

P4568 : Impact of a normal or non-specific ECG on admission on the treatment and outcome of patients with myocardial infarction between 2003 and 2008

Authors:

S. Francois (Zurich /Switzerland), **P. Erne** (Lucerne /Switzerland), **P. Urban** (Geneve /Switzerland), **M. Maggiorini** (Zurich /Switzerland), **B. Seifert** (Zurich /Switzerland), **F. Gutzwiller** (Zurich /Switzerland), **D. Radovanovic** (Zurich /Switzerland)

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Background: Diagnosis of acute myocardial infarction (AMI) rests upon clinical, electrocardiographic and biochemical parameters. Previous studies reported AMI patients who present with non-specific ECGs.

Objectives: To examine clinical or demographic features of AMI patients presenting with or without specific ECG changes and assess the impact of these ECGs on treatment and outcome.

Methods: Using the AMIS Plus data, patients admitted between 2003 and 2008 with a definite diagnosis of AMI (clinical symptoms, elevated troponin levels) were stratified according to the admission ECG into group 1 with normal/non-specific ECGs and group 2 with specific ECG changes.

Results: Of 14 957 patients, 1085 (7.3%) belonged to group 1 and 13 872 (92.3%) to group 2. There were no differences between the two groups in age (65.9y vs. 65.4y), gender (28% female), diabetes (19% vs. 18%), hypertension (61% vs. 59%), family history (35% vs. 33%) or smoking (37% vs. 38%). Dyslipidaemia (62% vs. 56%; $p<0.001$), history of CAD (39% vs. 35%; $p=0.023$) and obesity [BMI>30kg/m² (23% vs. 19%; $p=0.003$)] were more frequent in group 1 who were admitted later after symptom onset (280min vs. 230min). Patients in group 1 were exposed to less intensive pharmacological and interventional treatments [aspirin (93.6% vs. 95.3%; $p=0.012$), clopidogrel (70% vs. 73%; $p=0.046$), unfractionated heparin (59% vs. 65%; $p<0.001$), ACE inhibitors or angiotensin II antagonists (46% vs. 53%; $p<0.001$)]. However, therapy for beta-blockers (72% vs. 70%), statins (75% vs. 76%) and nitrates (59% vs. 57%) did not differ between groups. Patients in group 1 underwent significantly less frequently PCI (69% vs. 77%) with a longer in-hospital delay (589min vs. 96min). No differences were found for reinfarction (both 1.4%) and a cerebrovascular event (0.4% vs. 0.8%). Cardiogenic shock (5% vs. 2%; $p<0.001$) and mortality during hospitalisation were higher in group 2 (6% vs. 3%; $p<0.001$). A normal/non-specific ECG on admission was not an independent negative predictor of in-hospital mortality (OR 0.58, 95%CI 0.25-1.38; $p=0.22$).

Conclusions: Despite a less intensive treatment, AMI patients who presented with normal/non-specific ECG changes developed less frequently cardiogenic shock during their hospitalisation and had a lower crude mortality rate compared to those with specific ECG changes on admission. Nevertheless, reinfarctions and cerebrovascular events occurred evenly in all AMI patients, regardless of their admission ECG.