

Endoluminal thermal ablation of the great saphenous vein (GSV)

insufficiency Laser and radiofrequency results after five years

F. Sporbert^{1,2}; C. Zollmann²; P. Zollmann³; J. Veltman^{2,3}; A. Gräser⁴; I. Berger²; E. Rabe¹

¹Department of Dermatology, University of Bonn, Bonn, Germany; ²Post-Carré Practice for Venous and Dermatological Diseases, Jena, Germany; ³Post-Carré Surgical Centre, Jena, Germany; ⁴Bundeswehr Central Military Hospital Koblenz, Koblenz, Germany

Summary

Objective: To evaluate and compare the five- year outcome after treatment of a varicose GSV by endovenous thermal laser ablation (EVLA) and radiofrequency ablation (RFA). **Methods:** In this non-randomized, prospective study, patients treated in 2007 and 2008 for complete varicosity of the GSV (CEAP: C2–C6) were divided according to the treatment technique used into three groups: RFA (VNUS ClosureFastTM), EVLA 980nm (ELVeS 980TM) and EVLA 1470nm (ELVeS 1470TM). Ultrasound-guided follow-up consultations were conducted 3 days, 3 months, 1 year and 5 years after treatment.

Results: 589 patients with 643 GSVs (223 RFA, 185 EVLA 980, 235 EVLA 1470) were treated under tumescent local anaesthesia. No major complications occurred and minor complications were rare (4.7–12.2 %, $p=0.135$). After 5 years, 86 % (RFA), 90% (EVLA 980) and 93% (EVLA 1470) of the veins were occluded ($p=0.096$). Ultrasound imaging revealed reflux in treated GSVs in 5–8% of cases ($p=0.73$). A second ablation of the previously treated GSV was required in 5 % (RFA), 2 % (EVLA 980) and 2 % (EVLA 1470) of the patients ($p=0.28$).

Conclusion: Endoluminal thermal ablation is an easy, safe and well tolerated method for the treatment of varicosity. RFA and EVLA 1470 are equally effective for vein closure.