

**Conclusions.** Ovarian torsion and its detorsion involve reactive oxygen species production, that determines lipid peroxidation. Controlled detorsion can diminish this process and decrease the level of MDA that is produced.

**Key words:** ovarian, torsion, malondialdehyde

## **264. EXPERIMENTAL MYOCARDIAL INFARCTION AND INTERLEUKINE-6 MODIFICATIONS**

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**Introduction.** The inflammatory response, manifested as acute necrosis, is induced by ischemia in infarcted myocardium. Myocardial remodelling is one of the complications, which leads to arrhythmias and heart failure. Interleukine-6 (IL-6) is a cytokine involved in tissue remodelling, as well as in the pro- and anti-inflammatory response pathways. Post infarct it promotes myocyte hypertrophy and myocardial dysfunction. In addition, IL-6 inhibits cardiomyocyte apoptosis.

**Aim of the study.** To evaluate serum and homogenate IL-6 level in isoproterenol-induced acute myocardial infarction.

**Materials and methods.** Forty adult male rats (*Rattus albicans*) were divided into five groups: L1 – intact (n=11); L2 – control animals which were administered NaCl 0.9% (n=11); L3 (n=6), L4 (n=6) and L5 (n=6) included the animals with experimental myocardial infarction, reproduced by injecting subcutaneously isoproterenol hydrochloride 100 mg/kg (one dose). Rats were anesthetized, and sacrificed at 6h, 24h and 7 days respectively. For IL-6 assessment, we use standard Rat IL-6 ELISA kit (Beijing 4A Biotech Co. Ltd). The results were analyzed by Kruskal-Wallis nonparametric test using SPSS version 23. Discussion

**Results.** The investigated groups have not presented any statistically significant difference neither in homogenate IL-6 content ( $p = 0.098$ ), nor in serum IL-6 level ( $p = 0,322$ ). At the same time, higher amounts of both homogenate and serum IL-6 were registered in experimental groups compared to intact and control groups.

**Conclusions.** Inflammation plays a significant role in the pathogenesis of myocardial ischemic injury. Infarcted myocardium increases the production of IL-6. Increased IL-6 levels for a prolonged time can indicate associated inflammation and elevated risk of second myocardial infarction. Serum IL-6 level following AMI can be used for the inflammatory process monitoring. In order to prove it the research should be enlarged, and statistical correlations will be performed.

**Key words:** myocardial injury, cytokine, IL-6

## **LABORATORY OF TISSUE ENGINEERING AND CELL CULTURES**

### **265. THE ETHIOLOGY OF THE AVASCULAR NECROSIS OF THE FEMORAL HEAD**

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**Introduction.** Avascular necrosis (AVN) is the disease characterized by a vascular insult to the blood supply of the femoral head, which can lead to necrosis of the spongiform bone followed by