

Varicose vein study shows radiofrequency ablation causes less post-operative pain

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A study to compare two increasingly popular treatments for varicose veins has found that patients who received radiofrequency ablation reported less post-procedural pain than those treated with endovenous laser ablation.

However, both groups reported the same clinical and quality of life improvements at six weeks, according to UK research published in the June issue of the *British Journal of Surgery*.

"Varicose veins are a very common condition that occurs when the blood flow to the legs is interrupted and collects in the veins" explains principal investigator Professor Alun Davies from Imperial College, London. "It's estimated that as many as 30 per cent of adults in the UK will suffer from the condition at some point in their lives."

Vascular surgery experts from the College randomised 131 patients into two groups, with 64 receiving endovenous [laser ablation](#) 980nm (EVLA) and 67 receiving radiofrequency ablation (RFA) using VNUS® ClosureFAST™.

All the procedures were carried out under [general anaesthetic](#) between July 2008 and July 2009 by one of three surgeons experienced in both techniques. The 89 female and 42 male patients were then asked to fill in diary cards recording pain levels, based on a visual analogue scale from zero to 100, and note any analgesia use.

The patients had an average age of 49 and there were no statistically significant differences in other factors such as their [body mass index](#) and the pattern of the disease between the two surgical groups.

"Radiofrequency and endovenous ablation are minimally invasive techniques and their development has revolutionised the treatment of varicose veins" says Professor Davies. "Perceived advantages over traditional surgery include fewer complications, minimal post procedural pain and faster recovery times.

"Their use has steadily increased in the UK since 2001, when the National Institute for Health and Clinical Excellence - which advises the National Health Service - approved their use."

Key findings of the study included:

- Average pain scores for the first three days after surgery were 26.4 on the zero to 100 scale for the RFA group and 36.8 for the EVLA group.
- The average scores for the first 10 days after surgery were 22.0 for the RFA group and 34.3 for the EVLA group.
- Patients treated with RFA used an average of 8.8 analgesic tablets during the first three days and 20.4 over the first ten days. This was much lower than the 14.2 and 35.9 used by the EVLA group.
- Sixty per cent of the RFA group and 50 per cent of the EVLA group returned to normal activities after three days, with 77 and 74 per cent respectively resuming normal activities within seven days. Return to work figures were similar for both groups.

- Only two major complications were observed. A patient in the RFA group suffered a pulmonary embolus two weeks after surgery and a patient in the EVLA group suffered a lymphatic leak.
- The most common minor complications were tingling, pricking or numbness (10 per cent), vein inflammation (six per cent) and skin staining (six per cent).
- There was little difference in clinical and quality of life scores between the two groups six weeks after surgery.

"Our study showed that patients experience less post procedural pain with the VNUS® ClosureFAST™ than the 980nm EVLA" says Professor Davies.

"Newer radial fibres and longer laser wavelengths have been developed for EVLA and are likely to replace the 980nm bare tip laser fibre. We await the results of randomised trials using these with interest."

More information: Randomized clinical trial of VNUS® ClosureFAST™ radiofrequency ablation versus laser for varicose veins. Shepherd et al. British Journal of Surgery. 97, 810-818. (June 2010). [DOI:10.1002/bjs.7091](https://doi.org/10.1002/bjs.7091)

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