IF MIAVR IS SO GOOD, WHY AREN’T WE ALL DOING IT?

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Introduction

- First case ministernotomy 1996
- Proposed that clinical outcomes would be superior
- Literature and evidence thus far highly debated
Aim & Objective

- Evaluate consultant cardiac surgeons’ opinions of minimally invasive aortic valve replacement (MIAVR)
- Identify barriers to performing MIAVR
- Identify areas for future research
Methodology

- 20 question survey
- Designed to minimise bias where possible
  - Discrete choice (Likert scale)
  - White space answers
- Online survey distributed to consultant cardiac surgeons (approx. 150) through SCTS.
Results - Demographics

- Response rate: 32.6% (49 responses)

- Location of practice: 71% England, 8% Scotland, 8% NI, 12% Unknown

- > 95% work in unit that has carried out MIAVR

- > 75% have carried out MIAVR
  - Of these 60% continue using MIAVR in their practice
In your opinion is there an overall benefit of MIAVR vs. conventional sternotomy?

- Yes: 48%
- No: 52%
In your opinion is there an overall benefit of MIAVR vs. conventional sternotomy?

Consultants that have carried out MIAVR:
- 42% Yes
- 58% No

Continue to do MIAVR:
- 85% Yes
- 15% No
In your opinion is there an overall benefit of MIAVR vs. conventional sternotomy?

P <0.05

Percentage of yes responses

< 10 years as consultant | > 11 years as consultant
80                          | 39

P <0.05
Is there a benefit of MIAVR vs. conventional sternotomy across these outcomes?

<table>
<thead>
<tr>
<th>No difference</th>
<th>Conventional sternotomy superior</th>
<th>MIAVR superior</th>
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<tbody>
<tr>
<td>30 day mortality</td>
<td>Crossclamp time</td>
<td>Blood loss</td>
</tr>
<tr>
<td>Length of ICU stay</td>
<td>Bypass time</td>
<td>Length of hospital stay</td>
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<tr>
<td>Valve function</td>
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<td>Post operative pain</td>
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<td>Long term survival</td>
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<td>Lung function</td>
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<td>Time until extubation</td>
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<td>Chest wall mechanics</td>
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<td>Revision surgery</td>
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Evidence base

- 80% respondents felt evidence base not robust
- Systematic review & RCTs – opinion neutral
- Collective unit and personal experience – responses polarised
Do you feel that these are barriers to MIAVR?

- Inadequate training: 80%
- Inadequate equipment: 48%
- Surgical technique: 41%
- Patient selection criteria: 39%
- Cannulation site: 34%
- Outcomes: 30%
Barriers to MIAVR

- Inability to have TOE in theatre
- Time pressure on list
- Cost of femoral venous cannula
- Availability of saw to open chest in ITU
- Excellent results with conventional sternotomy – why change?
In your opinion what areas need to be addressed?

- A rigorous randomised trial
  - experienced surgeons in both arms
  - chest opened and closed by the consultant.

- Long term follow-up study

- Positively document superior preserved respiratory function post op

- Cost benefit analysis.
Conclusion

- Opinion remains divided on benefit
- Inadequate training and equipment perceived barriers
- Consultant opinion not assured by current evidence
- Need for further research imperative
References