

ELECTROPULSE MUSCLE TONING BY THE VEINOPLUS DEVICE AS A PART OF COMBINATION TREATMENT OF PATIENTS WITH OBLITERATING ATHEROSCLEROSIS OF LOWER LIMBS ARTERIES

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Aim of the study: This work contains a preliminary study of efficiency of Veinoplus portable apparatus in combination treatment of obliterating atherosclerosis for patients with chronic lower limbs ischemia. The received data indicate clinical efficiency of the device in combined therapy of chronic lower limbs ischemia.

Material and methods: 31 patients with different grades of chronic lower limbs ischemia received conservative vasodilating (Trental) infusion, and other pharmacological treatments. Hyperbaric oxygenation sessions were added for 17 patients. 13 patients underwent reconstructive operations on main arteries of lower limbs. Electropulse stimulation was also applied to the affected extremity muscles using the Veinoplus device in the treated group (21 people). The sessions were conducted during infusion vascular therapy (to improve perfusion of preparations in limbs tissue). The sessions were conducted 2 to 5 times a day.

Results: The results were estimated on the 1st, 5th, 10th day from the beginning of the therapy, then every 5 days (for patients after performing reconstructive surgery on the affected extremity arteries). In the treated group, on the 5th day, 14 patients (66.67%) reported abatement of the pain syndrome at rest and during minimum walking, increase of the painless walk distance by 100 meters on the average (versus 50 m in control group). On the 10th day, 19 patients (90.48%) reported a positive effect: absence of pain in the affected extremity at rest (for 8 patients, versus 3 patients in the control group), reduction of trophic disorders sizes (for 5 patients versus 1 patient in the control group). Regarding the increase of the painless walking distance, in the treated group it increased by 300 meters (for 14 patients) and by up to 500 meters (for 5 patients). In the control group, it increased by 100 meters (for 6 patients); by up to 200 meters (for 3 patients) and by up to 300 meters (1 patient). In the treated group, the edema of all 5 patients who underwent surgery decreased by 40% on the 1st day, by 50% on the 5th day, the edemas were eliminated on the 10th day and there were no recurrences of the edemas. In the control group, the edema was the same on the 1st day, decreased by 30% on the 5th day, 5 patients still had edema on the 10th day.

Conclusion:

The Veinoplus electropulse muscle toning apparatus is appropriate for combination treatment of patients with chronic ischemia of lower limbs, especially of patients with critical ischemia (grades III and IV according to Fontaine-Pokrovsky classification). Electric muscle toning by means of the Veinoplus apparatus during treatment of arterial pathology of patients with chronic ischemia intensifies the effect of traditional therapy methods (vasodilating infusion therapy, hyperbaric oxygenation) and facilitates fast formation of collaterals. Portability, simplicity and safety of the technology make it possible to use the Veinoplus device in the outpatient setting.

Keywords: obliterating atherosclerosis, fitness walking, electropulse muscle toning, Veinoplus device.