



## Imaging

### THE PROGNOSTIC VALUE OF LEFT ATRIAL PEAK RESERVOIR STRAIN IN ACUTE MYOCARDIAL INFARCTION IS DEPENDENT ON LEFT VENTRICULAR LONGITUDINAL FUNCTION AND LEFT ATRIAL SIZE

Poster Contributions

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**Background:** Peak atrial longitudinal strain (PALS) during the reservoir phase has been proposed as a measure of LA function. However, no studies have assessed the interrelation of PALS and LV longitudinal strain (GLS) in large scale populations in regard to prognosis.

**Methods:** We prospectively included 843 patients (mean age  $62.1 \pm 11.8$ , 74% male) with acute myocardial infarction and measured GLS, LA volumes and PALS within 48 hours of admission. PALS was related to a composite outcome of death and heart failure hospitalization.

**Results:** Reduced PALS was associated with hypertension, diabetes and Killip class >1 (All p-values < 0.05). All measures of LV systolic and diastolic function progressively worsened with reduced PALS and the correlation between GLS and PALS was highly significant ( $p < 0.001$ ,  $r = -0.71$ ). During follow-up (median 23.0 months IQR, 16.8-26.0) a total of 76 patients (9.0%) reached the composite endpoint. PALS was significantly associated with outcome (HR, 0.88; 95%CI 0.85-0.90,  $p < 0.001$ ), however no independent effect of PALS (1.00; 95%CI 0.99-1.01,  $p = 0.46$ ) was found when adjusting for GLS (HR, 1.20; 95%CI 1.09-1.33,  $p < 0.001$ ), LAmx (HR, 1.02; 95%CI 1.01-1.04,  $p = 0.006$ ) and age (HR, 1.06; 95%CI 1.03-1.08,  $p < 0.001$ ).

**Conclusion:** PALS provides a composite measure of LV longitudinal systolic function and LAmx and contains no added information when these measures are known.

