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Efficiency of Non-Medicamental Complex Rehabilitation of Patients With Chronic Venous Diseases of The Lower Limbs and Obesity

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Research Objectives

To evaluate the effect of complex rehabilitation of patients with Chronic Venous Disease (CVD) of the lower extremities and obesity on reduction fat mass and clinical manifestations of CVD.

Design

Complex procedures carried out 5 times a week, duration 2 weeks.

The malleolar volume, waist circumference (WC), hip circumference (HC) and bioimpedansometry (BIM) were measured before and after treatment.

Setting

Clinic of National Medical Research Center for Rehabilitation and Balneology of the Ministry of Health of Russia, which provides specialized inpatient and polyclinic medical care.

Participants

212 obese patients (30 men, 182 women), average age - 56.3 ± 9.3 years. Among 212 obese patients, 165 had CVD.

Interventions

Complex included low-calorie diet, physical exercises in the pool using a Kneipp track, underwater massage shower, intermittent pneumatic compression carried out 5 times a week.

Main Outcome Measures

After treatment, the malleolar volume decreased from 26.88 ± 0.47 cm to 24.92 ± 0.42 cm, there was a decrease in body weight from $91.64 \pm 14,98$ to 88.26 ± 13.61 kg. WC and HC decreased from 97.25 ± 12.64 to 94.57 ± 10.85 cm and from 114.36 ± 11.21 to 112.88 ± 9.45 cm. According to BIM, fat mass decreased by 7.02%; lean mass decreased by 3.84%; total fluid and extracellular fluid decreased by 4.8% and 5.5% .

Results

Non-drug treatment of patients with obesity and CVD leads to decrease in body weight, fat mass, total fluid and extracellular fluid. Movement in the water improves the muscle pump of the lower leg and the ankle range of motion.

Conclusions

The proposed rehabilitation complex for patients with obesity and CVD reduces body weight by reducing fat mass, eliminates edema by reducing the extracellular fluid. Reduction of edema of the lower extremities leads to decreased hyperpigmentation and lipodermatosclerosis of the leg skin.

Author(s) Disclosures

No conflict of interest.

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Key Words

Chronic Venous Disease; Obesity; Fatty Mass Bioimpedance Measurement; Swelling Of The Legs

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