



Phoenix
Health
Solutions

PATIENT INFORMATION

Radiofrequency Ablation of Varicose Veins

RADIOFREQUENCY ABLATION OF VARICOSE VEINS

You have varicose veins that can be treated using radiofrequency ablation. This information sheet tells you about the procedure. Please read it carefully and ask your surgeon if you have any further questions or concerns.

What are varicose veins?

Varicose veins are veins (usually in the legs) that have lost their elasticity and bulge with blood as a result. They happen if the valves in a vein become weak and let blood go the 'wrong way' back through the vein.

Over time, the vein has to become wider to cope with the extra blood and this eventually means that it loses its elasticity. In some people varicose veins are asymptomatic or cause only mild symptoms, but in others they cause pain, aching or itching and can have a significant effect on their quality of life.

Varicose veins may become more severe over time and can lead to complications such as changes in skin, e.g. dark patches, eczema, ulceration or result in bleeding which could be spontaneous or following a minor trauma. It is not known which people will develop more severe disease but it is estimated that 3–6% of people who have varicose veins in their lifetime will develop ulcers.

Radiofrequency ablation is currently recommended as one of the first line treatments for varicose veins by the National Institute for Health and Clinical Excellence (NICE).

What is radiofrequency ablation?

Radiofrequency ablation means collapsing a vein using heat generated by radiofrequency energy. This causes the treated vein to close up, so blood is redirected through nearby healthy veins as a result. Whilst the procedure is generally not particularly painful there is some inevitable post-operative discomfort. It is a good idea to have some paracetamol and anti-inflammatory medication (ibuprofen) to take when you get home if you are able to take these medications.

As this procedure can take a variable amount of time, it is important that you allow an adequate amount of time at the hospital. We usually recommend about two hours. Occasionally, it may be quicker than this.

What are the advantages of radiofrequency ablation over conventional surgery?

- Radiofrequency ablation has been shown to cause less pain and bruising.
- Radiofrequency ablation can be performed under local anaesthetic
- Recovery to normal activity and work has been demonstrated to be quicker following radiofrequency treatment.



Before the procedure – First Consultation

You will have been consulted by a vascular surgeon and undergone a venous duplex scan to assess your veins and determine the most appropriate form of treatment for you. After a thorough discussion including risks of complications (see below), a consent form will be completed and signed by the surgeon and yourself.

What will happen during the procedure?

Before your treatment starts, you will meet your surgeon and the team looking after you. A member of the team will measure your legs so that you can be fitted with some support stockings to wear after the procedure. You will be taken to a changing room where you will change into a theatre gown in preparation for your treatment.

You will then be lead into the theatre suite at which stage the surgeon will go through the procedure with you and reaffirm your consent for the procedure. You will have opportunity to ask any further questions about your treatment.

You will then lie down on the treatment couch. The venous duplex scan will be repeated to mark your vein and plan where the radiofrequency probe should be placed into your vein for the best outcome of treatment. The surgeon will clean the skin on your leg with antiseptic solution and then your leg will be draped with sterile sheets.

Initially the operating couch is tilted so that your leg is pointing downwards to help make your veins bigger for insertion of the sheath. Once you are comfortable and in position, the surgeon will “freeze” the skin of your leg with local anaesthetic at the point where a small cut in the skin is made and a sheath will then be inserted into the vein.

The radiofrequency device (a long catheter) will be inserted through the sheath into the vein and guided into position using the duplex scanner. The catheter is then connected to the radiofrequency generator.

The operating couch is then tilted into a head-down position. The surgeon will then perform a series of injections into the leg using the duplex scanner to place local anaesthetic all around the vein and “freeze” the skin in preparation for the radiofrequency treatment.

The generator then creates heat energy to seal the vein up from the inside. This happens as the heating probe is pulled back in a series of steps through the length of vein being treated. This takes just a few minutes. You should not feel anything during the treatment, but if you do then your surgeon will place more anaesthetic around the vein. Once the vein has been sealed, the probe and sheath are removed. You will have a paper stitch placed over the entry site of the sheath and a dressing applied over this.

Finally, a compression bandage is wrapped around the leg and this should be worn for five days.

What will happen after the treatment?

We will ask you to wait in waiting room area for a period after the operation, during which time refreshments will be offered. If you feel fine after this time then you can go home. After radiofrequency treatment you will be able to walk immediately. You will not be able to drive



yourself home and must have someone to drive you. We recommend that you should not drive for 5 days. If you are travelling for more than an hour from the hospital you should sit on the back seat with your leg(s) up. Stop every hour and walk around for five minutes.

Normal activity, including work, can be resumed as soon as you like, although contact sports, heavy exercise and swimming should be avoided for one to two weeks.

When the bandage is taken off, you may see some bruising or hardness under the skin. This is quite normal and will gradually settle.

You should then wear the stocking during the day for at least 2 days following removal of the bandage. If you feel relief wearing the support stocking during your recovery then you should wear the support stocking for up to 2 weeks following removal of the bandage.

Follow up after your treatment – Second Consultation

A follow up clinic appointment will be made for you to be reviewed by the surgical team after 8 to 12 weeks. However, if you are experiencing any problems in the meantime then you can contact vascular team to discuss any concerns.

Residual and recurrent veins

Radiofrequency ablation of varicose veins is targeted at the main superficial vein in your leg that is causing the varicose veins. The treatment does not directly target all of your varicose veins. You may notice some residual varicose veins on removal of your compression 1 week after your treatment. In the majority of patients these residual veins will shrink over the next 3 months. However a number of patients may require additional treatment of these residual veins. This treatment can be either injections into the veins to cause them to shrink (sclerotherapy), or a minor operation to remove the veins through small cuts in the leg (avulsions). Your surgeon will be able to discuss further treatment options with you if required at your follow up visit.

What are the complications of radiofrequency ablation?

- There is a small chance that the vein may not be completely sealed by the radiofrequency probe. This occurs in approximately 3 – 5%.
- Some bruising and tenderness may occur but this may be alleviated by taking simple painkillers.
- It is not uncommon for some discomfort to develop around the obliterated vein between 5 and 10 days after the procedure due to inflammation. Thrombophlebitis (Inflammation of the vein) is not uncommon and may cause some pain and redness over the treated area but this generally responds well to non-steroidal anti-inflammatory drugs such as Ibuprofen.
- Blood clots can form in the deep veins in the leg (Deep Vein Thrombosis). This can occur in approximately 0.3% patients. The blood clot can also travel to the lungs (Pulmonary Embolism) however these side effects are rare.
- There is a very small risk of skin burns from the radiofrequency probe. This can occur in around 0.5 - 1%. It may result in pigmentation in the line of the vein. This usually fades with time.



- Paraesthesia (numbness or tingling) in the leg can occur due to irritation of the nerve that lies next to the treated vein. This is usually temporary and can occur in 2-5% of patients. Very occasionally these symptoms can be permanent.
- Recurrent varicose veins is relatively common in the long term and can occur in 25% of patients.
- Small skin veins (spider veins) do not usually disappear with radiofrequency ablation of your main varicose veins. Occasionally these veins can become more prominent after treatment.

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