Abstract: P493

Impact of copeptin on diagnosis, safety, and short-term prognosis of acute coronary syndromes at Vilnius university hospital clinics

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Aims: Our aims were to describe the safety of the early rule-out strategy using combined testing of copeptin and high sensitivity troponin at admission of patients with signs and symptoms suggestive of acute coronary syndrome (ACS) and to monitor diagnoses, clinical course and outcome of these patients.

Introduction: Although chest pain is a common presenting symptom in emergency departments, its clinical management is highly variable and depends on physician as well as facility. Many of these patients spend a great deal of time in the Emergency Department (ED), although most are later determined to have non-ischemic causes of their symptoms. In times of increasing crowding of Emergency Departments, an early identification of low risk patients is of great importance and new studies suggest copeptin - the C-terminal portion of Pro-Vasopressin – could improve diagnosis of ACS.

Methods: This prospective study was a part of proCORE registry. Data included patients admitted to the Emergency Department (ED) with symptoms suggested ACS, but no ST-elevation on initial ECG. The various characteristics were registered: age, sex, time spent in the ED, etc. High sensitivity troponin and copeptin were obtained at the admission. Two groups of patients were defined: first one- primary discharge after rule-out and second group- no rule out and secondary discharge. The primary endpoint was all-cause mortality at 30 days.

Results: All 74 cases included in the registry in our center were analysed. Median age in both groups was 66 (33-84) years old with 56.8 % (n=42) patients being male and 43.2 % (n=32) female. History of comorbidities, cardiovascular diseases, risk factors (family history, arterial hypertension, cigarette smoking, Diabetes mellitus, hypercholesterolemia) were similar in both groups. Leading symptom was chest pain in the majority of patients 83.8% (n=62). Median GRACE scores were higher in the second group (88 vs 116, p=0.003). Median troponin level in primary discharge group were 3ng/l, in second group 16ng/l, p=0.000. Median copeptin levels in the first group was 2.3pmol/l and 9.1 pmol/l in the second (p=0.000). Overall hospital admission rate was 40.5% (n=30). Cardiac diagnoses received in group 1 were 65.4 % (n=27) and in group 2 75,0% (n=36), p=0.381. Acute Coronary syndromes were diagnosed in 32.4% (n=24) and all in the second group. 30-days mortality in the first group was 0% (n=0) and in the second group 4.3 % (n=2), p=0.291.

Conclusions: Rule-out patients received a cardiac diagnosis in fewer cases. Among rule-out patients no acute coronary syndrome was diagnosed compared to 50% in the patients with secondary discharge. The 30-days-mortality was 0% among rule-out patients. Therefore, safety and efficiency of the algorithm was confirmed in the real life setting.