REPLY: Valvular Disease, Myocardial Mechanics, and Valve Guidelines

We want to deeply thank Dr. Argulian for his interest in our review paper. The figure proposed by Dr. Argulian has an additive value with respect to Figure 8 in our original paper (1). Our goals in depicting Figure 8 were to position the strain value all over the spectrum of the aortic stenosis (AS) phenotypes and to propose a global longitudinal strain cutoff value which may advocate careful attention in the evaluation and management of some AS patients. We agree that in normal flow/low gradient (LG) AS, a careful reassessment of the aortic valve severity is mandatory. These patients should benefit from a reassessment of their AS to achieve a rigorous evaluation of aortic valve flow, gradients, and morphology. If discrepancies persist and the patient is symptomatic, a calcium scoring could be of help.

Guidelines (2) are very clear as far as the management of normal flow/normal gradient AS is concerned. In asymptomatic patients, anyway, a reduced global longitudinal strain is a predictor of adverse events, including reduced exercise tolerance, symptoms onset, aortic valve replacement, and death (1), suggesting the need for closer regular follow-up.

We agree that the value of low-dose dobutamine stress echocardiography is confirmed in patients with low flow/LG AS and reduced left ventricular ejection fraction to discriminate true from pseudo-severe AS. In spite of this fact, approximately 20% of these patients do not show a significant increase in stroke volume with dobutamine, which prevents a correct evaluation of AS severity even in low flow/LG preserved ejection fraction (3). Therefore, we think that aortic calcium score quantification might be very useful in the identification of patients with true severe AS (4).

The present paper did not attempt to provide specific recommendations according to cardiac mechanics evaluation but wanted to point out the growing interest of global longitudinal strain analysis in AS, which could represent a new way for imaging risk stratification.

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