

INVITED COMMENTARY

Radiofrequency Venous Ablation: Not Simple and Not Always Effective!

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The study by¹ reports the success rates of three different radiofrequency devices for great saphenous vein (GSV) ablation. The senior author, who performed all the interventions himself, developed an algorithm (based on the parameters of successful ablation in earlier cases) for re-treating some vein segments depending on their diameter. These differed for each device. This is easy with Venefit (no repositioning required for re-treatment). Conversely, the radiofrequency induced thermotherapy (RFITT) and endovenous radiofrequency treatment (EVRF) catheters deliver energy during “pull back” and must be re-advanced for re-treatment. This might be difficult if vasospasm occurs. Finally, these devices have different tips and methods of energy transfer to the vein wall, presumably explaining the need for individual protocols to deliver desired outcomes. To avoid “experimenting” on patients, manufacturers should establish these parameters before marketing a new device.

For a long time, it was a simple choice: laser or radiofrequency, which, for the latter, meant VNUS ClosureFAST (now Venefit). There are now four commercially available RFA systems, including RFITT and EVRF (investigated in this study), which confirms a similar efficacy of Venefit and RFITT at six months. The manufacturers of EVRF may be disappointed to learn that their device was not particularly effective and seemed to hurt more!

In this study, 115 of 302 (38.1%) patients were excluded because of GSV tortuosity. They were subsequently treated with Venefit to avoid the re-introduction of the EVRF and RFITT devices, as it was perceived that this may be difficult in tortuous veins. Most healthcare providers will only fund one device for vein therapy and there would seem to be little advantage in selecting one that can only treat 62% of patients. While the authors suggest Venefit as the best option for tortuosity, my own experience is that for a very

tortuous GSV the optimum technique is GSV cannulation at the lowest point of reflux with navigation of a hydrophilic guidewire to the saphenofemoral junction (SFJ) facilitated by a Cobra catheter and ultrasound guidance. This allows insertion of a sheath and bare tipped laser fibre to the SFJ more often than can be achieved with the Venefit device.

Personal bias aside, this study confirms that Venefit and RFITT achieve high GSV ablation rates with minimal post-procedure discomfort and improvement in quality of life measures, provided that the algorithm for re-treatment is followed.

In this study, ablation was started 0.5 cm from the SFJ rather than 2 cm (according to the manufacturer’s instructions for use). This did not result in clinically obvious endovenous heat induced thrombosis in the GSV stump, although this was not objectively proven by duplex ultrasound. A potential benefit of this modification is that it might reduce the risk of recurrent varicosities in the territory of an anterior accessory saphenous vein,² but long term follow up will be required.

Based on this study, if RFA is your technique of choice, then Venefit seems the optimum technology for straight-forward truncal vein ablation. The shorter treatment times for RFITT do not amount to a clinically useful benefit.

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