

**P914****Changes of echocardiographic parameters in primary mitral regurgitation and determinants of symptom: an assessment from the Asian valve registry data**

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[Background] Clinicians often have a difficulty in determining the presence of mitral regurgitation (MR)-related symptoms because of subjectivity. However, there are few actual measurement data for echocardiographic left ventricular (LV) and left atrial (LA) size related to the severity of MR and the relationship between MR-related symptoms and these echocardiographic parameters.

[Purpose] The purpose of this study was to clarify actual values for echocardiographic parameters related to severity of MR and determinant factors of MR-related symptoms.

[Methods] Among patients enrolled in the Asian Valve Registry, we investigated 778 consecutive patients with primary MR showing sinus rhythm. Symptoms were determined by NYHA ( $\leq$  II or  $\geq$  III).

[Results] MR severity was mild in 106, moderate in 285, and severe in 387 patients. LA volume index, LV end-diastolic diameter, and LV mass index increased with increasing MR grade [LA volume index: 47.9 (mild), 56.2 (moderate), and 64.9 ml/m<sup>2</sup> (severe) ( $p < 0.001$ ), LV end-diastolic diameter: 51.2, 54.5, 58.1 mm ( $p < 0.001$ ), and LV mass index: 101, 109, 123 g/m<sup>2</sup> ( $p < 0.001$ )]. Regarding moderate and severe MR, 70 patients (10.4%) were symptomatic. Table shows multivariable analysis for being symptomatic in moderate and severe MR patients. LV mass index ( $p = 0.040$ ), ejection fraction ( $p < 0.001$ ), female gender ( $p = 0.004$ ), and heart rate ( $p = 0.007$ ) were independent factors for MR-related symptoms.

[Conclusions] LV and LA parameters on echocardiography worsened as MR severity progressed. Larger LV mass index and lower ejection fraction were independent determinant factors for MR-related symptoms. We should also pay attention to LV hypertrophy in patients with primary MR.

Determinant factors for mitral regurgita

	Model 1		Model 2	
	OR (95% CI)	P-value	OR (95% CI)	P-value
Age, per 1-y increment	1.03 (1.00-1.05)	0.035	1.02 (0.99-1.05)	0.053
Sex (female)	2.23 (1.20-4.16)	0.011	2.28 (1.31-3.98)	0.004
Hear rate, per 1 bpm increment	1.03 (1.00-1.05)	0.025	1.03 (1.01-1.05)	0.007
LVDs index, per 1 mm increment	0.99 (0.90-1.09)	0.90		
EF, per 1% increment	0.95 (0.92-0.99)	0.019	0.96 (0.93-0.98)	<0.001
LV mass index, per 10 g/m <sup>2</sup> :increment	1.12 (1.01-1.25)	0.033	1.09 (1.005-1.18)	0.040
LA volume index, per 10 mL/m <sup>2</sup> :increment	0.96 (0.90-1.03)	0.23		
E wave, per 1cm/s increment	1.81 (0.70-4.66)	0.23		
TR pressure gradient >40 mmHg	2.11 (0.97-4.57)	0.057		
Hypertention			1.40 (0.75-2.63)	0.29