
"GOOD OPERATIONS ARE THOSE REPRODUCIBLE FOR MOST"

JOHN KIRKLIN