

STS/EACTS Latin America Cardiovascular Surgery Conference

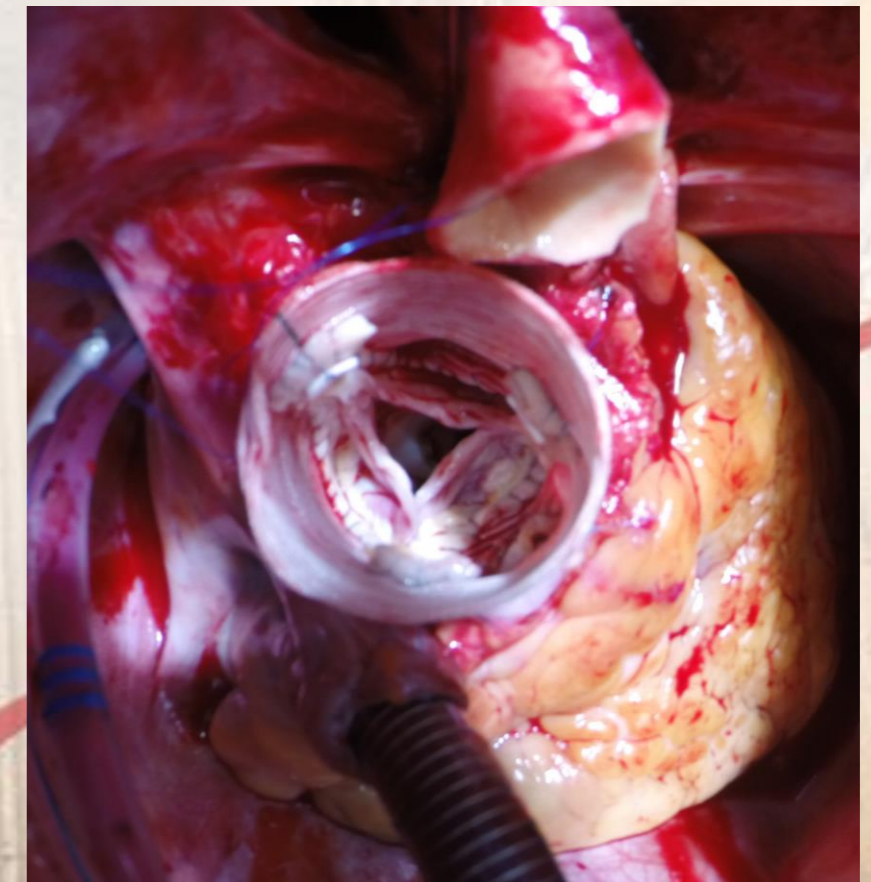
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Aortic Valve Sparing Operations A 7 year Experience

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Conflicts of interest

- Johnson & Johnson
 - Consultant fees in training courses
- Medtronic Colombia
 - Consultant in minimally Invasive Cardiac Surgery

INTRODUCTION

David et al

Acquired

Reimplantation of the aortic valve at 20 years

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Long-term results of external aortic ring annuloplasty for aortic valve repair[†]

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Indications for surgery in (A) severe aortic regurgitation and (B) aortic root disease (irrespective of the severity of aortic regurgitation)

| Indications for surgery | Class ^a | Level ^b |
|---|--------------------|--------------------|
| A. Severe aortic regurgitation | | |
| Surgery is indicated in symptomatic patients. ^{57,58,66,67} | I | B |
| Surgery is indicated in asymptomatic patients with resting LVEF ≤50%. ^{57,58} | I | B |
| Surgery is indicated in patients undergoing CABG or surgery of the ascending aorta or of another valve. | I | C |
| Heart Team discussion is recommended in selected patients ^c in whom aortic valve repair may be a feasible alternative to valve replacement. | I | C |
| Surgery should be considered in asymptomatic patients with resting ejection fraction >50% with severe LV dilatation: LVEDD >70 mm or LVESD >50 mm (or LVESD >25 mm/m ² BSA in patients with small body size). ^{58,66} | IIa | B |

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OBJECTIVE

To describe our institutional experience in 73 patients who underwent an aortic valve sparing operation.

