

## DISORDERS OF COAGULATION STATUS AND HAEMOSTASIS AS PROGNOSTIC PARAMETERS OF IMMEDIATE AND EARLY RESULTS AFTER SURGICAL MYOCARDIAL REVASCULARISATION

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Surgical myocardial revascularization is one of the most commonly performed surgical procedures in the world. Over time, with the development of technology and modern diagnostic procedures, as well as the advancement of surgical techniques, the mortality rate for elective uncomplicated cases has fallen to below 2%. Nevertheless, despite the exceptional development of the surgical techniques, the rate of postoperative complications, that can compromise the patients, is over 10%. The aim of this study was to define a group of patients with an increased risk of postoperative complications depending on the disorders of coagulation status and haemostasis.

Twenty eight patients who underwent surgical revascularization of the myocardium were included in this prospective, non-randomized study. The study was conducted at the Clinic for Cardiac Surgery, Clinical Center Nis, from January to April 2017. Preoperatively as well as 3 hours, 24 hours, 48 hours, 3 days, and 5 days postoperatively, the following parameters were determined: blood count, inflammation parameters (C reactive protein, presepsin); coagulation status (prothrombin time (PT), International Normalized Ratio (INR), activated partial thromboplastin time (APTT), fibrinogen, anti-thrombin III, D dimer).

The only preoperative independent prognostic parameter for increased postoperative drainage was INR. Activated clotting time (ACT) was an independent postoperative prognostic parameter of increased postoperative drainage, probably due to delayed or prolonged heparin activity. Inflammation parameters showed no association with the onset of postoperative complications. In relation to patients without bleeding, in patients with bleeding, significantly higher values of urea and the difference in APTT values, preoperatively and at the end of the monitoring period, were detected. Multivariate logistic regression analysis, confirmed the difference in APTT values preoperatively and at the end of the monitoring period, as the only factor, significantly associated with the risk of bleeding. Multivariate linear regression analysis, confirmed the value of the urea, as the only factor significantly associated with the change in total allogeneic transfusion value. Increase in urea levels is associated with an increase in the total amount of allogeneic transfusion. Correlation analysis showed that the increased number of days in the intensive care was significantly associated with female gender, number of grafts, prolonged ECC, clamping time, hematocrit (HCT), PT, INR preoperatively and at the end of the follow-up period.

Surgical myocardial revascularization is a safe method with a minimal morbidity rate. Using of modern methods for the preoperative monitoring of haemostasis may significantly reduce the risk of postoperative bleeding and the need for transfusion of red blood cells and other blood derivatives.

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