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## Speckle tracking imaging in hypertrophic cardiomyopathy

### A powerful tool in search of an unfavorable substrate?

We read with great interest the article by Candan and colleagues [1]. The authors have found an independent association of increased left ventricular twist and decreased global longitudinal strain (GLS) with the occurrence of nonsustained ventricular tachycardia (NSVT) during Holter monitoring in patients with hypertrophic cardiomyopathy (HCM).

The study of left ventricular mechanics with strain echocardiography in HCM has been associated with various outcomes as well as with myocardial fibrosis [2, 3]. Myocardial twist has been associated with myocardial fibrosis and the type of hypertrophy in HCM [4]. In particular, untwist alterations have been observed in HCM mutation carriers [5, 6], implying that distortion of ventricular mechanics in HCM is not entirely due to myocardial disarray but begins primarily as a result of impaired actin–myosin interaction kinetics [7]. The latter can result from altered intracellular calcium handling, leading to decreased calcium re-uptake in the sarcoplasmic reticulum and, thus, establishing the link with increased arrhythmogenicity [8].

In the article by Candan and colleagues there is no association of twist and untwist rate with occurrence of ventricular arrhythmias or increased HCM risk score. Although GLS was associated with increased HCM risk score, twist was not. Besides, NSVT is a risk factor for sudden cardiac death with very low positive predictive value [9]. This means that only absence of abnormal twist or GLS

could possibly signify a favorable prognostic profile (also by indicating normal myocardial mechanics and thus a more favorable substrate) but not the opposite. Further study of the markers of left ventricular mechanics will have to eventually clarify their prognostic merit in HCM. Speckle tracking imaging results may be regarded as novel parameters for an update of the MOGE(S) classification [10].

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