



## Imaging

### TIME COURSE AND PREDICTORS OF SIGNIFICANT MITRAL REGURGITATION AFTER STEMI

Poster Contributions

Poster Sessions, Expo North

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**Background:** Ischemic mitral regurgitation (MR) is a frequent complication of ST-segment elevation myocardial infarction (STEMI) and an important predictor of mortality. However, limited studies evaluated MR during follow-up after STEMI. This study aimed to evaluate changes over time in MR after STEMI and to assess predictors of significant MR (defined as grade  $\geq 2$ ) at 1 year follow-up.

**Methods:** Consecutive STEMI patients treated with primary percutaneous coronary intervention were included ( $n=1599$ ; age  $60\pm 12$  years; 77% male). According to the institutional protocol, patients received optimal medical therapy and were monitored at the outpatient clinic. Echocardiography was performed within 48 hours and at 1 year follow-up and MR grade was assessed according to current recommendations.

**Results:** Significant MR was present at baseline in 103 patients (6%). At 1 year follow-up, MR grade remained stable in 963 (60%) patients, of which 11 patients showed still significant MR. In 315 (20%) patients, MR improved  $\geq 1$  grade over time, of which 10 patients however maintained a significant MR (with a decrease from MR grade 3 to grade 2). In turn, MR worsened  $\geq 1$  grade over time in 321 (20%) patients, of which 114 patients progressed to significant MR. In total, significant MR was present at 1 year follow-up in 135 patients (8%,  $P=0.01$  compared to baseline). After adjustment for clinical and echocardiographic parameters, age (OR 1.05, 95% CI 1.03-1.07), gender (OR 0.60, 95% CI 0.38-0.94; female gender as reference), peak troponin T (OR 1.06, 95% CI 1.03-1.09), left ventricular (LV) end-systolic volume (OR 1.02, 95% CI 1.01-1.04), MR grade (grade 1: OR 2.28, 95% CI 1.45-3.56; grade 2: OR 7.64, 95% CI 3.94-14.83; grade 3: OR 11.97, 95% CI 5.18-27.70; grade 0 as reference) and E/A ratio (OR 2.05, 95% CI 1.31-3.20) remained independent baseline predictors of significant MR at 1 year.

**Conclusions:** The grade of MR changes over time after STEMI and significant MR was observed in 8% of patients at 1 year follow-up. Independent predictors of significant MR at follow-up were age, female gender, enzymatic infarct size and baseline LV volume, LV diastolic function and MR grade.