



Acute and Stable Ischemic Heart Disease

RELATIONSHIP BETWEEN SERIAL MEASUREMENTS OF LV EJECTION FRACTION AND CARDIOVASCULAR EVENTS IN PATIENTS WITH ACUTE CORONARY SYNDROME

Poster Contributions

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Background: Serial change of LV ejection fraction (LVEF) and its clinical impact have not been demonstrated in large-sized patients with acute coronary syndrome (ACS).

Methods: Serial LVEFs were measured in 2,872 ACS cohort. Patients were stratified into 4 groups according to LVEF (on-admission & 1-month post-PCI): (1) decreased (LVEF < 55%)-decreased group (26.6%); (2) preserved-decreased group (5.2%); (3) decreased-preserved group (17.5%); and (4) preserved-preserved group (50.7%). Clinical events were defined as all-cause death and MACE (a composite of CV death, non-fatal MI, and ischemic stroke).

Results: With a median follow-up of 33.0 (IQR: 16.6, 53.2) months, the rates of all-cause death significantly differed across the groups (log-rank test, $p < 0.001$, Figure), in which the decreased-decreased group showed the greatest risk of all-cause death compared with other groups. After adjustment, the decreased-decreased group was the strongest independent predictor in terms with all-cause death (HR 3.14, 95% CI 2.03-4.86, $p < 0.001$) and MACE (HR 1.57, 95% CI 1.14-2.17, $p = 0.006$) occurrence. In multivariate analysis, on-admission LVEF 48% (OR 6.51, 95% CI 5.01-8.46, $p < 0.001$) was associated with maintenance of persistent LV dysfunction.

Conclusion: This is the first study to show that re-evaluation of LVEF 1 month after PCI can help to stratify the risks of all-cause death and adverse CV event in ACS patients. In addition, decreased LVEF_{on-admission} showed poor recovery from LV dysfunction.

DD ; Decreased /Decreased LVEF
DP ; Decreased /Preserved LVEF
PD; Preserved /Decreased LVEF
PP; Preserved /Preserved LVEF

