Mitral Valve Repair

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Mitral Valve Repair
• Anatomy
• Etiology
• Types of MR
• Indications (Who gets a repair?)
• Repairs (approach, types of repair, rings)
• Outcomes
• Final thoughts and considerations

Etiology MR
• Primary (Organic)
  – Myxomatous degeneration (weakening of connective tissue)
  – Endocarditis (active and healed)
  – Rheumatic
  – Marfans
  – Ehlers Danlos
• Secondary (Functional)
  – Ischemic (acute and chronic)
  – Dilated cardiomyopathy
Etiology MR

• Primary (Organic)
  – Myxomatous degeneration (weakening of connective tissue)
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Clinical presentation of MR

• Acute Primary MR (leaflet)
  – Ruptured papillary muscle
  – Ruptured chord
• Chronic Primary MR (leaflet)
• Chronic Secondary MR (ventricle)

Acute Primary MR

• Surgical emergency
• IABP for H/D instability
• Ruptured papillary muscle- often replacement
• Ruptured chord- repair

INDICATIONS
Indications Summarized

- Severe MR with symptoms
- Asx MR with EF<60 or enlarging LV
- Asx MR with new onset Afib, pul htn
- Asx with nl EF and repair is likely
- Moderate/Severe MR and having another procedure

Early operation

2014 AHA/ACC Valve Guidelines.

Indications for Surgery for Mitral Regurgitation

JTCVS 2010
Repair in the Ischemic

Controversy

2014 AHA/ACC Valve Guidelines.
Who gets repaired

- We try on EVERYONE
- It’s a question of who does not
  - Mitral stenosis
  - Mitral Annular Calcium
  - Active endocarditis
  - Severe Rheumatic

Surgery

- Approach
- The repair
- Implants
- Images
The Repair

- Resection
- Repair
- Remodel

Outcomes

- Mortality
- Isolated repair for primary MR <1% (elective)
- Risk calculation depends on factors
- STS risk calculator
Outcomes

- Durability of Repair
  - Posterior leaflet alone- freedom from reoperation at 10 years >95%
  - Anterior or Bileaflet- freedom from reoperation at 10 years 89%

- DHMC
  - Elective Mitral Repair Mortality
    - 0% for 2014 and 2015
    - If all Mitral and Mitral CABG's
    - 3% for 2014 and 0% 2015

Final Thoughts

- Etiology and ultimately anatomy determine reparable
- Repair until proven otherwise
- Early intervention provides better outcomes
- Risk assessment is the health of the patient not necessarily the complexity of the repair
- The more simple the repair- the more durable