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Syncope after myocardial infarction. Changes of the results of programmed ventricular stimulation during the last 26 years

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Ventricular tachycardia (VT) may explain syncope after myocardial infarction (MI) and is in this case is associated with a high risk of sudden death, mainly in association with low left ventricular ejection fraction (LVEF). Programmed ventricular stimulation (PVS) remains the main method to look for VT. The purpose of the study was to look for the changes of the population referred for PVS for unexplained syncope after MI during the last 26 years.

Methods: 346 patients were recruited for unexplained syncope after MI between 1982 and 2008. 76 patients (group I) were studied between 1982 and 1998, 451 patients (group II) were studied between 1990 and 1999 and 119 patients (group III) were studied between 2000 and 2008. ECG and 24 hour Holter monitoring did not indicate a possible cause of syncope. LVEF was evaluated in all patients by echocardiography. PVS was systematic with the same protocol (up to 3 extrastimuli in 2 sites of right ventricle).

Results: Clinical and electrophysiological data were similar between groups I and II but differed significantly in group III. Age was higher in group III (68±12 years) than in group I (64±11) and II (65±12) (p <0.009); LVEF was higher in group III (45±13%) than in group I (41±16) and II (42±13) (p=0.008). PVS was more frequently negative in group III (74%) than in group I (43%) and II (54 %) (p<0.001). Monomorphic VT < 270 b/min was less frequently induced in group III (16 %) than in group I (30 %) and II (26 %) (p<0.01). Ventricular flutter (VT > 270/min) and ventricular fibrillation were less frequently induced in group III (9 %) than in group I (26 %) and II (19 %) (p<0.05). The changes could be related to the ICD implantation recommendations and to recanalization of occluded coronary artery, which is systematic in recent MI since 2000 (38 % in group III, 27 % in groups I and II) (p<0.05).

Conclusions: Clinical data and results of PVS in patients admitted for unexplained syncope after MI infarction were identical between 1982 and 2000. ECG and 24 hour Holter monitoring did not indicate a possible cause of syncope. LVEF was evaluated in all patients by echocardiography. PVS was systematic with the same protocol (up to 3 extrastimuli in 2 sites of right ventricle).

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Comparison of Omeprazole and Pantoprazole Influence on Clopidogrel Effect of a High 150 mg Maintenance Dose: the Proton Pomp Inhibitors and Clopidogrel Association (PACA) prospective, randomized study

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Objective: To compare the effect of two Proton Pomp Inhibitors (PPI) on platelet response to clopidogrel after coronary stenting for Non ST Elevation Acute Coronary Syndrome (NSTEMI ACS).

Background: Use of omeprazole has been reported to decrease significantly the clopidogrel antiplatelet effect because of cytochrome P450 interaction. As all PPIs are metabolized by CYP2C19, but to a varying degree, we hypothesized that the reported negative omeprazole-clopidogrel drug interaction may not be due to a class effect.

Methods and Results: 104 patients undergoing coronary stenting for NSTEMI ACS were prospectively included and randomized to omeprazole or pantoprazole 20 mg. They received at discharge 75 mg aspirin and 150 mg clopidogrel. Platelet reactivity index VASP was used to assess clopidogrel response and ADP-induced aggregation for platelet reactivity (ADP-Ag). After one month, patients receiving pantoprazole had a significantly better platelet response to clopidogrel as assessed with the PRI VASP: 36±20 % vs 48±17 %, p=0.007. We identified more clopidogrel non responders in the omeprazole group than in the pantoprazole group: 44% vs 23%, p=0.04, OR 2.6 [1.2-6.2]. Conversely, we did not observe any significant difference in platelet reactivity with ADP-Ag between omeprazole and pantoprazole groups: 52±15 % and 50±18 % respectively, p=0.29.

Conclusion: The present findings suggest the preferential use of pantoprazole compared to omeprazole in patients receiving clopidogrel to avoid any potential negative interaction with CYP2C19.

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Comparison of the Angiographic Myocardial Blush Grade with Delayed Enhanced Cardiac Magnetic Resonance for the assessment of Microvascular Obstruction in Acute Myocardial Infarctions

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Background: Myocardial Blush Grade (MBG) and cardiac magnetic resonance (CMR) are both imaging tools that can assess myocardial reperfusion after primary percutaneous coronary intervention (PCI) for acute myocardial infarction (AMI).

Objectives: We studied the relation between MBG and gadolinium-enhanced CMR for the assessment of microvascular obstruction (MVO) in patients with acute ST-elevated myocardial infarction (STEMI) treated by primary PCI.

Material and Methods: MBG was assessed in 39 patients with initial TIMI 0 STEMI successfully treated by PCI, resulting in TIMI 3 flow grade and complete ST-segment resolution. These MBG values were related to MVO determined by CMR, performed between 2 and 7 days after PCI. Left ventricular (LV) volumes were determined at baseline, and at 6-month follow up.

Results: No statistical relation was found between MBG and MVO extent at CMR (p=0.63). Regarding MBG 0 and 1 as a sign of MVO, the sensitivity and specificity of these scores were respectively 53.8% and 75%. In this study, CMR determined MVO was the only significant LV remodeling predicting factor (z=-3.18; p=0.002), whatever the MBG status was.