

Prognostic value of soluble ST2 in patients with ST-segment elevation MI undergoing primary PCI

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Background: Soluble ST2, an interleukin 33-related substance is a marker of biomechanical strain and has shown to be an independent predictor for adverse outcome in heart failure. We evaluated the prognostic value of soluble ST2 in ST-segment elevation myocardial infarction (STEMI) patients undergoing primary percutaneous coronary intervention (PCI). **Methods:** A total of 323 patients with STEMI undergoing primary PCI were enrolled and divided into two groups based on the median level of ST-2 measured at the time of presentation: the high ST2 group (ST2 ≥ 654 pg/mL, n = 162) and the low ST2 group (ST2 < 654 pg/mL, n = 161). The primary endpoint was 1-year major adverse cardiovascular and cerebrovascular events (MACCE), defined as the composite of all-cause death, non-fatal MI, non-fatal stroke, and ischemia-driven revascularization. **Results:** Demographic, echocardiographic and angiographic characteristics were similar between the high and low ST2 groups. The cumulative incidence of MACCE at 1 year was significantly higher in the high ST2 group than in the low ST2 group (15.4% vs. 8.1%, $p=0.044$, Figure). By multivariate Cox regression analysis adjusting for age, sex, diabetes, anterior wall infarction, and systolic dysfunction (ejection fraction < 40%), the high ST2 level was independently associated with 1-year MACCE (adjusted hazard ratio 2.09, 95% CI 1.01-4.29, $p=0.046$). **Conclusions:** The level of ST2 measured at the time of presentation can be a powerful, independent predictor of 1-year adverse clinical outcomes in patients with STEMI.

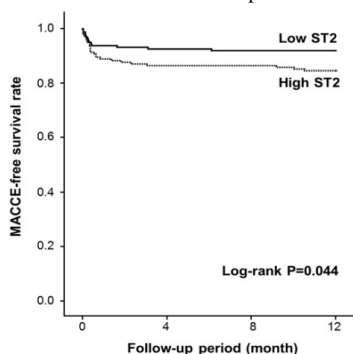


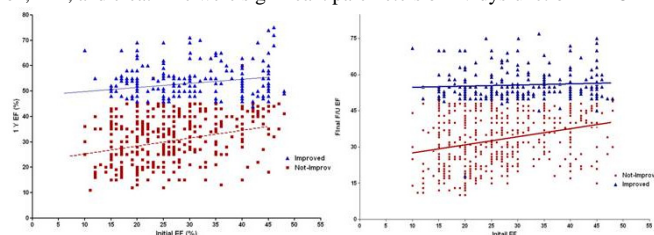
Fig. Kaplan-Meier survival curves for 1-year MACCE.

Frequency of Recovery and Relapse in Patients with Nonischemic DCMP on Medical Therapy

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Background: In patients with congestive heart failure, LV dysfunction can be improved symptomatically and hemodynamically. Several clinical questions can be shown as below; what kind of patients with DCMP may be recovered, how many of them can be relapsed and which type can be relapsed and so on. **Objectives:** Neither the clinical course of the nonischemic left heart failure nor guidelines on the management of patients who recover from left heart failure have been established. In the present study, the clinical progress of patients who recovered from congestive heart failure caused by nonischemic LV systolic dysfunction was investigated. **Methods:** This is a retrospective study, patients in nonischemic DCMP, presenting to the Department of Cardiology, Sejong General Hospital, since January 2005 to September 2015. Patients were selected as below: Age > 18 years old, LVEF < 50% at baseline, one or more echocardiogram evaluation. Total 960 patients were enrolled. Patients with heart failure caused by coronary artery disease, hypertension, myocarditis, stress-induced cardiomyopathy and cardiomyopathy accompanied by endocrine disorders were excluded. **Results:** Half of DCMP patients recovered LV function. LV dysfunction recurs in some patients with reversible DCMP. The recurrence of LV dysfunction was significantly correlated with the discontinuation of medication, DM and elevated creatinine level. **Conclusions:** Discontinuation of medication, DM, and creatinine were significant parameters of LV dysfunction in DCMP.



Baseline characteristics of 960 patients

variables	Recovered (n=356)	Not Recovered (n= 449)	Relapsed Group (n=95)	P value
Initial diagnosis age (years)	54±12	59±10	52±7	0.2
Female	156(44%)	206 (46%)	48	0.8
FU duration (months)	51±35	60±50	71±32	<0.01
Baseline HR	87±10	91±12	85±18	0.1
Final HR	67±14	75±13	75±12	0.04
Creatinine	1.0±0.4	1.24±1.7	1.30±1.4	0.02
DM	28 (8%)	89(20%)	23 (25%)	0.01
Atrial Fib	21(6%)	45(10%)	12(11%)	0.04
LBFB	35(10%)	120(28%)	18(20%)	0.03
Stop Medication	0 (0%)	40 (9%)	16(17%)	<0.01