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## ULTRASTRUCTURAL CHARACTERISTICS OF MUSCULAR TISSUE DURING SURGICAL TREATMENT OF PATIENTS WITH III DEGREE CHRONIC ISCHEMIA OF LOWER LIMB

**ABSTRACT. Background.** Of particular note is the analysis of ultrastructural features of compensatory repair capabilities in terms of muscle ischemic injury developing in several ways: 1) direct induction of angiogenesis; 2) increased survival of muscle fibers; 3) mediated stimulation of muscle-typical differentiation; 4) resistance to apoptotic mechanisms. **Objective.** The purpose of research was the ultrastructural analysis of anterior tibial muscle in patients with III degree chronic ischemia of lower limb after direct, indirect and composite revascularization in near-term and long-term postoperative periods. **Methods.** Patients have been divided into three groups: 1) 37 patients after femoral-tibial reconstruction; 2) 57 patients after indirect revascularization with autotransplantation of bone marrow; 3) 50 patients after composite revascularization of distal part of lower limb. The observation was carried out in the near-term postoperative period and in 2 years. Ultrastructural study of tissue samplings of anterior tibial muscle taken between superior and middle one thirds was carried out. **Results.** It have been determined that direct revascularization causes the significant improvement ultrastructure of muscle fibers of anterior tibial muscle in all age groups during 6 months after operation, however does not provide the stabilization of positive changes in long-term postoperative period. Indirect revascularization does not change significantly structurally-functional condition of components of muscle in near-term postoperative period, however causes the stable normalization of parameters of tissue components due to initiation of neovasculogenesis at patients till 75 years. **Conclusion.** Composite revascularization allows to receive near-term normalizing effect concerning the studied ultrastructural criteria and to provide its stabilization in the long-term postoperative period.

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