

Mitral Valvular Disorders

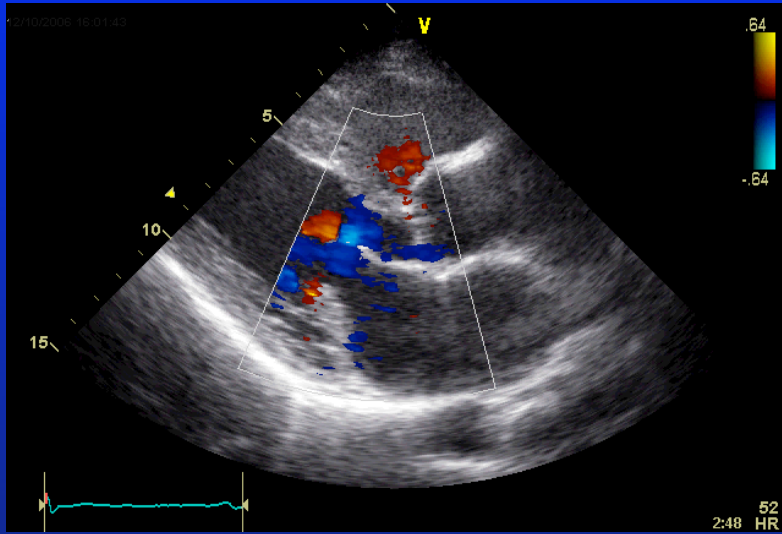
- Echocardiography (TTE and TEE) is the primary modality of choice for imaging the mitral valve in patients with suspected MS and/or MR
- Provides MV anatomy, LA volume, LV morphology and function, assessment of pressure gradients and degree of stenosis/regurgitation using color Doppler
- Mitral valve consists of anterior/posterior leaflets, chordae tendinae, papillary muscles, ventricular wall and annulus connected to atria

Mitral Stenosis: Echocardiography

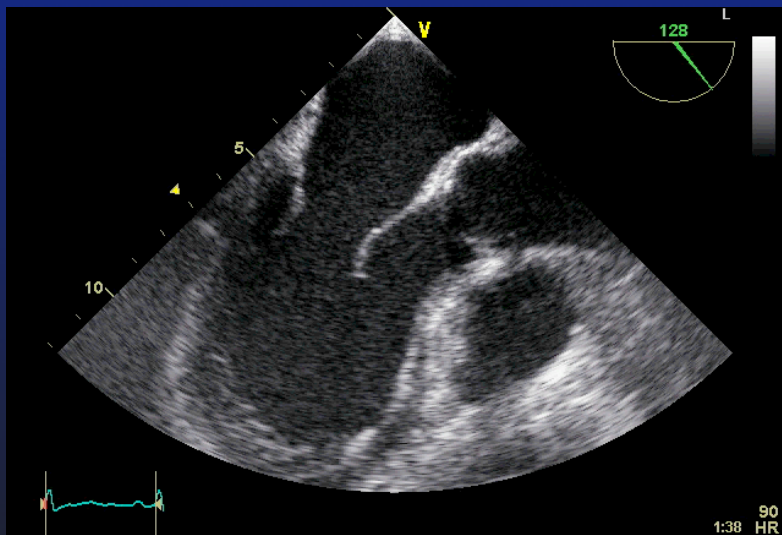
- Appearance of MV structure: rheumatic vs. calcific
- Mean gradient >10 mm Hg consistent with severe MS
- MVA by planimetry, continuity equation, or pressure half time <1.0 cm² consistent with severe MS
- LA volume and pulmonary pressures via TR Doppler
- Weymans-Wilkins score for suitability of MV for valvuloplasty

Mitral Stenosis: Intervention

Recommendations	COR	LOE
PMBC is recommended for symptomatic patients with severe MS (MVA ≤ 1.5 cm ² , stage D) and favorable valve morphology in the absence of contraindications	I	A
Mitral valve surgery is indicated in severely symptomatic patients (NYHA class III/IV) with severe MS (MVA ≤ 1.5 cm ² , stage D) who are not high risk for surgery and who are not candidates for or failed previous PMBC	I	B
Concomitant mitral valve surgery is indicated for patients with severe MS (MVA ≤ 1.5 cm ² , stages C or D) undergoing other cardiac surgery	I	C



Mitral Regurgitation



Leaflets

MVP, Flail
Congenital
Endocarditis

Annulus

Dilated CM

Papillary

Myocardial
infarction

Mitral Regurgitation: Echocardiography

- Appearance of MV structure: leaflets, annulus, chordae and papillary muscle
- Severity of MR quantified using 4, 5, 6, 7 rule
- $ERO > 0.4 \text{ cm}^2$, jet occupies $> 40\%$ of LA, RF $> 50\%$, RV $> 60 \text{ cc}$ and VC $> 7 \text{ mm}$
- LV size/volume and LVEF
- MV repair vs. MV replacement

Mitral Regurgitation: Intervention

Recommendations	COR	LOE
MV surgery is recommended for symptomatic patients with chronic severe primary MR (stage D) and LVEF >30%	I	B
MV surgery is recommended for asymptomatic patients with chronic severe primary MR and LV dysfunction (LVEF 30%–60% and/or LVESD ≥40 mm, stage C2)	I	B
MV repair is recommended in preference to MVR when surgical treatment is indicated for patients with chronic severe primary MR limited to the posterior leaflet	I	B

Mitral Regurgitation: Intervention

Recommendations	COR	LOE
MV repair is recommended in preference to MVR when surgical treatment is indicated for patients with chronic severe primary MR involving the anterior leaflet or both leaflets when a successful and durable repair can be accomplished	I	B
Concomitant MV repair or replacement is indicated in patients with chronic severe primary MR undergoing other cardiac surgery	I	B