



## Chronic rheumatic mitral regurgitation with normal atrial size and pulmonary artery pressure

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### Letter to Editor

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#### Dear Editor

Chronic rheumatic mitral regurgitation (MR) is identified by enlargement of left atrium (LA) size as a pathophysiologic response to volume overload and establishment of LA pressure hemostasis, and to maintain pulmonary artery pressure (PAP) within normal limits; but in our country, we have observed some cases with severe rheumatic MR with normal atrial size and normal PAP. Therefore, the LA size could not be performed using measurement of atrial size in this subgroup of rheumatic mitral diseases.

Rheumatic mitral disease is common in developing countries.<sup>1</sup> Basically, the entity of chronic rheumatic MR has been jointed with enlargement of LA size as a pathophysiologic response to volume overload and establishment of LA pressure hemostasis.<sup>2</sup> LA size at the time of diagnosis has a major predictive role for long-term outcomes, risk-stratification protocols, and life expectancy.<sup>3</sup> Thus, measurement of LA size, as a marker of cardiac remodeling, is a guideline-based advice. The superiority of LA volume measurement to diameter has been demonstrated, and is a guideline-based approach.<sup>4</sup> Indeed, LA enlargement is an adaptive response in severe MR to maintain PAP within normal limits, and avoid pulmonary artery hypertension. The progression of MR severity is usually in parallel with eventual development of pulmonary artery hypertension. Nevertheless, in cases with normal size LA, PAP is usually elevated due to sudden pulmonary congestion.<sup>5</sup>

As physicians working in developing country, we have observed some cases with severe rheumatic MR with normal atrial size and normal

PAP. Severe MR with normal atrial size and normal PAP is not a usual finding in rheumatic mitral valve diseases, and there are very limited reports with very old references.<sup>6</sup> In these cases, both LA area and 3-dimensional (3D) volume are within normal limits. Since the LA size is an indirect measure of atrial remodeling, assessment of atrial remodeling could not be performed using measurement of atrial size in this subgroup of rheumatic mitral diseases, and novel measures for LA remodeling are needed.

#### Conflict of Interest

Authors have no conflict of interests.

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