

Microwave Thermocoagulation

Newly approved technique heats spider veins out of existence.

By Kamran Goudarzi, MD, FICS, FACS

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The following is a clinical case study: As a general surgeon with special interest in vascular surgery, I have always looked for the right device for a given task. Many effective tools exist to treat a whole spectrum of diseased veins, yet small spider veins (smaller than a size 30 gauge needle) remain a constant challenge.



HOT NEW TREATMENT: These before and after images show the results of facial spider vein treatment with a thermocoagulation device.

For these problem veins, I've been utilizing a thermocoagulation method with a device from Vein Partners called the TC3000. The device, approved by the FDA in 2009, ablates very small spider veins via targeted microwave technology.

This causes thermocoagulation of the vein without damaging the surrounding tissue in much the same way that a steak in a microwave oven gets cooked while the paper towel it sits on remains undamaged.

When treating a spider vein patient, we examine the patient with a vein light for reticulators.

If we identify varicosities and venous incompetency, those are addressed first. If there are spider veins less than 0.3 mm, we treat them once with TC3000 and usually follow up 6 weeks later with a second treatment.

If there are reticulators, I treat the spiders with the TC3000 and inject the feeders several weeks later. This provides a much better cosmetic result; I am able to avoid trapping blood in these small spiders, which often happens after reticular injections.

For the technique, I place the insulated needle of the TC3000 on the spider at a 90-degree angle. I apply gentle pressure then fire the microwave. In my experience, the device should not penetrate the skin. Thus a good rule to follow: If you see blood, you have gone too deep.

We do not use lotion or topical anesthesia because this will negatively affect the outcome of the thermocoagulation. We also advise patients not to put any lotion or makeup on the day they come in for their treatments. If they do, we simply reschedule their appointments to ensure optimal outcomes.

We've found spider veins and telangiectasia on the nose and cheeks respond extremely well (over 90 percent success). In these cases, we notice minimal crusting on the face, which is a great benefit to the patients.

However, microcrust on the lower extremities is more common and usually goes away in a few days.

There are reports of scarring from this procedure on the Internet, though I have personally not experienced this and have not seen any convincing evidence or literature documenting it. As a physician, you must be aware of the technology and use it as it was intended.

We still routinely evaluate all our patients with spider and various vein combinations with ultrasound to rule out any underlying venous insufficiency.

Of course, the beauty of this procedure is its simplicity. You don't have to worry about skin type. No compression stockings are necessary, and patients do not have to hide themselves from the sun after procedures--making it a convenient treatment.

Additionally, the same setting is utilized on all skin types. The device can be utilized by a physician or a physician extender, such as a nurse practitioner or a physician assistant.

In our setting, we found once the diagnosis is properly made and the treatment is recommended appropriately, results with the TC3000 are good.

Kamran Goudarzi, MD, FICS, FACS, is a graduate of the University of London School of Medicine in England. He obtained his surgical training in the United States. He is a member of the Royal College of Surgeons, licentiate of the Royal College of Physicians, diplomat of American College of Surgery and diplomat of American Board of Phlebology.

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