

IQ_2012_06_venus - Venous Interventions

Radio Frequency Ablation



Through follow-up is an essential part of clinical care: Prof. Binkert takes time to sit down with the patient in his office. Image courtesy of Prof. C. Binkert.

The Treatment

Radiofrequency (RF) ablation is one of the common ways to treat symptomatic varicose veins by applying endovenous heat.

With the latest technology a catheter with an RF tip is inserted into the varicose vein and advanced to where the treatment should begin, which is typically at the groin level. The RF tip heats each segment to 120°C for 20 seconds, as the catheter is carefully pulled back segment by segment.

As it is heated the injured vein will close shut and no longer be able to cause troublesome symptoms.

In order to protect the surrounding healthy tissue a large amount of local anaesthetic is injected around the vein (tumescent anaesthesia), this absorbs excess heat so burning is avoided.

Ablation Methods Compared

RF and laser treatments have shown very similar results. One advantage of RF is that the therapy is more standardised as the technique requires the catheter to be pulled back segment by segment every 20 seconds. Laser ablation involves a continuous pull back during the procedure: this will vary with each physician.

Another advantage is that the RF therapy seems to give rise to less postprocedural pain and bruising when compared to bare tip laser fibres. However, this advantage may be balanced when covered laser fibre tips and different wave lengths are used.

Interdisciplinary Care

Patients with symptomatic varicose veins are examined at our interdisciplinary vascular centre, in which interventional radiology (IR), vascular surgery and angiology work together.

To begin with, a physician of any one of these specialties examines the patient. A duplex ultrasound is a vital part of the examination, in order to reliably diagnose and locate the insufficient varicose vein(s) causing the symptoms.

RF therapy can be applied in most cases except when varicose veins are very tortuous or the diseased vein segments are very short (less than 10cm). In these circumstances surgical therapy is more suitable.

The Results

RF therapy of varicose veins is a safe and effective procedure with success rates of 90% or higher at two years.

Symptoms disappear typically within a few weeks and serious complications are extremely rare. The most likely problem is aching pain and bruising for a few days. Some staining of the treated vein can occur although this discoloration has no clinical impact. In rare cases the nerve which runs alongside the vein can be damaged by the heat. This sounds more dramatic than it is because typically the problem is only a sensory deficit around the ankle which is likely to recover over the following months. Motor function is hardly ever impaired.

Patient Satisfaction

The vast majority of the treated patients are very pleased with the procedure. Patients like the fact that RF therapy is an outpatient treatment with only local anaesthesia needed. They are also very happy and sometimes even surprised that there is little or no recovery time, minimal or no pain and a good cosmetic outcome.

Unfortunately, RF and laser vein therapies are generally not reimbursed by insurance companies in many European countries. Therefore, the treatment has to be paid for by the patient. Efforts to overcome the reimbursement issues are being made.

Patient's Point of View

Ms. Sonja Budja, a patient of Prof. Binkert, shares her experience of how she found RF therapy a convenient and effective treatment for symptomatic varicose veins:

"The leg that was affected felt uncomfortably heavy and the calf was discoloured and red. I feared the development of an ulcer.

"I had already had a vein-stripping operation done on the other leg 20 years ago and I can remember how the operation was quite invasive. I needed spinal anaesthesia and had to stay in hospital for three days. This time around, I looked for a less invasive treatment option that wouldn't require me to stay in hospital or have strong anaesthesia.

"The [endovenous RF therapy] I then had six weeks ago was very tolerable. I could barely feel the pinpricks of the needles. The atmosphere was relaxed and so the procedure went by very quickly. I was most impressed that I left home at 14:30 and returned at 17:30, able to walk without any significant pain!

"My recovery went very smoothly and I returned to my normal daily routine the next day. I was able to run the household as normal, doing the cooking, cleaning and even the laundry. From the second day after the procedure I was able to go for walks for an hour or so at a time.

"I am very happy with the result of the treatment. The heaviness and most of the redness and discoloration have disappeared and I am in no pain. The newer [IR] treatment is an improvement over the surgery which I had on the other leg. I would recommend this treatment to everyone."

With very special thanks to Sonja Budja

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Published on : Wed, 20 Jun 2012