EVLT IN PATIENTS WITH ADVANCED CVI

Nikolay Donchev¹, Veselin Petrov¹, Angel Angelov¹, Plamen Panayotov¹, Krasimir Ivanov²

¹*Department of Surgery, Medical University of Varna;*

²*Department of General and Operative Surgery, Medical University of Varna*

ABSTRACT

As a result of the trophic changes in the distal third of their shank, patients with Advanced CVI stages are not suitable for conventional stripping. Incisions in areas with disrupted trophics should not be performed, because of the risk of slow wound healing. This paper is based on the results of the endovenous laser treatment (EVLT) of 23 patients with an advanced disease with trophic changes in the distal third of the shank. In all of these patients, incompetent valves of GSV in the shank segment, as well as insufficiency of the perforant veins have been detected preoperatively. This gave us the opportunity to follow the proximal laser ablation of the thigh segment of GSV to perform through the same access point laser ablation of the shank segment in the distal retrograde direction. In all of these patients GSV has been exteriorized proximally over the trophic changes and ante- and retrograde laser ablation has been performed with great results. Retrograde laser ablation has been successful in all cases due to the incompetent GSV valves in its shank segment. Thus, without access to an area of disturbed trophicity, the low vein-venous reflux is effectively stopped.

Keywords: *endovenous laser, trophic changes*

BACKGROUND

The surgical treatment of the varicose disease amid swelling lipodermatosclerosis, skin atrophy, angiodermitis, or trophic ulcers is oftentimes accompanied by postoperative complications. Opportunities to affect the reflux on all levels in this contingent of patients and achieve closure of the trophic ulcers are not numerous – ligation of the perforant veins (the Cockett procedure), SEPS. The applicability of EVLT for these patients has not been studied well (1).

AIM

At the Vascular Surgery Clinic, St. Anna University Hospital – Varna, Bulgaria we have set it as our goal to test to what extent EVLT is suitable for the treatment of advanced CVI with trophic skin changes, and whether it could effectively separate the system of deep and superficial veins in this group of patients.

MATERIALS AND METHODS

In the 2007-2009 period 141 laser ablations were performed at the Vascular Surgery Clinic of St. Anna University Hospital – Varna, Bulgaria. Of these, 100 cases were studied. 29 of these cases concerned men (29%) and 71 – women (71%), at the average age of 42.04 ± 1.12 years (16 to 73 years of age).

The scope of patients studied was quite diverse – from CVI Class 2 per CEAP – to CVI Class 6 per CEAP with trophic ulcers of the shank. The distribution per CEAP was as it follows: C2 – 2 patients (2%),

Address for correspondence:

Nikolay Donchev
St. Marina University Hospital of Varna
Medical University of Varna
1, Hristo Smirnenski Str.
9010 Varna, Bulgaria
e-mail: nikolaidon4ev@yahoo.com

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C3 – 75 patients (75%), C4 – 14 patients (14%), C5 – 6 patients (6%) and C6 – 3 patients (3%).

Fig. 1. Distribution of cases according to the CVI stages per CEAP (in %)

Fig 2. (A) A 41-year-old man with trophic skin changes before endovenous laser ablation.
(B) Results 5 month after endovenous laser treatment

In all patients with Advanced CVI (C4, C5, C6) incompetent valves of GSV in the shank segment, as well as insufficiency of the perforant veins have been detected preoperatively. This gave us the opportunity to follow the proximal laser ablation of the thigh segment of GSV to perform through the same access

point laser ablation of the shank segment in the distal retrograde direction. In all of these patients GSV has been exteriorized proximally over the trophic changes and ante- and retrograde laser ablation has been performed with great results. Retrograde laser ablation has been successful in all cases due to the incompetent GSV valves in its shank segment. Thus, without access to an area of disturbed trophicity, the low vein-venous reflux is effectively stopped.

RESULTS

In all patients with trophic ulcers above the medial malleolus and C6 class of CVI a successful clo-

sure of ulcers was observed. The progression of trophic changes was successfully stopped in all patients of the C4 and C5 classes. On the contrary, we have observed in all patients a reduction of the area of skin pigmentation and lipodermatosclerosis. The laser treatment conducted had also effectively reversed

*Fig. 3. (A) A 41-year-old woman with angioidermatitis before endovenous laser ablation.
(B) Results 8 months after endovenous laser treatment*

*Fig. 4. (A) A 51-year-old man with varicose veins and skin pigmentation before endovenous laser ablation.
(B) Results 2 months after endovenous laser treatment*

Fig. 5. (A) A 50-year-old man with varicose veins and skin pigmentation before endovenous laser ablation. (B) Results 4 months after endovenous laser treatment

the syndrome of swelling. All patients of the C3 class had either passed into the C0 class, or had been completely cured.

The advantage of EVLT is the ability to minimize the number of incisions in the removal of the vertical reflux. The use of EVLT in patients at the advanced stage of the disease with trophic skin changes proves to be an efficient method for the treatment of CVI.

CONCLUSION

The results obtained from the use of EVLT in the treatment of patients with advanced CVI with trophic skin changes allows us to recognize the effectiveness and undeniable advantages of this new minimally invasive methodology, which is turning into the method of choice for this group of patients.

REFERENCES

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