COMPARISON OF ANTIPLATELET EFFECT OF TICAGRELOR VERSUS TIROFIBAN IN PATIENTS WITH NON-ST ELEVATION ACUTE CORONARY SYNDROME UNDERGOING PERCUTANEOUS CORONARY INTERVENTION: A PROSPECTIVE, SINGLE-CENTER, OPEN-LABELLED, NON-INFERIORITY STUDY (TE-CLOT: TICAGRELOR'S EFFECT FOR CLOT PREVENTION)

Poster Contributions

Hall C

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Background: Ticagrelor is a new oral P2Y12 receptor inhibitor and its pharmacodynamics (PD) measurements showed excellent and fast inhibition of platelet activation. However there has been no study comparing the PD effect between ticagrelor and GPI.

Methods: Patients with non-ST elevation acute coronary syndrome (NSTE-ACS) were randomized to either ticagrelor (n=47) or tirofiban (n=48) on top of aspirin. Platelet reactivity was assessed by conventional aggregometry at 0, 2, 8 and 24 hours after the first dose of study drug. Primary endpoint was inhibition of platelet aggregation (IPA, 20 µM ADP, final extent) at 2 hours with a non-inferiority margin of 10%. Secondary endpoints were IPA at 8, 24 hours and high on treatment platelet reactivity (HPR) rate.

Results: The mean difference of IPA was -9.90% [95% CI -25.67 to 5.87] at 2 hours, -1.60% [-8.02 to 4.81] at 8 hours and -3.25% [-18.44 to 11.95] at 24 hours. The lower limit of the CI at 2 and 24 hours exceeded the non-inferiority margin (non-inferiority p=0.495 and p=0.190, respectively), but the result at 8 hours was non-inferior (non-inferiority p=0.006). There were no differences in HPR rate between two groups at 2, 8 and 24 hours (Figure 1 & 2).

Conclusions: Although this study did not meet primary endpoint of non-inferiority (IPA at 2 hours), ticagrelor was comparable to tirofiban in terms of IPA at 8 hours and HPR rate over 24 hours. These results will provide valuable PD information to guide optimal antiplatelet therapy for NSTE-ACS patient. (NCT01660373)