

Left ventricular rotational mechanics in cardiac amyloidosis – what is its clinical importance?

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I am reading the paper of Monda *et al.* in which the role of a multiparametric echocardiographic score in the diagnosis of cardiac amyloidosis (CA) was investigated [1]. The results were interesting and impressive, but I feel some additional comments are necessary. Under normal circumstances, LV apex and base rotate in opposite directions resulting in a towel-wringing-like LV motion called LV twist, which has an important role in LV function and a significant contribution to LV ejection [2-5]. However, absence of LV twist called as LV 'rigid body rotation' (LV-RBR) could be detected in several disorders with different incidence rates with 6% in a normal population [2-5]. In these cases, LV apex and base rotate in the same clockwise or counterclockwise direction with some apico-basal gradient defined as a net difference between the clockwise/counterclockwise LV basal or apical rotations [2]. Noncompaction (50-100%), dilated (50%) and hypertensive (32%) cardiomyopathies, corrected tetralogy of Fallot (38%) and acromegaly (20%) are the most examined disorders with highest rate of LV-RBR [2-5]. LV rotational mechanics were examined in CA patients in several studies [2,3]. Although only limited number of CA patients were investigated, 3 out of 10 patients had LV-RBR with less than 3 degrees apico-basal LV gradient, while another 3 patients showed LV-RBR with 6-10 degrees apico-basal LV gradient [3]. The remaining cases showed normo-, hypo and hyperrotations of LV segments in normal directions suggesting several patterns of LV rotational mechanics in CA. The relationship between the new multiparametric echocardiographic score and LV rotational mechanics in CA would be interesting and requires further investigations.

References

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