

CORONARY

Acute Coronary Syndrome

CRT-99*

Ticagrelor Versus Clopidogrel in African American Patients with Stable Coronary Artery Disease: A Randomized, Open-label, Multiple-dose, Crossover Study

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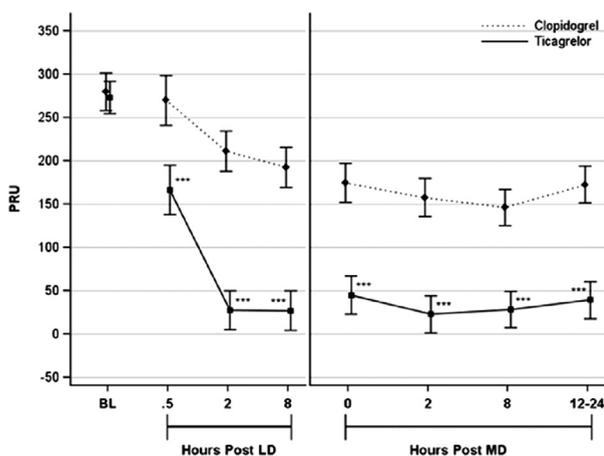
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Background: The pivotal PLATelet inhibition and Patient Outcomes (PLATO) study evaluated ticagrelor vs clopidogrel for reduction of thrombotic events in patients with acute coronary syndrome. African Americans (AAs) have a high mortality rate from coronary artery disease (CAD). However, their participation in clinical studies is limited. The aim of the present study was to compare the pharmacodynamics (PD) of ticagrelor vs clopidogrel in AAs with stable CAD.

Methods: A multicenter, randomized, open-label, crossover PD study was conducted in aspirin (75–100mg/day) treated AA patients with stable CAD. Patients were randomized to receive either ticagrelor (180 mg loading dose [LD] followed by 90 mg twice-daily maintenance dose [MD] for 7–9 days) or clopidogrel (600 mg LD followed by 75 mg once-daily MD for 7–9 days). After a 10–14 day washout period, patients crossed over therapy. Platelet reactivity was measured with the VerifyNow P2Y₁₂ function assay at the following time-points: 0.5, 2 and 8h following LD and 0, 2, 8 and 12–24h following MD.

Results: A total of 34 AA patients were randomized. At all post-dose time points, on-treatment platelet reactivity was lower for ticagrelor versus clopidogrel (Figure).

Conclusions: In AA patients with stable CAD on daily low-dose aspirin, ticagrelor provided a faster onset and greater extent of platelet inhibition than clopidogrel.



*Indicates iMPACT Trial Accepted for Oral Presentation

CRT-100

A Systematic Diagnostic and Therapeutic Approach for the Treatment of Patients After Cardio-Pulmonary Resuscitation: A Prospective Evaluation of 212 Patients During 5 Years

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Background: There is a need for a systematic treatment protocol for patients after resuscitation.

Methods: A systematic diagnostic approach including ECG, echocardiogram, urgent cardiac catheterization ("STEMI-like" workflow), pulmonary angiography, CT scans, pre-defined laboratory findings, IABP, hypothermia and cMRI prospectively during the last 5 years was in our cardiology department evaluated. The primary endpoint was the Cerebral Performance Category Scale (CPCS).

Results: From January 2008 to December 2012, 212 patients were included into our protocol. Mean age was 66.7 years, 71.2 % were male, the mean ejection fraction was 42.9 %, the mean time from first medical contact to start of catheterization/intervention was 76.6 minutes. Ventricular fibrillation (VF) was observed in 99 patients reflecting 46.7 %. A significant coronary artery stenosis (defined as % stenosis > 60 %) was found in n=130 (61.3 %) and a percutaneous coronary intervention (PCI) was performed in 101 patients (47.6 %). An acute coronary syndrome (ACS) was diagnosed in 100 patients (47.2 %), 91 patients (42.9 %) had a cardiomyopathy, and 7 patients (3.3 %) had evidence for a Tako-Tsubo cardiomyopathy. Rare diagnoses were patients with pulmonary embolism (n=8, 3.8 %), a vitium cordis or a congenital defect (n= 4, 1.9 %), a long QT syndrome (n= 4, 1.9 %), an early repolarization syndrome (n= 2, 0.9 %), hypertrophic cardiomyopathy (n= 1, 0.5 %) and aortic dissection (n=1, 0.5 %). A mechanical recanalization of a large thrombus of the pulmonary artery was performed in one patient. An extracardiac cause for cardiac arrest was observed in 12 patients (5.7 %) and mostly secondary to stroke (cerebral infarction/bleeding).

Endpoints: The survival rate was n=76 (35.9 %), a CPCS of 1/2 was established in 67 patients (31.8 %). In patients being treated with a PCI, a significant difference in mortality was found for patients with TIMI flow 2/3 vs 0/1 (65.4 % vs. 95.7, p< 0.05). The difference in mortality with respect to intra-aortic balloon pumping vs. no pumping was not statistically significant (70.0 % vs. 63.6 %, p=0.6). Hypothermia was able to reduce mortality significantly (52.7 % vs 68.2 %, p<0.05).

Conclusion: A systematic diagnostic and therapeutic algorithm using a "STEMI-like" workflow which includes urgent catheterization is feasible, safe and can improve prognosis.

CRT-101

Cocaine Paradox: A Predictor of Myocardial Infarction, Not Premature CAD

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Background: In the present study we aim to evaluate major predictors of premature coronary artery disease (PCAD) in patients aged ≤ 35 years undergoing coronary angiography for acute coronary syndrome.

Methods: We evaluated 224 consecutive patients aged ≤ 35 years who underwent coronary angiography at our institution between years 2003 to 2012. For each patient, demographics, coronary risk factors such as-family history of PCAD, hypercholesterolemia, diabetes mellitus, hypertension, cigarette smoking, cocaine use, biochemical profile and angiographic findings were recorded. Patients were divided into two group 1) significant CAD ≥ 50% stenosis and 2) No or Non-significant CAD. These two groups were compared and data was analyzed using SPSS 16.

Results: Out of 224 patients, 64 had significant CAD and the remaining 160 had no or non-significant CAD. Prevalence of smoking was found to be significantly higher in the significant CAD group as compared to the no or non significant disease group