Background: Incomplete P2Y12-inhibition during clopidogrel treatment is associated with increased cardiovascular events and mortality after coronary intervention.

The aim of this study was to evaluate the effect of high-dose clopidogrel continuation treatment on the development of MACCE in patients with Cytochrome P450 2C19*2 Loss-of-Function Allele.

Methods: Between May 2009, and September 2010, 100 patients who underwent a percutaneous coronary intervention (PCI) and were exposed to clopidogrel treatment for at least one month, were enrolled in our study. They underwent CYP2C19*2 determination. The primary endpoint was a composite of death, myocardial infarction, and urgent coronary revascularisation occurring during exposure to clopidogrel.

Results: The use of a double maintenance dose of clopidogrel (150 mg) was noted in 27% of cases, similarly in both study groups (28.6% in the non-mutated versus 21.7% in the mutant group (p=0.5).

This attitude was especially observed in diabetic patients, if drug-eluting stent is used and in case of complex angioplasty (77% of patients on double dose of clopidogrel are diabetics and 70% were implanted with a drug-eluting stent).

The use of a double dose of clopidogrel results in a non significant decrease in the occurrence of MACCE in the non mutated group (10.9% vs 0%, p=0.17) and has no effect in the mutated group (22% in a double dose of clopidogrel versus 20% p=0, 91).

Conclusion: Our study showed no relationship between the use of a double dose of clopidogrel and reduced occurrence of MACCE, irrespective of the genetic profile studied.

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Prognostic value of persistent vs. transient fragmented QRS on a 12-lead ECG in patients with acute myocardial infarction

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Objective: To investigate the determinants and the prognostic capacity of fragmented QRS on a 12-lead ECG in patients with acute myocardial infarction.

Patients and methods: Prospective cohort of 307 consecutive patients with AMI. Main outcomes measure: in-hospital adverse outcomes, thirty-day and one year mortality.

Results: 163 (53%) were found without IQRs (No IQRs group). 144 (47%) presented a IQRS on the first 36 hours 12-lead ECG, which was persistent in 107 patients (persistent IQRs group) and non persistent in 37 patients (non-persistent IQRs group). Despite similar demographic features, clinical presentation and reperfusion strategies, patients with a fragmented QRS (transient or persistent) were older, more likely hypertensive and less smoker were found among these groups. If in-hospital adverse outcomes were similar between groups, interestingly we found a trend towards a greater likeliness of ventricular arrhythmias in the group without a fragmented QRS when compared with other groups (12% vs. 5% vs. 4%, respectively, p=0.054). An all-cause death at 30 days was similar in the three populations. At one year’s follow-up, 45 (14.6%) patients had died from all causes and 30 (9.7%) from cardiovascular cause. The Kaplan Meier analysis revealed that mortality was significantly higher in the IQRs group (persistent or not) than in the non-IQRs group (30 (20%) vs. 15(9.2%) respectively, p=0.007). By multivariate logistic regression analysis, age (p=0.008) and the presence of a family history of CAD (p=0.045) were independent predictors of IQRs occurrence. In multivariate analysis six variables were significant predictors of all-cause death at one year: age, DBP, glucose on admission, LVEF, treatment with beta-blockers at the acute phase and presence of a IQRs.

Conclusions: The IQRS is an independent predictor of 1 year all cause death after AMI, even after correction with age and LVEF, and it is associated with lower event-free survival.