Tactical Approaches To Revascularization Of The Aorto-iliac-femoral Segment

Anastasia Artemova¹, Michael Ivanov¹, Nikolay Lukyanikhov², Anastasija Gorovaya¹, Farida Shaihova¹, Laura Brtsieva¹, Nikolay Shchemerov¹, Victoria Karsanova¹, Irina Kuznetsova¹, Yulya Shelukhina¹, Tatyana Potykalova¹.
¹North-Western State Medical University named after I.I. Mechnikov, Saint Petersburg, Russian Federation, ²I.M. Sechenov First Moscow State Medical University, Moscow, Russian Federation.

Relevance: Traumatism of open surgical interventions and, in some cases, the inability to conduct endovascular revascularization techniques, often complicates the choice of aorto-iliac-femoral reconstruction technique.

Aim: determine the results of various methods of revascularization in atherosclerotic lesions of the aorto-iliac-femoral segment.

Materials and methods: 192 patients with atherosclerotic lesions of the aorto-iliac-femoral segment were examined and reconstructive surgeries were performed. According to the type of revascularization performed, the patients were divided into 3 groups: 85 patients which underwent open surgical interventions (OO) composed the first group; patients from the second group (63 patients) underwent endovascular interventions (EI); patients included in third group (44 people) underwent hybrid surgical interventions (GI).

In the analyzed observations, the duration of the operative intervention, the amount of blood loss, the size of the bed-day and the duration of stay in the intensive care unit, the deviation of blood pressure and blood glucose level, as well as the primary patency of the operated segment, the frequency of complications, the need for repeated reconstructions in the early postoperative period were recorded. Statistical processing of the data was performed using "STATISTICA-10" software package. The research results are presented as M±m, the difference was considered significant at p<0.05.

Results: Critical ischemia and lesions (type C/D) according to TASC II classification were more often noted among patients who underwent hybrid interventions (p<0.05). Hybrid operations were characterized by a shorter duration of both open (OO—222.36±66.07min, GI—149.67±51.25 min), and endovasal (EV—108.19±49.37min, GI—77.58±27.79min) stages (p<0.05). Hybrid interventions were characterized by less blood loss than open methods (p=0.001). Hybrid operations showed slight need for repeated surgical intervention (χ²=8.396, p=0.01) and absence of amputations (χ²=6.956, p=0.03).

Conclusions: Hybrid interventions demonstrated acceptable results in the early stages of revascularization of the aorto-iliac-femoral segment.