Comparative Evaluation of the Effects of High-Intensity and Low-Intensity Laser Radiation on Microcirculation Among Patients with Knee Arthritis

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The objective of the present study was to evaluate on a comparative basis the effects of high- and low-intensity laser irradiation on the state of microcirculation among the patients with knee arthritis. Material and methods. Sixty patients with knee arthritis aged from 40 to 75 years old were examined. The patients were randomly divided into two groups: 1st group (30 patients) received high intensity laser radiation; 2nd group (30 patients) received low intensity laser radiation. As a result of the conducted research it was found that high intensity laser radiation is more efficient and leads to more vivid positive changes in the microcirculation of patients with knee arthritis. The changes in microcirculation were based on the normalization of the myogenic and neurogenic tonus of the arterioles, strengthening oscillation of the endothelial range. As a result of activating local mechanisms of tissue blood flow there occurs adequate modulation of the microcirculatory bloodstream, which is aimed at the elimination of congestive phenomena in the capillary and venular level of the microcirculation bloodstream. We should note that in the long-term more significant were the positive changes in the state of the venular level of the microcirculation bloodstream.