**LEFT ATRIAL VOLUME IS A PREDICTOR OF LEFT VENTRICULAR REMODELING IN PATIENTS WITH ACUTE MYOCARDIAL INFARCTION**

S. Fukuzawa, M. Inagaki, J. Sugioka, A. Ikeda, **S. Okino**

Funabashi Municipal Medical Center, Funabashi, Japan

Background: The left atrial volume reflects left ventricular (LV) diastolic properties. Left atrial volume (LAV) is largely determined by the same factors that influence diastolic LV filling. We hypothesized that LAV would predict LV volume expansion after acute myocardial infarction (AMI).

Methods: One hundred and eleven patients with a first acute myocardial infarction undergoing primary percutaneous coronary intervention within 12 hours from onset were eligible for investigation. All of patients with multivessel disease were treated with percutaneous coronary intervention to achieve complete revascularization during hospital stay. Two-dimensional echocardiographic parameters were collected in all of 111 patients during initial hospitalization and 6 months later. The LA volume, LV end-diastolic volume, and LV end-systolic volume were corrected for body surface area, and LA volume was divided according to LA volume index (LAVI) of 27 ml/m2 (mean + standard deviations).

Result: There were 28 (25.2%) patients with LAVI > 27 ml/m2. By univariable analysis, LAVI was associated with initial LVEDVI (LAVI >27 v.s.LAVI =<27; 48 v.s. 40 ml/m2, p=0.003), follow-up LVEDVI (51 vs 41, p<0.001) and initial LVESVI (23 v.s. 18, p=0.006), follow-up LVESVI (27 v.s. 17, p<0.001), changes in LVESVI (+4.3 v.s. -0.7, p<0.001), LV ejection fraction (LVEF; 49.6 % v.s. 59.6 %, p<0.001), and changes in LVEF (-4.0 v.s. +2.7, p<0.001). By multivariable analysis, LAVI was associated with follow-up LVEDVI (p=0.008), follow-up LVESVI (p<0.001), follow-up LVEF (p<0.001), changes in LVESVI (p=0.022), and changes in LVEF (p<0.001).

Conclusion: LAVI is a predictor of LV remodeling.