What you need to know about the post-op management of valvular heart disease

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Top 10 Post OP Valve Myths

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Myth # 10

All valve patients are the same post operatively
Myth # 10

OH, come on...

AS  MR

MS  AR

pressure ± volume overload,
Individualize !!
Myth # 9

Assymptomatic, severe valve disease exists
Severe MR without symptoms does not exist!

Effect of mitral valve repair on exercise tolerance in asymptomatic patients with organic mitral regurgitation

Juraj Madaric, MD, a Patrick Watripont, MD, b Jozef Bartunek, MD, PhD, a Filip Casselman, MD, PhD, c Marleen D'Hoore, MD, PhD, a Jan Kesterman, MD, PhD, a Ann Feys, MD, a Hugo Vanermen, MD, c

n = 19
LVEF > 60%
NYHA class I

Madaric et al. Am Heart J 2007;154:180
If “severe” - and they are asymptomatic … they are dead!

ACC/AHA indications:

Mitral valve repair, wait until:

- Symptoms .... BAD

or if "no" symptoms, wait until:

- A Fib,
- Pul Htn
- Increase LV size
- Fall in EF%

....also BAD!
**Myth # 9**

**ALL in CHF !**

Neuro hormone, anti-diuresis,
Not instantly better
PAp elevated – long term
Myth # 8

Just crank up the EPI !!
Changes in myocardial receptors in heart failure.

**CHF : Beta receptors**

- **down regulated**

![Graph showing changes in receptor density in normal and cardiomyopathic conditions.](image)

*P < 0.05 vs. normal function*

Vanoli E, Adamson P B Eur Heart J Suppl 2006;8:C51-C57
Myth # 8

Crank it up! = side effects

Phosphodiesterase inhibitor,
Milrinone,
Vasopressin,
Nitric Oxide,
Viagra
Myth # 7

Ischemic MR goes away after CABG
MR after CABG

- 2004 patients: Isolated CABG
- 2-year survival inversely related to Degree of MR

MR p CABG : Don’t leave it! It doesn’t go away!
Myth # 6

TR goes away by itself
Tricuspid Insufficiency
Duran  (Circ 112:2005)

At MVr, > 50% with TR
TV annulus size - predicted recurrence!

Up to 80% with large annulus
Tricuspid Insufficiency

Dreyfus (ATS 79:2005)

311 pts for MVr, ½ TVr, ½ did not:
> 40 mm or 2/3 mitral

30 d mort was = , but....

2 % vs 48 % return of 3-4+ TR @ 2 yrs
Myth # 5

TR is benign
Tricuspid Insufficiency

Bernal (JTCVS 130:2005)

Patients who left with post-op TR, when returned for redo

30 day mortality was 35%! ... and most don’t come back!

They just die!
When you leave TR, they do poorly...
Myth # 4

Anyone can do post op valve care
Myth # 4
Multidisciplinary
Protocol driven, Specialty care
Good post-op care can make up for a mediocre operation
Myth # 3

Anyone can do valve operations
Predictors of Mitral Repair

STS ACSD 2005 - 2007:

Mitral cases/yr - 5.3 (0.3 – 166)

Mean repair rate - 41% (0 – 100 %)
Predictors of Mitral Repair

Total Population

Mitral volume vs repair rate relationship

# of Mitral Cases per Surgeon for Years 2005-2007
## Predictors of Mitral Repair

### Risk Adjusted Odds Ratio for Mitral Repair (95% CI)

<table>
<thead>
<tr>
<th>Mitral Volume:</th>
<th>Odds Ratio</th>
<th>95% CI</th>
</tr>
</thead>
<tbody>
<tr>
<td>30</td>
<td>1.42</td>
<td>(1.18 - 1.71)</td>
</tr>
<tr>
<td>60</td>
<td>2.16</td>
<td>(1.44 - 3.24)</td>
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<tr>
<td>100</td>
<td>3.78</td>
<td>(1.87 - 7.64)</td>
</tr>
<tr>
<td>150</td>
<td>7.61</td>
<td>(2.60 - 22.26)</td>
</tr>
<tr>
<td>160</td>
<td>8.76</td>
<td>(2.78 - 27.58)</td>
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</tbody>
</table>
Myth # 2

Coumadin is benign
Benign?

2% to 5% per pt/year risk of hemorrhage or TE

Linear event rate!

Myths

10. All valve dz same post op
9. Assx severe valve disease exists
8. Crank up the EPI!
7. MR goes away after CABG
6. TR goes away by itself
5. TR is benign
4. Anyone can care for post op valves
3. Anyone can do valve surgery
2. Coumadin is benign

...........and the #1 myth
Myth #1

That there is even the slightest chance that OSU can beat MICHIGAN this year
Valve Myths

Go BLUE!