METHODS

- Retrospective, descriptive and observational
- From June 2010 to May 2017
- We included 73 patients who underwent aortic valve sparing operations

J Thorac Cardiovasc Surg 2016, 10-7

Eur J Cardiothor Surg 2016;50: 350.60

Eur J Journal 2017;00: 1-53

RESULTS

| Demographic Data | | N = 73 |
|----------------------------------|---------------------------|--------|
| Age (year, mean \pm SD) range | 54.45 \pm 14.94 (14-82) | |
| Female (n, %) | 13 (17.80%) | |
| Male (n, %) | 60 (82.20%) | |
| NYHA I-II | 41 (56.17%) | |
| NYHA III-IV | 32 (43.84%) | |

| Type of surgery | N = 73 |
|---------------------------|------------|
| Elective Surgery, n (%) | 62 (84.93) |
| Urgent o Emergency, n (%) | 11 (15.06) |

Data are presented as mean \pm SD standard deviation, median (IRQ, interquartile range), or n (%), as appropriate, unless otherwise indicated

| Aortic valve morphology, n (%) | N = 73 |
|--------------------------------|------------|
| Tricuspid aortic valve | 60 (82.20) |
| Bicuspid aortic valve | 13 (17.80) |

| Aortic root diameter, mm, mean \pm SD | 50 \pm 1.02 |
|---|---------------|
| <50 mm, n (%) | 46 (63.01) |
| 50 - 55 mm, n (%) | 17 (23.28) |
| 56 -60 mm, n (%) | 2 (2,74) |
| >60 mm, n (%) | 8 (10.95) |

| Aortic insufficiency, n (%) | N = 73 |
|--|------------|
| None or trivial | 3 (4.11) |
| Mild | 6 (8.22) |
| Moderate | 16 (21.92) |
| Severe | 48 (65.75) |
| Mitral regurgitation (moderate/severe) | 7 (9.58) |

RESULTS

| Type of Surgery | N=73 |
|---|---------------|
| -Aortic valve reimplantation, n (%) | 45 (61.64) |
| - Aortic valve repair (Cusp plication) | 15 (20.53) |
| - Replacement of the ascending aorta with a tubular Dacron graft (Supracoronary tube) isolated | 7 (9.58) |
| - Replacement of Valsalva sinuses | 6 (8.21) |

| Associated procedures | |
|--|------------|
| Replacement of aortic arch/hemiarch, n (%) | 25 (34.23) |
| Mitral valve repair, n (%) | 5 (6.84) |
| Coronary artery bypass, n (%) | 6 (8.21) |
| Thymectomy (Miastenia Gravis) | 1 (1.36) |

| Perioperative Outcome | N=73 |
|---|-------------|
| ICU length of stay (days) Median (IRQ) | 3 (0-93) |
| Hospital length of stay (days) Median (IRQ) | 12 (1-123) |
| Ventilation time, < 48H | 52 (71.22) |
| Reintervention for bleeding or tamponade, n (%) | 11 (15.10) |
| Perioperative acute myocardial infarction, n (%) | 1 (1.30) |
| Infective complications, n (%) | 3/73 (4.10) |
| Mediastinitis | 1 (1.30) |
| Superficial wound infection | 1 (1.30) |
| Infective Endocarditis | 1 (1.30) |
| Pulmonary complications | 6/73 (8.22) |
| Stroke, n (%) | 5/73 (6.8) |
| Perioperative acute kidney injury (dialysis), n (%) | 5 (6.84) |
| New-onset atrial fibrillation, n (%) | 20 (27.39) |

Data are presented as mean ± SD standard deviation, median (IRQ, interquartile range), or n (%), as appropriate, unless otherwise indicated

OUTCOMES

| Patients Outcomes | N= 73 |
|---|-----------------|
| EARLY MORTALITY (within 30 days), n (%) | 7 (9.59) |
| * Type A aortic dissection, n (%) | 4 (5.48) |
| * Elective surgery, n (%) | 3 (4.10) |
| Operations performed | |
| Aortic valve reimplantation, n (%) | 6/45 (13.33) |
| Resuspension of commissures + Replacement of the ascending aorta and aortic arch/hemiarch, n (%) | 1/28 (3.57) |

- Seven (9.6%) patients lost during follow-up.
- 89.04 survival at 27.2 months, of follow up (IQR 1-90 months).
- One late dead during follow-up
- One late endocarditis, 50 months PO
- One repair failure 12 mo PO

STUDY LIMITATIONS

- Observational uncontrolled study
- Lost of patients and short term follow up limited further statistical analysis

CONCLUSION

- The aortic valve sparing operations has promising clinical results in short term follow up
- RAV is an important surgical alternative to treat young adults with aortic root aneurysms.
- Careful patient selection is important to achieve better outcomes
- Longer follow up is further needed to assess durability of this type of repairs.