

12. CLINICAL OUTCOMES OF ENDOVENOUS LASER TREATMENT (EVLT) FOR PRIMARY CHRONIC VENOUS INSUFFICIENCY

Author: Cujbă Valeria

Scientific adviser: Vasile Culiuc, MD, Associate Professor, Department of General Surgery-Semiology no. 3, Vascular Surgery Clinic, *Nicolae Testemitanu* State University of Medicine and Pharmacy of the Republic of Moldova.

Introduction. Endovenous treatment, in particular thermal ablation, has become the preferred approach in the management of primary chronic venous insufficiency (CVI). Moreover, endovenous laser treatment (EVLT) is recommended by current guidelines as a first choice curative option for varicose veins.

Aim of study. The purpose of the study was to assess the early and long-term clinical results of EVLT applied for varicose veins of the lower limbs.

Methods and materials. The study was conducted at the Chair of General Surgery nr.3, SUMPh “*Nicolae Testemitanu*” (Chisinau, Republic of Moldova), and included 88 patients with primary CVI. Female patients accounted for the vast majority – 79.54% (n=70); while the age of the subjects ranged from 22 to 72 years, median value – 41 (25%-75% IQR 30-56) years. Seven (7.95%) patients were hospitalized with bilateral varicose veins, the study group thus comprising 95 limbs. Nine (10.22%) subjects had active venous leg ulcer. The primary etiology of CVI was confirmed in all patients by duplex scanning. Incompetence of great saphenous vein was diagnosed in 85 (89.47%) cases, small saphenous vein demonstrated pathological reflux in 6 (6.3%) cases, while incompetence of both saphenous veins has been identified on 4 (4.2%) limbs. EVLT was performed under local tumescent (n=40; 45.45%), spinal (n=27; 30.68%) or general (n=21; 23.86%) anesthesia. In 69 (72.63%) cases endovenous access was achieved by ultrasound-guided puncture in the upper third of the calf. In another 26 (27.36%) cases was practiced high ligation with subsequent retrograde passage of the bare-tip laser fiber towards the distal sense. Thermal ablation was done using diode laser, the energy being emitted in a continuous or pulsed regime. In 67 (70.52%) cases EVLT was associated with stab avulsion of varicose tributaries. Early clinical outcomes were evaluated one month postoperatively. Long-term results were assessed over 5 up to 12 years after endovenous treatment, median value – 8 (25%-75% IQR 7-10) years. Patient satisfaction, changes in the venous clinical severity score (VCSS), rate of leg ulcer healing and frequency of recurrent varicose veins were considered as endpoints.

Results. Eighty-four (95.45%) patients expressed their satisfaction with the treatment outcome. In the early postoperative period there was one local wound complication and 6 (6.31%) cases of isolated thrombophlebitis of tributaries. Mean VCSS was found to decrease compared to preoperative level: 3 ± 2.51 versus 7.12 ± 4.11 points ($p < 0.0001$). Healing rate of venous leg ulcers was 100%. During the follow-up period only 2 (2.27%) patients returned with recurrent varicose veins.

Conclusion. EVLT for primary chronic venous insufficiency ensures a good immediate and long-term clinical outcome, being associated with a high rate of patient satisfaction and a low percentage of postoperative complications.