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

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Plain English summary

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Many people undergo treatment for varicose veins, which are visible tortuous veins. Different types of treatment are available. These are surgery (that is, removing the vein by stripping it out), laser (using the heat energy of the laser to close the vein) or injection of a foam to make the walls of the vein stick together.

We compared these three treatments in terms of how well they worked from a participant and clinician perspective and their relative cost-effectiveness. Seven hundred and ninety-eight people with varicose veins requiring treatment were allocated at random to one of these three treatments. Outcomes were assessed at 6 weeks and 6 months. We found that all three treatments reduced the symptoms associated with varicose veins and improved quality of life (QoL). Foam allowed people to return to their normal activities quickly, but had fewer benefits in terms of patient-reported QoL and more complications.

Foam was also less likely to close the leaky vein, thus increasing the chance of more treatment being needed in the future. Overall, the main finding is that consideration of both success at 6 months and estimated 5-year costs and benefits suggests that laser should be considered as the preferred treatment for patients who are suitable for all three treatment options. We are following the study participants to 5 years, as long-term results are important to determine the longer-term costs and consequences (in terms of recurrent varicose veins) of these three treatments.
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