

34. Mitral Stenosis

Etiology

1. Rheumatic Heart Disease (mostly)
2. Senile Mitral Annular Calcification (rarely)

Symptoms

- Dyspnea is usually the primary presenting symptom.
- Pulmonary edema- which can be acute, and seen with exertion.
- Hemoptysis
- Chest pain- 15% will present with this symptom
- Thromboembolism- common problem.

Exam

- Auscultation- accentuated S1, and as disease progresses, the pulmonic component of S2 delays because of increased pulmonary pressure, and eventually becomes a single S2 (i.e. no splitting)
- Opening Snap- best heard at the apex with diaphragm of stethoscope. A short A2-S1 is a reliable index of MS severity.
- Diastolic Rumble- best heard at the apex with the bell, and may radiate to the axilla, or lower left sternal area. The duration of the rumble is related to the severity of MS, but the loudness of the rumble **is not**. It is hard to hear.
- JVP, arterial pulses are usually not helpful.

Natural History

- About 20 years following an attack of acute rheumatic fever in the USA, the mitral typically presents with symptoms, and it progresses over about a 5 year period to severe.
- In tropics progression can occur more rapidly in just 3 to 6 years.

Echocardiogram

- Mitral Valve area by Planimetry and Pressure $\frac{1}{2}$ Time.
- **Mitral Valve Score** (Grade of 1 to 4, 4 categories) determines if < 8 Balloon valvuloplasty is appropriate. (1) leaflet mobility, (2) valvular thickening, (3) subvalvular thickening, (4) calcification of valve.

Treatment

- Diuretic for edema. Antiarrhythmic for Afib.
- SBE prophylaxis is mandatory
- Antibiotic (PCN) for those with rheumatic etiology necessary for strep infections/sore throats
- Anticoagulation if embolic events as suspected.
- Mitral balloon valvuloplasty by Inoue technique, transseptal puncture by Brockenbrough needle
Significant MR precludes a balloon valvuloplasty.
- If embolism occurs, high risk for recurrence. An indication for valve replacement, not repair or balloon.