

# Patient Compliance Important for Treating Diabetic Foot Ulcers

Specialists should not only use devices that properly offload pressure and require minimal patient compliance to heal ulcers, but they should also focus on the patient's overall health.

BY LAURA SUAREZ, MANAGING EDITOR

**T**reatment of a diabetic patient must focus on their overall health, which requires specialists to not only concentrate on their primary expertise but to also monitor other hindrances of patient health. Treating diabetic foot ulcers is only one component of maintaining the health of a diabetic patient, said Jeffrey M. Robbins, DPM, at the 2005 Annual Scientific Meeting of the American Podiatric Medical Association in Orlando.<sup>1</sup>

"Of course no matter what specialist you talk to, their [practice] is a mirror for the body – whether it is the eye, the foot or the teeth. It is all true, actually," he said. "The important issue here is that we ... don't lose the big picture, which is the patient's entire health."

## CRITICAL TO OFFLOAD

Patients with a diabetic foot ulcer should be properly cared for, and offloading pressure is critical for wound healing, said Dr. Robbins, director of podiatry service, Veterans Affairs Central Office. "Keeping [the wound] healed is a different issue, and keeping it healed is extremely important."

According to a study published in *Diabetes Care*, approximately four in 10 (43%) diabetic patients with a first-onset foot ulcer that goes on to heal will die within 5 years of ulceration.<sup>2</sup> Forty-seven percent of amputee patients resulting from foot ulcer will also die within 5 years. These deaths, Dr. Robbins said, are not associated with the ulcer, but rather cardiovascular disease.<sup>1</sup> Physicians should make their patients aware of these statistics and other risks associated with improper treatment of foot ulcers.

Despite the method of wound treatment, several com-

Wound treatments that offload pressure typically produce the best results for healing.

ponents of wound care are critical for proper healing, Dr. Robbins said. The first component of wound care is that the chosen device properly reduces and offloads pressure to the wound. Secondly, the wound must be debrided, dressed and managed for infection. Vascular reconstruction and amputation may be required in some instances. These evidence-based guidelines were compiled during the American Diabetes Association and Census Development Conference on Diabetic Wound Care, a consensus conference held in 1999.

## PATIENT COMPLIANCE

Wound treatments that offload pressure typically produce the best results, Dr. Robbins said. For a product to properly offload pressure, it must be easy to use and it must also be compatible with wound healing agents. One detail to keep in mind is that the offloading agent will only offload pressure when it is used correctly. This means that patients must comply with its use.

To ensure that patients are offloading pressure, it is best to choose an offloading device that requires minimal reliance on patient compliance, Dr. Robbins said. "When patients are at home ... they'll take off that wound dressing or they'll take off the cast boot and walk around their house for 6 or 7 hours because they are in a so-called safe environment."

One method of offloading that does not require patient compliance is total contact casting (TCC) because patients cannot remove the dressing. Although TCC is the gold standard of care, it is not widely used. Reasons for its infrequent use include time, technical expertise required to apply the cast, clean up, cost and unwanted side effects like pungent smell. It is also difficult for specialists to close the wound for a significant period of time, Dr. Robbins said.

**INSTANT TCC**

Because it is the gold standard, TCC is the tested measure of all offloading devices. Other methods of offloading are instant TCC (Table 1), removable walking boots, healing sandals, half shoes and ankle foot orthoses. However, these require patients to comply with their use.

“In patients with diabetes, it is so important that they are compliant and that they understand the conse-

**TABLE 1. INSTANT TOTAL CONTACT CASTS**

Royce WoundCare Insole  
 Royce Medical Company  
 742 Pancho Rd, Camarillo, CA 93012  
 Phone: 800-252-5333  
 Fax: 800-889-5722

AirCast Pneumatic Walker Diabetic System  
 Aircast Global Corporate Office  
 92 River Road  
 Summit, NJ 07901  
 Phone: 800-526-8785 or 908-273-6349  
 Fax: 800-457-4221 or 908-273-060  
 E-mail: USInq@Aircast.com

High Tide Diabetic Walker  
 dj Orthopedics, Inc  
 2985 Scott St  
 Vista, CA 92081  
 Phone: 760-727-1280  
 Fax: 760-734-3595  
 Web site: www.djortho.com

Maxx Trax Walker  
 dj Orthopedics, Inc  
 2985 Scott St  
 Vista, CA 92081  
 Phone: 760-727-1280  
 Fax: 760-734-3595  
 Web site: www.djortho.com

quences of even 1% of the time deviating from what they should be doing,” said Dr Robbins. “If 1% of the time they are not following your instructions, they are more likely crash and burn. It is important for [patients] to be vigilant about their care.”

Feet should be checked on a regular basis for ulcers, deformities and loss of sensation.

Another consideration of wound treatment is pressure points across the foot, Dr. Robbins said. According to a study done by Roukis et al<sup>3</sup> the area with the most pressure is at foot slap. “The reason that this foot slap is so important is not only because of the pressure, but because of the tissue deformation,” Dr. Robbins said.<sup>1</sup> Patients with diabetic neuropathy are prone to foot slap, loss of function and foot drop, which may not always be noticed, he said.

**REGULAR CHECK-UPS**

It is important for physicians to check the feet of their diabetic patients on a regular basis, Dr. Robbins said. In addition to checking the feet for ulcers, deformities and loss of sensation, physicians should also be checking patients’ shoes for foreign materials, wear pattern, support and function, integrity, style and design and proper fit. They should also know if patients are using shoe inserts or braces.

“Patients [should be] followed over time so that you prevent any further ulcerations,” he said. Podiatrists and other foot specialists should be working closely with primary care physicians to ensure that their patients with diabetes are accurately controlled.

An important element of diabetes control is exercise, Dr. Robbins said. “If we give them an exercise function, they can get their cardiovascular shape in the best condition that it can possibly be.” ■

*Jeffrey M. Robbins, DPM, is director of podiatry service, Veterans Affairs Central Office, Cleveland. He can be reached at jeffrey.robbs@med.va.gov. Dr. Robbins is a member of the scientific advisor committee for DIApedia.*

1. Robbins JM. “Offloading the Diabetic Foot. Presented at the 2005 Annual Scientific Meeting of the American Podiatric Medical Association. August 4-7, 2005. Orlando.  
 2. Vinik AI, Maser RE, Mitchell BD, Freeman R. Diabetic Autonomic Neuropathy. *Diabetes Care.* 2003;26:1553-1579.  
 3. Landsman AS, Meaney DF, Cargill RS, et al. A theory on the mechanical etiology of diabetic foot ulcerations. *J Am Podiatr Med Assoc.* 1995;85: 519-527.