

## Effect of percutaneous mitral balloon valvuloplasty on right ventricular functions in mitral stenosis: Short-and mid-term results

To the Editor,

We read the original investigation entitled "Effect of percutaneous mitral balloon valvuloplasty on right ventricular functions in mitral stenosis: Short- and mid-term results" by İnci et al. (1) published in the *Anatol J Cardiol* 2015; 15: 289-96 with great interest. We would like to touch on some points regarding this article.

A prospective study was conducted in 61 patients (age:  $42.7 \pm 11.6$  years) with isolated rheumatic mitral valve stenosis who underwent percutaneous mitral balloon valvuloplasty (PMBV). The patient population consisted of individuals with notable advanced ages. Although the authors stated clinical, echocardiographic, or angiographic evidence of coronary artery disease as exclusion criteria, there are some unclarified points. Firstly, what percentage of the patients underwent coronary angiography? Furthermore, it should be stated whether the patients with non-critical coronary artery disease were also included in the study.

Secondly, it should also be stated in the text that the clinical characteristics of the patients such as heart rate and systolic and diastolic blood pressures were similar before and after the procedure at the 3<sup>rd</sup> and 12<sup>th</sup> months. Otherwise, differences in these parameters will probably affect echocardiographic measurements (deceleration time, E peak, A peak, mean gradient, etc.) (2). In addition, pulmonary flow velocity, right ventricular filling fraction, and A wave, which also reflects right ventricular filling, have already been found to be increased, and right ventricle isovolumetric relaxation time has been found to be prolonged in hypertensive patients. The reduction of pulmonary valve acceleration time index in hypertension should also be noted (3).

Thirdly, mitral valve area assessment using the pressure half-time (PHT) method is not recommended, especially in the early period after

PMBV (4). Because the creation of an iatrogenic atrial septal defect during transseptal catheterization may contribute to a poor agreement between Doppler and Gorlin data after PMBV (5). How do the authors explain the similarity between valve area measurements obtained via the PHT method and planimetry in the early post-PMBV period?

Finally, when increased left atrial diameter (mean, 48 mm; range, 42–57 mm) in the patient population is considered, the development of an arrhythmia such as atrial fibrillation (at least paroxysmal atrial fibrillation) in the 1-year follow-up is highly likely. It is also unclear whether exclusion was performed in the follow-up period because of the development of such an arrhythmia or any other reason. We hope that the authors are willing to comment on these issues.

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