Mitral regurgitation and prognosis after non ST-segment elevation myocardial infarction in very old patients

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Background: Mitral regurgitation (MR) after acute coronary syndromes is associated with adverse prognosis. However, the prognostic impact of MR in older patients with Non ST-segment Elevation Myocardial Infarction (NSTEMI) has not been well addressed.

Methods: The multicenter LONGEVO-SCA prospective registry included 532 unselected patients with NSTEMI aged ≥80 years. Echocardiography performed during admission quantified mitral valve parameters in 497 patients, who were classified according to mitral regurgitation (MR) status in two groups: significant (moderate or severe) or no significant MR (absent or mild). We evaluated the impact of MR status on mortality or readmission at 6-months.

Results: Mean age was 84.3±4.1 years, 308 (61.9%) were males. A total of 108 patients (21.7%) had significant MR. Compared with patients without significant MR these patients had lower systolic blood pressure (132±28 vs 141±27 mmHg), higher heart rate (82±21 vs 74±17 bpm), worse Killip class (=II 49.5% vs 22.5%), lower ejection fraction (47±14% vs 55±11%), higher pulmonary pressure (42±15 vs 35±11 mmHg), as well as more frequent new onset atrial fibrillation (16.4% vs 7.2%) (all p values=0.001). Patients with significant MR also had higher in-hospital mortality (4.6% vs 1.3%, p=0.04) and longer hospital stay (median 8 [5-12] vs 6 [4-10] days, p=0.002),and higher mortality/readmission at 6 months (HR 1.54, 95% CI 1.09-2.18). However, after adjusting for potential confounders, this last association was not significant.

Conclusions: Significant MR is seen in about one fifth of octogenarians with NSTEMI. Patients with significant MR have a poor prognosis, which is mainly determined by their clinical characteristics.