Minimally Invasive Mitral Valve Surgery: When Not To

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No disclosures
Minimally Invasive Mitral Valve Surgery

Techniques:
- thoracotomy or partial sternotomy
- robotic or direct vision
- central, axillary, or femoral cannulation
- cross clamp, endoaortic occlusion, or fibrillation
Femoral Cannulation

- open Seldinger technique, pursestring suture in artery and vein
- long venous cannula
- high flow arterial cannula
Chest Incision

- better high than too low
- CO2 line and sucker through chest tube site
- small retractor
Pericardial Incision

- traction suture
Left Atrial Incision

- cool to 28 – 30 degrees
- fibrillate with pacing Swan
- open atrium at base of superior pulmonary vein
- hand-held retractor
Mitral Procedure

- Al, ventricular blood
- Pulmonary venous blood
- Chordal preservation
- Standard techniques
- Cinch valve
Atrial Closure

- CO$_2$
- warm during closure
- stop perfusion flow briefly to defibrillate
Groin Closure

- seroma occurs
- transverse rather than longitudinal incision
- vascular complications
- cannulae removed prior to protamine
Thoracotomy Closure

- single chest tube
- no sternal infections
Minimally Invasive Mitral Valve Surgery

1805 minimally invasive mitral procedures since 2000

24 strokes (1.3%)
35 deaths (1.9%)
Contraindications to Minimally Invasive Mitral Surgery

Relative
- aortic insufficiency
- peripheral vascular disease
- prior thoracotony

Absolute
- need for aortic valve replacement or coronary bypass

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