Standard of treatment of ACS patients – Data from the REGISTRY

Aim of the research: to make an overwiew of standard of treatment in everyday clinical practice in our country, threw representative sample from the hospital Registry.
Material and methods: we analyzed data from the hospital Registry with all the variables entered in the registry: general, clinical: risk factors, comorbidities, SBP and HR at the hospital admit ion, type of ACS, MI location, type of treatment, medication prehospital and during the hospitalization, angiography data, in-hospital morbidity and mortality. Statistical analyze: descriptive and comparative analyze was performed, and univariate and multivariate logistic regression.
Results:
629 pts were analyzed, 204 (36.4%) females, and 425 (63.6%) males with ACS were analyzed. The majority were STEMI patients 486 (77.3%), 70 (11.1%) NSTEMI and 73 (11.6%) APNS patients. Mean age 62±11 years, with females being significantly older 65.9±11.5y. Vs 60.3±10.9 y. (p=0.000). <u>Risk profile:</u> <u>Risk factors:</u> only 39.1% were nonsmokers, 4.3% smoked <10 cigarettes per day, 23.3% 10-20, and 33.2% >20 cigarettes per day. 20% had HLP, 60.3% HTA or antihypertensive treatment, 28.5% were diabetic patients, 2.1% had extra coronary vascular disease, 34% had positive family history, 28.5% had premature CAD (defined <45 y for males, and <55 years for females), mean BMI 26.6±3.0, with 27.1±3.7 (f), and 26.4±2.7 (m) (p=0.013), or 20% of females and 14% of males were obese (BMI >30). <u>Comorbidities:</u> 5.1% cerebrovascular disease, 5.2% history of GIT symptoms (or confirmed ulcer disease), 11.6, % with previous MI, and/or myocardial revascularization, 2.5% COPD, 1.5% CRF. 30.2% of patients experienced angina pain during the last two weeks prior to hospitalization, but didn't reported.
<u>Medical therapy prior to hospitalization:</u> only 20% of pts received ASA, 5.4% P2Y12, 14, 3% statins, 33.4% ACE inhibitors and 13.5% BB. <u>Entrance to the PCI center</u>**:** 30.3% self reported themselves directly to PCI center, from those who searched for medical help (EMS or emergency centers, only 20% were transported directly to PCI center, 48.8% had stopped in non PCI hospital). Time to PCI center: only 20.2% get in to PCI center in the first 2 hours of symptom onset. 39.4% in 2-6 hours, 13.2% in 6-12h, 9.5% in 12-24h and 17.6% missed the first 24h. Chi square distribution was statistically significant (p < 0.000), with the majority of pts in each time frame groups (>2h from symptom onset), being in the group that stopped in local hospital. 43.7% of total number of pts in the time frames >2 h stopped in the local hospital, 14.8% of 20.2% of pts that came in the golden two hours were either self-reported, either without stop in local hospital. <u>ACS treatment</u>**:** STEMI pts 92.6% were treated with PPCI, 3.9% had pharmacy-invasive approach or facilitated PCI, and 3.5% were medically treated. 61.1% received PPCI during the first 6 hours of symptom onset (Pearson chi square 0.035). NSTEMI and APNS pts were treated in the majority of cases (85.2%) with PCI during the first 24 h.of hospitalization, but only 38% of them entered PCI center in the first 6 h of symptom unset. <u>Hemodynamic parameters:</u> mean HR 84±21.7, and SBP 137±27.8, with females having significantly higher HR 87±21.7, males 83±21.8 (p 0.025), and SBP 137±27.8, with no significant differences between genders. <u>In-hospital morbidity</u>**:** 6.4% of pts had symptoms of acute heart failure at the moment of hospitalization, 3.2% developed pulmonary edema and/or cardiogenic shock. 5.6% A-V dyssotion, 5.6% supraventricular, and 7.5% ventricular arrhythmias. 1.6% had early thrombotic complications necessitating recoronarography, and 0.8% had ischemic stroke. The most frequent were hemorrhagic complications 11%, 3.8% of which were major bleeding, one nonfatal intracranial hemorrhage, and 1.7% GIT bleedings. In-hospital mortality was 4.3%. Angiography data:

94.9% received coronary angiography, 3.2% had infarction in the absence of significant stenosis, 53.7% had one diseased vessel, and the rest had two and ≥ three vessel disease as follows (20.4% and 22.6%0.0). <u>In-hospital therapeutic treatment</u>**:** 89.2% received mechanical reperfusion therapy **(**61.1% of stent implantation, in 20.3% with addition of thromboaspiration, 7.9% dilatation without stent implantation, but 1% of them with thromboaspiration), and 4.3% received fibrinolytic therapy as reperfusion strategy. Majority of pts received UH, only 9.2% were treated with LMWH, majority of pts received 600mg (84.2%), and 12.4% 300mg loading dose of Clopidogrel, 3.8% received IIBIIIA blockers. In uni and multivariate analysis we identified predictors of in-hospital mortality: gender (0.074), age 0.005, HTA as negative predictor (-0.014), HR 0.006, SBP as negative predictor -0.051, type of PCI procedure (0.019) (the lowest in PPCI/stenting patients), HR (0.066), SBP (0.051).

Conclusions:

EMS has to be organized in such manner that STEMI pts have to be transported directly to PCI center. Smoking and HTA are the most frequent risk factors. NSTEMI/APNS patients tend to seek for medical help later than STEMI pts. We registered underuse of medical therapy prior to ACS, having in mind that 60% reported HTA, nearly 30% diabetes, and 30% reported angina pain in the last two weeks prior to hospitalization. We registered relatively low rate of in-hospital mortality. Independent predictors of in-hospital mortality were: age (p=0.005) (advanced), gender (male) (p=0.074), HTA (negative correlation p=0.014), PCI (when performed PCI and stenting), SBP with negative correlation (r=0.033, p 0.005), and PCI (type).