New guidelines: do we have all the answers

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FIGURE 1. Mitral regurgitation.

FIGURE 2. Strain analysis.

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Background: Appropriate timing of surgery in asymptomatic severe primary mitral regurgitation (MR) remains challenging. According to the guidelines, surgery is recommended for patients with symptomatic severe primary MR or those with asymptomatic left ventricular (LV) systolic dysfunction, new-onset atrial fibrillation and pulmonary arterial hypertension¹.

Case report: 40-year-old male came to our Echo Lab because of a heart murmur. He had no previous health problems and no disturbances in his daily activities. Myxomatous mitral valve degeneration with prolapse of the posterior leaflet and severe MR was found (**Figure 1**). No additional echo findings that would indicate surgical intervention were detected (LVESD was 34 mm, LVEF 65%, RVSP 30 mmHg, no significant LA enlargement). He was in sinus rhythm. We also measured left ventricular global longitudinal strain (LV-GLS) and performed an exercise stress testing to assess his functional capacity with addition of echocardiographic measurement of RVSP during peak stress. He achieved 100% of predicted METs with no worsening of RVSP and LV-GLS was -24% (**Figure 2**). Based on the above-mentioned findings, we decided to follow-up the patient.

Discussion: Clinicians and patients often choose to postpone valve surgery as long as justified. This “watchful waiting” approach is dictated by a timely identification of LV dysfunction. Ejection fraction and end-systolic dimensions are affected by the altered loading conditions in MR and can remain falsely normal despite underlying myocardial dysfunction². New parameters capable of detecting onset of LV dysfunction earlier could help discriminate the higher risk patients. Current European guidelines state that the use of LV-GLS could be of potential interest and determination of functional capacity may be useful, but there are no exact recommendations³. In the study of Mentias *et al.*, reduced exercise capacity and worsening LV-GLS were associated with mortality providing additive prognostic utility¹. Maybe the detection of the relative change of GLS from baseline rather than an absolute cut-off value as in cardio-oncology could be helpful.

Conclusion: We are still looking for an optimal timepoint when we should operate patients with asymptomatic severe primary MR. Further investigations are required.

LITERATURE

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