

## THE IMPACT OF DEPRESSION ON THERAPY OF ACUTE CORONARY SYNDROME

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Epidemiological studies suggest that besides classic factors for the development and prognosis of acute coronary syndromes, depression and anxiety are important as well. Depression and coronary heart disease occur simultaneously in the same person due to a common pathophysiological mechanism, possible genetic dysfunction of serotonin receptors. The aim of the paper was to examine the incidence and severity of the depression and anxiety in acute coronary syndrome patients and to examine whether the presence of depression had an impact on the decision for invasive or non-invasive approach.

We included 38 patients (23 males and 15 females, aged  $63.5 \pm 10$  years) hospitalized in the Clinic for cardiology Clinical Centre Niš, with the acute coronary syndrome (ACS). The patients were divided according to the type of ACS therapy: the invasive group (28 patients) with percutaneous coronary intervention and stenting and the second group of patients who underwent angiography without indication for stenting (non-invasive group of 10 patients). The anamnestic and clinical data, biomarkers of cardiac necrosis, standard laboratory, lipid profiles, and markers of inflammation were done. To examine the levels of depression and anxiety we used different questionnaires: The general questionnaire for socio-demographic data and the data about the disease progression, Beck Depression Inventory – questionnaire to measure the intensity of the depressive symptoms and State and Trait Anxiety Inventory (STAI) questionnaire to measure the intensity of actual anxiety (state anxiety), and anxiety as a personal characteristic (trait anxiety), Health Locus of Control – the questionnaire which measures where a patient puts the centre of the control of the disease. According to the level of depression, we formed four groups - 19 patients without depression (50 %), mild: 10 patients (26.3 %), moderate: 8 patients (21 %), and with severe depression: 1 patient (2.7 %).

The most common risk factors were: hypertension with 81.6 %, lipid disorders 68.4% and family history of cardiovascular disease in 52.6 %. Cardiovascular risk factors did not differ significantly between genders. Previous coronary artery disease (CAD) had 42.1 % hospitalised patients with ACS with a similar proportion of patients of both genders. The STEMI was the most common clinical presentation of ACS in 47.4 % of patients. The stenting procedures were performed in 28 (73.6 %) patients and medicamentous therapy in 10 (26.4 %). The patients in non-invasive group were significantly older, more commonly obese, hyperlipidemic, with positive family history for CAD, with anamnestic data about previous AP and heart failure, and with higher heart rate. The presence of depression, especially a moderate level of depression was more common in non-invasive group (90.0 % and 50.0 % prospective) than in invasively treated group (35.7 % and 10.7 %) ( $p < 0.01$  and  $p < 0.05$ ). The correlation was found between the duration of hospitalization and the degree of hyperglycemia and depression and anxiety that exacerbate the progression of CAD.

Increased depression leads to increased anxiety and higher blood glucose levels - both additional risk factors for the progression of CAD. Patients with depression more likely had actual anxiety and will be treated by non-invasive medicamentous therapy for ACS. Increase in anxiety in patients diagnosed with the CAD increases the risk of MI, lethal outcome of coronary disease.

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