



Letter to the Editor



Left ventricular function in left ventricular noncompaction – does compaction matter?

Anwer et al. investigated myocardial mechanics of non-compaction phenotype in their article. [1] The manuscript is well written, the results are interesting and impressive. The discussion is clear, although it needs some revision. In an early study, wall motion score index was markedly elevated in the non-compacted and compacted segments of patients with left ventricular (LV) non-compaction (LVNC) with reduced LV ejection fraction (EF), the wall motion score index was significantly worse in case of the non-compacted segments compared to the compacted ones. [2] When more recent three-dimensional (3D) echocardiography was used for quantitative evaluation of regional LV volumes, non-compacted and compacted LV segments showed similarly increased 3D regional LV volumes and reduced regional LV-EF as compared to those of controls. [2] These results suggested that reduced regional systolic LV function is not confined to the non-compacted segments in LVNC. When different contributions of non-compacted and compacted segments to the global LV systolic dysfunction were investigated by 3D speckle-tracking echocardiography-derived LV strain parameters in LVNC patients, all LV strains in all directions proved to be significantly decreased in all segments of LVNC patients as compared to the segments of controls confirming previous findings. [3] However, radial and 3D strains were further reduced in non-compacted LV segments compared to the compacted LV segments suggesting more pronounced reduction in contractility of non-compacted segments in radial direction. No correlation was found between the extent of non-compaction (number of segments) and LV systolic function (LV-EF). [2,3] LV strain values changed with LV-EF as well, but an LVNC-specific strain pattern could not be detected. [4] Moreover, LV rotational mechanics and the absence of LV twist, the so called LV 'rigid body rotation' could affect LV function as well. [4,5] These results suggest significant

LVNC-related abnormalities in LV functional properties, which require further investigations.

References

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