Is Foam the most cost-effective ablation technique?

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Disclosure of Interest

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I have the following potential conflicts of interest to report:

- Consulting : Quali Med
- Shareholder in a healthcare company : Miravas
As long-term differences in recurrence and quality of life are small, overall cost effectiveness is driven primarily by initial treatment costs and ultrasound-guided foam sclerotherapy is the most cost-effective strategy in many models.

What is effective care for varicose veins? Meissner MH1.


• Marsden G\(^1\), Perry M\(^2\), Bradbury A\(^3\), Hickey N\(^4\), Kelley K\(^2\), Trender H\(^5\), Wonderling D\(^2\), Davies AH
RESULTS:
All interventional treatments were found to be cost-effective compared with CS at a cost-effectiveness threshold of £20,000 per QALY gained. ETA was found to be the most cost-effective strategy overall, with an incremental cost-effectiveness ratio of £3,161 per QALY gained compared with UGFS. Surgery and CS were dominated by ETA.

CONCLUSIONS:
Interventional treatment for VV is cost-effective in the UK NHS. Specifically, based on current data, ETA is the most cost-effective treatment in people for whom it is suitable.
ALUN, WHAT IS QALY?
Clinical effectiveness and cost-effectiveness of foam sclerotherapy, endovenous laser ablation and surgery for varicose veins: results from the Comparison of LAser, Surgery and foam Sclerotherapy (CLASS) randomised controlled trial.
Brittenden J¹, Cotton SC², Elders A², Tassie E³, Scotland G², Ramsay CR², Norrie J², Burr J⁴, Francis J⁵, Wileman S², Campbell B⁶, Bachoo P¹, Chetter J⁷, Gough M⁸, Earnshaw J⁹, Lees T¹⁰, Scott J⁸, Baker SA¹¹, MacLennan G², Prior M², Bolsover D², Campbell MK².
The health gain achieved in the AVVQ with foam was significantly lower than with surgery at 6 months [effect size -1.74, 95% confidence interval (CI) -2.97 to -0.50; p = 0.006], but was similar to that achieved with EVLA. The health gain in SF-36 mental component score for foam was worse than that for EVLA.

The trial-based cost-effectiveness analysis showed that, at 6 months, foam had the highest probability of being considered cost-effective at a ceiling willingness-to-pay ratio of £20,000 per QALY. EVLA was found to cost £26,107 per QALY gained versus foam, and was less costly and generated slightly more QALYs than surgery.
at 5 years, EVLA had the highest probability (≈ 79%) of being cost-effective at conventional thresholds, followed by foam (≈ 17%) and surgery (≈ 5%).
CONCLUSIONS:
Considerations of both the 6-month clinical outcomes and the estimated 5-year cost-effectiveness suggest that EVLA should be considered as the treatment of choice for suitable patients.
Systematic review, network meta-analysis and exploratory cost-effectiveness model of randomized trials of minimally invasive techniques versus surgery for varicose veins.

12. **Cost and effectiveness of laser with phlebitomies compared with foamsclerotherapy in superficial venous insufficiency: Early results of a randomised controlled trial.**
Lattimer CR, Azzam M, Kalodiki E, Shawish E, Trueman P, Geroulakos G. 
Eur J Vasc Endovasc Surg. 2012 May
RESULTS:
Changes in AWVQ, VCSS and VFI values (3 months) did not demonstrate any significant difference between groups. At 3 months, the above-knee GSV occlusion rate (without co-existing reflux) was not significantly different between the groups (74% vs 69%; EVLA vs UGFS; P = .596). Of the 9 haemodynamic failures in each group, 7 EVLA patients and 4 UGFS patients had co-existing cross-sectional above-knee GSV occlusion at some point. However, UGFS significantly outperformed EVLA in cost, treatment duration, pain, analgesia requirements and recovery.

CONCLUSIONS:
UGFS is 3.15 times less expensive than EVLA (£230.24 vs £724.72) with comparable effectiveness but 56% (versus 6%) required additional foam.
Initial cost of treatment is still a limiting factor

- In many countries the patient has to pay for endovenous treatments.
- Specialists are concentrated in large towns meaning a long trip to be treated.
- Follow up thus not as thorough as in Western Europe.
How can we lower the costs?

- Ambulatory, local anesthesia
- Low costs generators: easy with RF, more difficult with Laser (optics)
- Reusable fibers and catheters: not in the interest of industry but feasible: coloscopes are re-usable, and work in a much worse environment...
Conclusion

• Cost effectiveness studies are necessary to guide re-imbursement policies

• We should use their results to improve our techniques in order to offer a better service to our patients.