ACC.17™

214
JACC March 21, 2017
Volume 69, Issue 11

Acute and Stable Ischemic Heart Disease

TICAGRELOR VERSUS CLOPIDOGREL IS ASSOCIATED WITH BETTER RECOVERY OF LV FUNCTION AFTER ACUTE MYOCARDIAL INFARCTION

Poster Contributions
Poster Hall, Hall C
Saturday, March 18, 2017, 3:45 p.m.-4:30 p.m.

Session Title: Antithrombotic Therapy in Ischemic Heart Disease
Abstract Category: 3. Acute and Stable Ischemic Heart Disease: Therapy
Presentation Number: 1252-314

Authors: *Min Gyu Kang, Jong-Hwa Ahn, Jeong Yoon Jang, Hyun Woong Park, Jin-Sin Koh, Jeong-Rang Park, Yongwhi Park, Seok-Jae Hwang, Choong Hwan Kwak, Jin-Yong Hwang, Young-Hoon Jeong, Department of Internal Medicine, Gyeongsang National University Hospital, Jinju, South Korea, Cardiovascular Center, Gyeongsang National University Changwon Hospital, Changwon, South Korea*

Background: Recovery of LV function following AMI is associated with the risk of long-term CV mortality and CHF progression. We sought to evaluate the predictors of recovery of LV function in AMI patients.

Methods: AMI patients treated with uneventful PCI were prospectively enrolled (n=224). At 30-day follow-up, biochemical measurements (including NT-proBNP) and platelet reactivity (PRU) by VerifyNow were performed. Good recovery of LV function was defined using age-adjusted NT-proBNP cutoff values (ESC criteria).

Results: "High NT-proBNP$_{follow\text{-}up}$" was observed in 52 patients (20.6%). Compared with clopidogrel treatment, ticagrelor treatment decreased the level of NT-proBNP$_{follow\text{-}up}$ (672±1091 vs. 1695±4873 pg/ml; p= 0.030). Multivariate analysis showed that ticagrelor vs. clopidogrel significantly reduced the risk of "high NT-proBNP$_{follow\text{-}up}$" by about 55% (95% CI: 0.21 - 0.95; p= 0.037). By ROC curve analysis, PRU$_{follow\text{-}up}$ ≥ 160 (4.3% on ticagrelor vs. 71.6% on clopidogrel) was the optimal cutoff of "high NT-proBNP$_{follow\text{-}up}$" (AUC: 0.60; 95% CI: 0.51 - 0.69: p= 0.026). After adjustment, "PRU$_{follow\text{-}up}$ ≥ 160" increased the risk of "high NT-proBNP$_{follow\text{-}up}$" by about 3-fold (95% CI: 1.33 - 6.54; p= 0.008).

Conclusions: This is the first to suggest the impact of ticagrelor on recovery of LV function in AMI patients, which is mostly related with the level of platelet inhibition. The linkage of this effect with long-term clinical outcome will be evaluated in the large-scale clinical trials.

Predictors for 30-day "High NT-proBNP"

Multivariate analysis: variables with P < 0.1 in univariate analysis

Variable	Odds ratio	95% CI	P value
Age ≥ 70 years old	1.014	0.420 – 2.451	0.976
Female gender	2.331	1.001 – 5.435	0.050
STEMI (vs. NSTEMI)	3.583	1.707 – 7.518	0.001
Chronic kidney disease	1.520	0.578 – 4.000	0.396
LV ejection fraction < 50%	5.079	2.279 – 11.320	<0.001
High-sensitive CRP > 1.8mg/L	2.463	1.135 – 5.348	0.022
Ticagrelor (vs. Clopidogrel)	0.448	0.211 – 0.953	0.037