THE RISKS OF THROMBOTIC AND BLEEDING COMPLICATIONS AFTER ORTHOPEDIC SURGERY

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Introduction. Knee and hip replacement operations are rapidly increasing in frequency. Despite the significant consequences of perioperative bleeding, there is a lack of information about baseline risk factors. This complicates the preoperative evaluation and makes it difficult to assess the thrombotic and bleeding risks of surgery.

Aim. The aim of study is to investigate the risk factors for bleeding and thrombotic events in patients undergoing orthopedic surgery.

Methods. We performed analysis of 68 patients < 60 years old, (I group) 61–75 years old (II group), > 75 years old (III group), undergoing hip or knee replacement surgery in Vidzemes Hospital and Madonas Hospital, Latvia between January 7, 2015 and May 14, 2015. Bleeding risk was evaluated based on HAS-BLED scale and usage of medications prone to cause bleeding due to raising concentration of anticoagulants (Wessler JD et. al JACC 2013; 61(25):2495-2502) and thrombotic risk was evaluated based on CHAD-VASC and low, medium and high venous thromboembolism risk factors by (S. Konstantidines, A. Torbicki, G. Agnelli et al. 2014 ESC Guidelines on the diagnosis and management of acute pulmonary embolism).

Results. Of total 68 patients 70.6% underwent hip and 29.4% knee surgeries. 68% are women and 32% are men. Using HAS-BLED scale for bleeding 41.2% of patients had 2 points, 32.4% – 1 point, 16.2% – 0 points, 7.45% – 3 points and 2.9% – 4 points. The medications prone to cause bleeding due to raising concentration of anticoagulants are using 19% of all 68 patients. Using CHAD-VASC scale almost one third of patients (27.9%) had 3 points, 21% – 1 point, 19% – 2 points, 15% of all patients – 4 points, 10% – 0 points, 4% – 5 points, and 3% had 6 points. Using HAS-BLED scale in I group mode is 1 point, II group mode is 2 points and in III group mode is 2 points. Using CHAD-VASC scale in I group mode is 1 point, II group mode is 3 points and III group mode is 4 points. Correlations is statistically distinguished between CHAD-VASC scale and age of patients (P = 0.064). Comparing the age of patients with low, medium and high thrombotic risk factor scale: all have at least 1 high risk factor of thromboembolic episode due to orthopedic surgery which is one of the criteria evaluating the risk factors. In I group: low risk factors are less common than in III group, medium risk factors in I group are more or less compatible with II group and the most medium risk factors have III group.

Conclusions. 1. There is greater risks of thrombotic episodes after orthopedic surgeries in III group rather then in younger participants. 2. There is no significant difference of bleeding risk between groups II and III. 3. Bleeding risk factors are significantly lower in the I group.