

415 Correlation between tissue abnormalities and myocardial deformation indices in arrhythmogenic cardiomyopathy: a pilot study

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Aims: To evaluate the correlation between cardiac magnetic resonance (CMR) tissue abnormalities and impairment of myocardial deformation indices in patients with definite diagnosis of arrhythmogenic cardiomyopathy (AC).

Methods and results: 41 AC Patients with available CMR study were enrolled. Myocardial deformation indices (i.e. global longitudinal strain -GLS-; global circumferential strain -GCS-; global radial strain -GRS-) for both ventricles were calculated using feature tracking analysis. Quantification of tissue abnormalities (i.e. late gadolinium enhancement -LGE- extension expressed as percentage of total ventricular mass) was performed. Spearman's rho correlation was evaluated. Mean age was 44 ± 13 years and 26 (63%) patients were male. Mean left ventricular (LV) ejection fraction (EF) was $54 \pm 10\%$ and mean right ventricular (RV) EF was $49 \pm 12\%$. Median LV LGE extension was 8.9% (1.05-21) and median RV LGE extension was 0 (0-6.92). All myocardial deformation indices were moderately associated with LGE extension (for LV 3D GLS Spearman's Rho 0.423, P 0.016; 2D GCS Spearman's Rho 0.388, P 0.028; 3D GCS 0.362, P 0.042; 2D GRS Spearman's Rho -0.417 , P 0.018; 3D GRS -0.396 , P 0.025; for RV 2D GLS Spearman's Rho 0.385, P 0.030; RV GCS Spearman's Rho 0.450, P 0.010; RV GRS Spearman's Rho -0.459 , P 0.008).

Conclusions: All myocardial deformation indices showed a moderate association with LGE extension in a cohort of patients with definite AC. Further studies are needed to validate this observation and understand its implications.