

35. Mitral Regurgitation

Etiologies of Mitral Valve Regurgitation

CHRONIC

Rheumatic heart disease
Papillary muscle dysfunction
Mitral valve prolapse
Endocarditis
Calcification of the mitral valve annulus
Accompanying hypertrophic obstructive cardiomyopathy
Congenital endocardial cushion defect, corrected transposition
Endocardial fibroelastosis
Severe left ventricular dilation

ACUTE

Ruptured chordae tendineae
Papillary muscle rupture
Endocarditis

Acute MR:

- Initial LA size is small and noncompliant. A sudden increase in pressure in LA results in pulmonary congestion

Chronic MR:

- LA dilates over time and attempts to accommodate the regurgitant volume. Far less pulmonary congestion

Physical Exam Differential Diagnosis:

MR	S ₁ soft, S ₂ widely split, S ₃ may be present High pitched holosystolic murmur most prominent at apex with radiation to axilla
VSD	Murmur over LLSB. Doppler shows L to R shunt Cardiac cath reveals O ₂ step up from RA to RV
HOCM	Associated MR also may be present HOCM murmur increases with Valsalva and Amyl nitrate Murmur decreases with squatting and handgrip
AS	Confusion occurs if MR due to rupture of posterior chordae tendinae with murmur to aortic area Some pts with AS, murmur is louder at apex, " <i>Gallavardin Dissociation</i> "

Therapy: Afterload Reduction.

- Acute MR: Nitride. IABP-Intra-aortic balloon pump
- Chronic MR: ACEI-ARB, Diuretics, Aldosterone blockade

Surgical Timing in Chronic MR:

- MV repair is preferred over MV replacement
- "Golden Moment": EF < 55% or LVES diameter > 45
- Earlier surgery for mitral valve repair

Recommend for Observation

Aortic Regurgitation:

- < 45 mm (Echo every 12 months)
- 46-55 mm (Echo every 6 months)

Mitral Regurgitation:

- < 40 mm (Echo every 12 months)
- 41-45 mm (Echo every 6 months)