

ISCHEMIC MITRAL REGURGITATION – CASE 1

- 80 yo man presents with new grade 1-2/6 apical systolic murmur
 - FC I – no symptoms, but follows a relatively sedentary life-style
 - Relevant additional physical findings:
 - Chest clear to P and A
 - neck veins normal amplitude with slightly early “v” wave
 - no abnormal LV or RV impulses (deep AP chest dimension)
 - 6 years post CABG (for severe 3V CAD with angina)
 - 11 years post anterior MI, treated with a thrombolytic agent
 - Risk factors
 - mild hypercholesterolemia (treated)
 - diet-controlled Type II DM (HgbA1c = 5.9)
 - Medications:
 - carvedilol 25 mg bid
 - perindopril 8 mg daily
 - aspirin 81 mg daily
 - atorvastatin 20 mg daily

ISCHEMIC MITRAL REGURGITATION – CASE 1

- ECG

- NSR
- PR 180 msec
- QRS 100 msec
- QTc 410 msec

- Echocardiogram (TTE)

- LVIDd = 60 mm
- LA = 41 mm
- LVEF = 35%
- ERO = 21 mm²
- RV = 35 ml
- PAp systolic = 40 mmHg
- No flail leaflet, akinetic anterior wall, minimally dyskinetic apex

ISCHEMIC MITRAL REGURGITATION – CASE 1

YOUR NEXT ACTION IS

- 1. Send to ER to rule out acute MI**
- 2. Consult EP service to perform EPS and, if positive, to insert ICD**
- 3. Watchfully wait**
- 4. Consult a surgeon to schedule mitral valve surgery, after TEE to determine reparability of valve**
- 5. Add digoxin 0.125 mg daily, spironolactone 25 mg daily, furosemide 20 mg daily and losartan 50 mg daily to the regimen and observe**

ISCHEMIC MITRAL REGURGITATION – CASE 2

- **61 yo man with no cardiac history or known risk factors presents to ER with central chest pain that began last evening, 16 hours ago, and moderately severe dyspnea beginning 6 hours ago. ECG reveals evidence of acute inferior MI and first Tnl is markedly positive.**
 - **BP = 100/50, HR 90 and regular**
 - **Chest: fine rales to mid-lung fields bilaterally**
 - **Neck veins 6 cm perpendicularly above sternal angle**
 - **No murmur is audible**

ISCHEMIC MITRAL REGURGITATION – CASE 2

- Chest x-ray: pulmonary edema
- Echocardiogram:
 - LVIDd = 58 mm
 - LA = 39 mm
 - LVEF = 40%
 - PAp systolic = 55 mm Hg
 - ERO = 22 mm²
 - RV = 35 ml
 - Akinetic inferior wall, no papillary muscle or chordal rupture but posterior papillary muscle malaposition/dysfunction, with tethering of posterior leaflet.

ISCHEMIC MITRAL REGURGITATION – CASE 2

YOUR NEXT ACTION IS

- 1. Insert IABP, judiciously administer inotropes and vasodilators**
- 2. Perform #1 and prepare patient for cath with PTCA of infarct artery**
- 3. Perform #1 and plan cath and consult surgeon for emergent valve surgery and revascularization (if PTCA not performed [or successful] in cath lab).**

ISCHEMIC MITRAL REGURGITATION – CASE 2

- **Two days later, PAp is 38mmHg, ERO is 12mm² and EF is 40%. At this point you**
 - 1. Consult EP service to insert ICD**
 - 2. Watchfully wait, adjusting medications as necessary and weaning IABP**
 - 3. Consult a surgeon to schedule mitral valve surgery +/- CABG, after TEE to determine reparability of valve**

ISCHEMIC MITRAL REGURGITATION – CASE 3

- A 76 yo woman presents with gradual onset of 2 block DOE during past 2 months, previously asymptomatic
- Uncomplicated anterolateral MI 3 years ago, with persistent ECG ST elevations in leads V4-V6 since that time.
 - Relevant additional physical findings:
 - BP = 135/80, HR = 70 and regular
 - Chest: few bibasilar rales
 - neck veins 3 cm perpendicularly above sternal angle with slightly early “v” wave
 - abnormal amplitude LV impulse relatively late after carotid impulse
 - Risk factors
 - mild hypercholesterolemia (treated)
 - Hypertension (treated)
 - Medications:
 - Metoprolol succinate 100mg daily
 - perindopril 8 mg daily
 - aspirin 81 mg daily
 - atorvastatin 20 mg daily

ISCHEMIC MITRAL REGURGITATION – CASE 3

- **ECG**

- NSR
- PR 180 msec
- QRS 110 msec
- QTc 420 msec

- **Echocardiogram (TTE)**

- LVIDd = 65 mm
- LA = 45 mm
- LVEF = 30%
- ERO = 30 mm²
- RV = 50 ml
- PAp systolic = 49 mmHg
- Dyskinetic apex/anterolat wall. Dilated mitral annulus with tethering of anterior and posterior leaflets.

ISCHEMIC MITRAL REGURGITATION – CASE 3

YOUR NEXT ACTION IS

- 1. Consult EP service to perform EPS and, if positive, to insert ICD**
- 2. Watchfully wait**
- 3. Treat pharmacologically for symptom relief and consult a surgeon to schedule mitral valve surgery and possible aneurysmectomy after cath to determine if additional coronary surgery is appropriate.**
- 4. Add digoxin 0.125 mg daily, spironolactone 25 mg daily, furosemide 20 mg daily to the regimen and observe**