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Title **Treatments for Varicose Veins**

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Aim

To assess the safety and effectiveness of current treatment options for varicose veins.

Conclusions and results

The treatment options assessed include surgery, phlebectomy, sclerotherapy, endovenous laser therapy (ELT), radiofrequency ablation (RFA), and conservative therapies (eg, compression hosiery). Studies eligible for inclusion were those reporting on human patients with varicose veins of the legs, both superficial and complicated. Included studies reported on ways to treat varicose veins and compared at least one of the included interventions with another treatment.

Seventeen studies published between 2003 and 2007 were eligible for inclusion. Of these, 4 publications were systematic reviews of existing literature, 10 were randomized controlled trials (RCTs), and 3 were non-randomized comparative studies. Of the RCTs, 3 were reported in one or more of the systematic reviews in some detail, and were also reported independently in full. The remaining 7 RCTs were published after the systematic reviews. Conclusions based on review findings include:

- Ligation with stripping plus avulsion is generally considered the 'gold standard' treatment for primary long saphenous veins, with good long-term effectiveness (≥ 12 months).
- Evidence suggests that compression stockings are less effective than sclerotherapy or surgery involving ligation with stripping.
- Both surgery and sclerotherapy appear to have a place in managing varicose veins.
- Sclerotherapy and phlebectomy may be best suited to patients with minor superficial varicose veins not related to reflux in the saphenous system, or as a post-treatment or adjunctive procedure.
- Endovenous varicose vein treatments (ELT and RFA) appear to be safe procedures, and at least as safe as conventional surgery (junction ligation and vein stripping).
- The extent of varicose veins should govern the intervention of choice, with no single treatment universally employed.

Methods

The search strategy identified articles published in English between January 1988 and February 2008. The following databases were searched: BMJ Clinical Evidence, York (UK) Centre for Reviews and Dissemination (CRD), Cochrane Database of Systematic Reviews, PubMed, and EMBASE. An ASERNIP-S researcher extracted the data using standardized extraction tables developed a priori, and a second researcher checked the work.

Further research/reviews required

While comparative treatment evidence was available on varicose veins, much of it was of mediocre quality, making it difficult to judge the relative safety and effectiveness of treatments. It is also unclear from the evidence whether some treatments are more or less effective in certain patient subgroups, dependent on the etiology of the varicose veins. Higher quality comparative studies with appropriate statistical comparisons are needed before newer varicose vein treatments and surgery (ligation plus stripping) can be definitively compared.

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