

significant differences in recurrence rate were reported in the comparison between radiofrequency and laser. AVVQ score improved from  $18.0 \pm 4.1$  to  $4.7 \pm 3.0$  in the radiofrequency group and from  $17.4 \pm 4.6$  to  $3.9 \pm 2.0$  in the laser group ( $P < .0001$ ). VCSS improved from  $6.9 \pm 0.8$  to  $2.0 \pm 1.5$  in the radiofrequency group and from  $7.0 \pm 0.9$  to  $2.6 \pm 1.6$  in the laser group ( $P < .0001$ ). No significant differences between the radiofrequency and laser groups were reported in the AVVQ and VCSS postoperative variation. No significant complications were reported.

**Conclusions:** A 6-cm segmental GSV shrinkage is safe and feasible by both radiofrequency and 1470-nm laser, without significant differences between the two devices. One-year follow-up reported a recurrence rate that is competitive with the traditional ablation of all the GSV trunk, paving the way for innovations both in technology and in strategy.

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### Venous Diameters, Clinical Severity, and Quality of Life: Does Size Really Matter?



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**Objective:** Chronic venous disease (CVD) leads to a significant impact on health-related quality of life (HRQoL). Truncal vein diameter is often recorded as part of the duplex ultrasound assessment and has been used as a measure to ration interventions. Studies have correlated truncal vein diameter to clinical severity and HRQoL scores in small populations, but the relationship is currently unclear. A review is required to synthesize the evidence regarding these relationships to better inform CVD management.

**Methods:** A systematic review was performed. MEDLINE and Embase databases were searched from 1946 to August 31, 2018. Reference lists of included studies were also searched to identify relevant papers.

Database searches (title, abstract, and full-text screens) and reference searches were performed by two independent reviewers. Full-text studies in English reporting on the relationship between great and small saphenous vein diameters and clinical severity or HRQoL scores as measured using validated instruments were included. Excluded were non-English studies; papers reporting only duplex ultrasound findings, clinical severity, or HRQoL without assessing their relationship; and papers focusing on nontruncal superficial veins.

**Results:** Eleven eligible studies were identified, reporting on a total of 2732 symptomatic limbs with C0 or C1 disease and limbs with C2 to C6 disease (range, 22-681). Four studies reported correlations between truncal vein diameter and both clinical severity and HRQoL, whereas seven reported the relationship with clinical severity only. Multiple validated classification systems and instruments were used for both HRQoL (Aberdeen Varicose Vein Questionnaire, Chronic Venous Insufficiency Questionnaire, Venous Insufficiency Epidemiological and Economic Study on Quality of Life/Symptoms, Varicose Vein Symptoms Questionnaire) and clinical severity (Clinical, Etiology, Anatomy, and Pathophysiology [CEAP], Venous Clinical Severity Score [VCSS]). Seven studies reported correlations between vein diameters and CEAP stage, with the majority of studies observing a trend of increasing diameter with increasing clinical severity. Weak correlations were observed in four studies between diameters and VCSS, with one study reporting correlations to individual components of the VCSS. However, no significant relationship between truncal diameters and HRQoL scores was reported in any study included in this review.

**Conclusions:** Whereas more studies are required to improve the available evidence, included studies suggest that truncal vein diameter correlates with disease severity. Truncal diameters appear to be a weak predictor of HRQoL and have no relationship to patients' perceived impact of CVD. As such, vein diameter should not be used as a measure to decide who needs venous intervention.

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