

The results of thermal treatment of foot and calves chronic ulcers in patients with diabetes and vascular diseases

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Chronic foot and leg ulcers are a serious medical problem requiring long-term treatment, often complicated by amputations and long-term disability. Balneological and physical methods complement the treatment of those patients who have completed optimal vascular and surgical treatment. The most common causes of ulcers are atherosclerosis, diabetes and venous insufficiency. In the thermal treatment we can effectively improve the treatment results using natural gases such as carbon dioxide and ozone, physical methods, kinesitherapy and treatment of diseases causing ulceration.

The aim of our research was to evaluate the results of treatment of ulcers in patients with diabetes, atherosclerosis and venous insufficiency in the thermal center conditions.

The material is a group of 46 patients with ulcers, in this group there were 18 women, the mean age was 63.5 years \pm 9.8. The number of patients with diabetic, atherosclerotic and venous insufficiency type of ulcer was 56.5 and 17.4 had grade II, and another 3/4/5 respectively 23.2 / 14.2%. Treatment in addition to standard surgical care and antibiotic therapy included ozone-therapy, carbodioxide-therapy, kinesitherapy and physical treatments (pulsed magnetic field and laser therapy). The average duration of treatment was 46 days. The results of the treatment were assessed on a four-level scale: I complete recovery, II improvement with chance to full recovery, III minor improvement, and IV lack of the improvement. In addition, patients were evaluated for changes in metabolic control of diabetes, and lipid parameters were also evaluated.

Full recovery was achieved in 32.9 improvement in the prognosis of recovery, small improvement in 24,6 of patients. In the subjective evaluation questionnaire, all patients reported improvement - generally reducing pain and swelling. In additional studies, the statistically significant level of total cholesterol, LDL-cholesterol, triglycerides and fibrinogen decreased.

Based on the obtained results, we conclude that thermal treatment is a valuable method that improves treatment outcomes in patients with vascular and diabetic ulcers. For the full assessment of the method, it is necessary to plan further randomized trials comparing the thermal treatment to other reference methods of treatment of chronic foot and cules ulcers.