

Radiofrequency Endovenous ClosureFAST versus Laser Ablation for the Treatment of Great Saphenous Reflux: A Multicenter, Single-blinded, Randomized Study (RECOVERY Study)

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PURPOSE: The present study was designed to address the hypothesis that radiofrequency (RF) thermal ablation, as represented by the ClosureFAST system, is associated with improved recovery and quality-of-life (QOL) parameters compared with 980-nm endovenous laser (EVL) thermal ablation of the great saphenous vein (GSV).

MATERIALS AND METHODS: Eighty-seven veins in 69 patients were randomized to ClosureFAST or 980-nm EVL treatment of the GSV. The study was prospective, randomized, single-blinded, and carried out at five American sites and one European site. Primary endpoints (postoperative pain, ecchymosis, tenderness, and adverse procedural sequelae) and secondary endpoints (venous clinical severity scores and QOL issues) were measured at 48 hours, 1 week, 2 weeks, and 1 month after treatment.

RESULTS: All scores referable to pain, ecchymosis, and tenderness were statistically lower in the ClosureFAST group at 48 hours, 1 week, and 2 weeks. Minor complications were more prevalent in the EVL group ($P = .0210$); there were no major complications. Venous clinical severity scores and QOL measures were statistically lower in the ClosureFAST group at 48 hours, 1 week, and 2 weeks.

CONCLUSIONS: RF thermal ablation was significantly superior to EVL as measured by a comprehensive array of postprocedural recovery and QOL parameters in a randomized prospective comparison between these two thermal ablation modalities for closure of the GSV.

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Abbreviations: EVL = endovenous laser, GSV = great saphenous vein, QOL = quality of life, RF = radiofrequency, SFJ = saphenofemoral junction, VCSS = Venous Clinical Severity Score

THE treatment of superficial venous disease has undergone dramatic changes during the past decade. Be-

fore this period, elimination of saphenous vein reflux was accomplished surgically (ie, with ligation and strip-

ping) or chemically (ie, with sclerotherapy). Surgical ligation and stripping is associated with complications including hematoma and paresthesia, and has not been well accepted by patients in the United States, who perceive the procedure as risky, disfiguring, and requiring hospitalization with a lengthy convalescence. Additionally, stripping is known to be fraught with recurrences in approximately 50% of treated patients who are followed on a long-term basis (1-3). Sclerotherapy of the saphenous vein, to the contrary, is performed commonly throughout the

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