



VENOUS STUDIES

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ELECTRICAL MUSCLE STIMULATION WITH VEINOPLUS® DEVICE IN THE TREATMENT OF VENOUS ULCERS

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Objective: The aim of the study was to analyze the results of the electrical muscle stimulation (EMS) usage in patients with venous ulcers developed on top of a post-thrombotic syndrome (PTS).

Methods: Sixty patients (60 legs) with active venous ulcer (C6EsAsdpPr according to CEAP classification) were divided into two groups. In addition to the background therapy consisting of a standardized compression with ULCER X and intake of micronized purified flavonoid fraction (MPFF 1000 mg daily), all the patients in the main group underwent EMS with VEINOPLUS® V.I. for at least 3 times a day. Follow-up examinations were performed on days 30, 60 and 90. These included pain severity assessment with 100-mm Visual Analogue Scale (VAS), disease severity measurement with VCSS (Venous Clinical Severity Score) and ankle circumference above malleolus, as well as recording number of healed venous ulcers.

Results: At day 90 pain severity was reduced in both main and control groups. However, according to VAS pain reduction rates were significantly higher in patients of the main group (from 8.7 ± 0.6 to 1.9 ± 0.3 in the main group and 8.4 ± 0.6 to 3.9 ± 0.5 in the control group). At the end of the study, ankle circumference decreased from 270.9 ± 4.6 mm to 257.1 ± 4.2 mm in the main and from 269.7 ± 5.3 mm to 263.4 ± 5.2 in the control group. VCSS before treatment was 7.3 ± 0.6 in the main group and 6.8 ± 0.5 in the control group. By day 90 VCSS significantly decreased to 2.3 ± 0.4 and 4.6 ± 0.5 in the main and control groups respectively. Healing rates were significantly higher in the main group. On day 90, the number of open venous ulcers in the main group was 3 times lower than in the control group (4 vs. 12).

Conclusion:

EMS demonstrated high efficacy and good tolerability and provided significant reduction in pain severity, VCSS score and ankle edema, as well as a 3-fold increase in the number of healed venous ulcers.