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Foam sclerotherapy vs thermal ablation in treating GSV VaricosE Veins: Which is best according to Randomised Controlled Trials?

G. M. Malouf

Summarizing for Professor Andrew Bradbury, University of Birmingham, UK.

The 2013 UK National Institute for Health and Care Excellence (NICE) issued varicose veins treatment preferences in the order thermal ablation most strongly recommended, then UG foam sclerotherapy, then surgical treatment and least recommended was compression hosiery. It is the first two treatment options in that list that this paper examines.

In 2015 Professor Bradbury reviewed all available randomized controlled trials that compared the first two recommended treatment options of thermal ablation and UGFS to determine if the level 1 evidence still supported the "endothermal ablation first" strategy for treatment of varicose veins.

Four RCT's, involving a total of 1718 legs, resulting in six publications were found, published between 2011 and 2014. His review publication appeared in PHLEBOLOGY in April 2016.

Variations existed between the RCT's in terms of the technology and techniques used in treating saphenous trunks and tributaries, the definitions of technical

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(anatomical) and clinical success, limited duration and completeness of follow-up and varied estimates of costs. Prof Bradbury saw difficulties in drawing firm conclusions regarding the relative clinical and cost effectiveness of thermal ablation vs foam sclerotherapy.

Many observations were made: UGFS, laser and RF are all safe and have low complication rates and little morbidity. Symptoms and signs of VV disease significantly improved with all treatments. Technical failure was higher with UGFS, but this failure was not reflected in patient reported clinical outcomes, thus questioning the usefulness of technical success as an end-point.

A growing consensus is noted that patient reported subjective outcome measures are more important than technical (anatomic or duplex) or physician reported outcomes. RF thermal ablation is standardized but not so with laser thermal ablation. UGFS is even more heterogeneous with many variables likely to significantly affect outcomes.

Thus simple categories of treatment such as the first two recommended by NICE may have to be further stratified according to heterogenicity of specific treatments. Calculation of treatment costs varied between trials but all RCT's reported UGFS to be less expensive than RF or laser, and given the lack of difference in clinical (QoL) outcomes it is reasonable to suggest that UGFS will be the more cost effective option for patients in most healthcare settings.

More data from longer term studies are required to support these observations. Prof Bradbury concluded that all endovenous methods discussed in the four RCT's-UGFS, laser and RF – have a role in varicose veins treatment.

Patient reported QoL improvement was seen in all groups with no statistical difference. Anatomical (technical) success measured on duplex ultrasound is better following thermal methods, but that may be due to the meticulous technical expertise and consideration of treatment tactics required for optimum outcomes using UGFS. UGFS was regarded as more flexible in its ability to treat recurrent or particularly tortuous VVs. There appears to be a significant cost advantage to UGFS over thermal ablation, even if further treatment sessions are required.

He concludes that the present level1 evidence base, shows that there is likely to be no significant difference in clinical outcomes between UGFS and thermal ablation. Possibly the NICE guidelines priority cannot be justified.

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