

Troublesome leg wounds often related to VEIN PROBLEMS

By Paul Skudder, MD, FACS



Many patients come in with wounds on their legs that started out as minor scrapes yet have not healed after weeks of bandages, Neosporin and other treatments. Very often, the cause is trouble with the veins of the legs.

Blood flow to keep our legs healthy is brought from the heart by the arteries. Then the blood flows through tiny capillaries, feeding the tissues of the legs, and into the veins. The veins then are supposed to carry the blood back to the heart. This means the veins need to carry the blood uphill, working against the downward pull of gravity. The pull of gravity works against the veins, and the veins combat this with little one-way valves inside them.

The valves allow uphill blood flow, but are oriented to prevent downhill blood flow. The valves are made of thin, lightweight almost transparent tissue, and over years of hard work they can wear out, become less efficient and allow blood flow to leak downwards. This is the beginning of the patient's problem.

The downhill flow means more blood will remain in the legs, pooling around the ankles as the veins work hard to try to bring it uphill. As the pooling of blood builds up, patients notice swelling, and a sense of aching and hardness or fullness that goes with it. While the swelling may not cause overall danger to the patient, it can be very hard on the skin. Over time, the skin becomes discolored. At first it is thick with the fluid edema in it, but over time it gets thin, scaly, flaky, and begins to break down.

At this point the skin has become really

fragile, and a minor scrape or injury of almost any type may precipitate a wound or sore. Sometimes the skin will break down and form a sore spontaneously, without any injury whatsoever. Vascular physicians will refer to this as a "venous ulcer," meaning a sore that is attributed to the veins in the leg.

Because of the open wound and the red, inflamed skin around it, there is a great temptation to regard the problem as an infection of some type. The word "cellulitis" (a medical term meaning infection in the skin) is often used in these cases. And, of course, once there is a wound, an infection might occur in the wound as a secondary issue † but the real problem is the poor function of the veins, which are not getting the blood to flow back up the legs. So the use of antibiotics will commonly be unsuccessful in treating the problem. This is because antibiotics fight germs, and help the body to combat infection, but they don't address the root cause of the problem – the swelling and edema associated with poor function of the veins.

The principles of treatment of these problems are straightforward and were worked out at least 150 years ago, primarily in Britain. The goal is to reduce the accumulation of blood and fluid in the legs, and hence in the skin around the ulcer or sore. This is what promotes healing of the wound. Antibiotics, or various salves, ointments or bandages do not promote healing of the wound, though the antibiotics may reduce the bacterial count and be of benefit in the subset of ulcers that are actually infected.

Treatment starts with common-sense measures. Elevation of the legs will drain fluid and blood and reduce swelling. Indeed, if patients are bedridden for a period of time these wounds often heal nicely. Of course, most of us cannot live a reasonable life with our legs elevated all the time.

Elastic compression garments can also

significantly reduce swelling and promote healing. The key is that the garment be truly tight enough to reduce the swelling. This may make it mildly uncomfortable, and in many cases the stocking may leave a mark or a line on the leg when it is used. The use of these elastic stockings allows people to be up and around while reducing the swelling and fluid accumulation, therefore allowing for healing to occur. These elastic compression hose have been the mainstay of care of these conditions for generations, and are still effective.

In patients with an active sore or ulcer, a stocking may be impractical because it is soiled by the wound. Application of specialized bandages that incorporate both wound dressing and leg compression is appropriate in these settings. These bandages, which are applied in physician offices and Wound Care Centers, remain in place for several days or a week between being changed, and are used until the wound has improved to a degree that an elastic garment can be applied without difficulty.

Today's vascular specialists have developed the expertise to identify (with painless ultrasound tests performed by highly trained technologists) the veins responsible for the problem in most patients. The ultrasound tests can identify in which veins blood is flowing downhill as a result of improperly functioning valves. The key here is that in most cases, the "bad" veins are located in shallow areas, just under the skin, and are not the vital deep veins on which the leg depends. (These shallow veins located superficially under the skin are the saphenous veins and their tributaries or branches).

Then, in the many patients for whom these veins are the problem, it is possible to safely seal the leaking veins under the skin without compromising the deep veins. These procedures, known as ablation of the veins, are accomplished in a brief, noninvasive procedure in vascular

specialists' offices. The procedure uses only needles and local anesthesia, with immediate discharge to home and very little recovery time. Patients have a minimal risk of a blood clot after the procedure, so every patient having the procedure should be checked with a follow-up ultrasound. These procedures commonly lead to dramatic improvement in the skin, prevention of future ulcers, and improvement in swelling, aching, discomfort and other symptoms.

When ultrasound tests don't show leaking valves in the superficial veins, investigation for possible narrowing or blockage in the veins that carry blood out of the upper part of the leg, moving it toward the heart, is often helpful. Today's modern vascular specialists are able to provide help for these conditions in a similarly non-invasive manner. For example, an angioplasty and stent, opening up a narrowed or blocked vein that is having trouble carrying blood out of the leg, is a noninvasive procedure. Like treatment of a vein with leaking valves, this type of intervention can make a major difference in the healing of a leg ulcer and the relief of related symptoms.

People with slow-healing wounds or ulcers often spend considerable time before reaching vascular or wound care specialists who are able to identify the root cause of their painful problem. Once they are treated for the underlying cause, most of the people find that healing is achieved, along with relief of the significant symptoms they have lived with. ‡

Paul Skudder, MD, FACS, is a vascular specialist at Southeastern Vein Specialists. He can be reached at (508) 775-1984 or southeasternveinspecialists.com