consequences. Thus, conservative treatment of ovarian torsion is encouraged with gradual detorsion of the organ.

Key words: ovarian torsion, ischemia-reperfusion injury, ROS

295. NATRIURETIC PEPTIDES IN THE PATHOGENESIS AND DIAGNOSIS OF CHRONIC HEART FAILURE

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Introduction. Chronic heart failure (CHF) is a severe health problem today, which is the most common cause of death globally. Half of the patients primarily diagnosed with heart failure, will die within 4 years, whereas those with severe heart failure will die within a year, in more than 50% of cases. This problem underpins the importance of an early diagnosis and risk stratification of the patients suffering from heart failure.

Aim of the study. The aim of the study was to determine the role of the natriuretic peptide (NP) family in the pathogenesis of chronic heart failure, as well as the biomarker potential in early diagnosis of the disease.

Materials and methods. A descriptive review was carried out, based on the scientific articles published during 2016-2020 in journals from PubMed and Google Scholar databases, by using the keywords "natriuretic peptide" and "chronic heart failure".

Results. The NP system is represented by five structurally similar peptides: ANP – atrial natriuretic peptide, BNP – brain natriuretic peptide, CNP – C-type natriuretic peptide, and DNP – dendroaspis natriuretic peptide. NPs interfere with blood pressure regulation by decreasing systemic vascular resistance, increasing the cardiac output, regulating the hydroelectrolyte balance by promoting natriuresis and diuresis due to neuro-hormonal suppression (renin-angiotensin-aldosterone system, norepinephrine, and endothelin-1) and exhibiting anti-proliferative and anti-fibrotic effects. Thus, the NPS are counteracting the main pathophysiological mechanisms found in patients with HF. The plasma NP levels can be used for initial diagnosis, especially in non-severe clinical presentation. Patients with normal NP levels are less likely to develop HF. B-type natriuretic peptide (BNP) and N-terminal propeptide of BNP (NT-proBNP) are the key members of the natriuretic peptide family, which have been recommended as gold standard biomarkers for heart failure diagnosis and prognosis (2016 ESC Guidelines on diagnosis and treatment of acute and chronic heart failure). 35 pg/ml for BNP and 125 pg/ml for NT-proBNP are the upper reference values in non-acute cases. The following factors should be considered when interpreting the BNP values: age (elderly people have higher BNP values), concomitant therapies and renal function. High NP values might be found in other cardiac and non-cardiac disease.

Conclusions. In case of CHF, BNP and NT-proBNP assessment is the most significant marker in diagnosing and stratifying the severity of the disease at its onset, since high levels of NP leads to recurrent hospitalization and sudden cardiac arrest.

Key words: chronic heart failure, natriuretic peptides, biomarkers