INTRODUCTION

In the wound care community, compression therapy is standard of care for edema control and wound healing for several conditions, including venous leg ulcers, chronic lower extremity lymphedema, and other lower extremity wounds complicated by edema. Compression therapy is used to reduce inflammation, aid fluid collection, help decrease pericapillary cuffing, and improve wound healing. Suitable compression includes consistent application, patient compliance, and exudate management with the goal to allow continuous, sustained, therapeutic pressure compression that is comfortable for the patient and that subsequently leads to better compliance. The most common bandage systems are single, long-stretch bandages; paste bandages; and multilayer compression bandages. Single, long-stretch bandages require a daily reaplication; as such, they may be less beneficial in wounds that require daily dressing changes along with edema management. Paste bandages customarily are impregnated with zinc oxide or calamine. Paste boots are uncomfortable and provide sustained compression only while the patient is ambulating. These bandages may lose sustained compression after 24 hours in use. Multilayer compression bandages provide sustained compression for approximately 1 week, and are not dependent on ambulation.

DUAL COMPRESSION SYSTEM

This is an easy-to-apply, 2-layer compression bandage that features the Dual Compression System®, designed to optimize the safe application of the recommended therapeutic pressure and increase patient compliance. This system provides the same high standard compression provided by 4-layer bandage systems. Numerous clinical studies, including a large randomized controlled trial (RCT), have proven the ability of the wrap system to provide the 3 Cs of compression therapy and prevent recurrence. The first layer of the system includes wadding of viscose and polyester and a knitted layer of polyamide and elastane; this pink/beige cohesive long-stretch bandage layer provides the additional compression necessary to achieve a good compression wrap — Consistency, Continuity, and Comfort.

COMPARING 2-LAYER (DUAL COMPRESSION SYSTEM*) WITH TRADITIONAL 4-LAYER COMPRESSION THERAPY

Patients in a recent RCT comparing the traditional 4-layer compression fall into 2 groups: Dual Compression System® or 4-layer compression therapy after initial application at bedside. Pressures were recorded 10 cm distal to the wrap at 5 minutes following application. Staff (with an average experience applying compression wraps of 8 years) were provided one training session on the 2-layer system and had previously only utilized the Dual Compression System®, yet after one training session were better able to consistently obtain pressures within the desired therapeutic range utilizing the 2-layer system. Because the Dual Compression System® is a two-layer system, it is more comfortable and is less sticky than the traditional 4-layer system, which has 3 layers of adhesive. The 2-layer system offers greater absorption (fewer moisture-wicking products were needed to keep the periwound dry), I did not find this to be the case, and 17 were neutral.

RESULTS

The 53 patient participants had a total of 62 leg ulcers. Of these, 31 legs were wrapped with Dual Compression System® and 31 with a traditional 4-layer compression wrap. Among the 4-layer compression users, 13 wraps (42%) were applied without sustained compression only while the patient was ambulating. These bandages may lose sustained compression after approximately 1 week, and are not dependent on ambulation. As such, they may be less beneficial in wounds that require daily dressing changes along with edema management. Paste boots are uncomfortable and provide sustained compression only while the patient is ambulating. These bandages may lose sustained compression after 24 hours in use. Multilayer compression bandages provide sustained compression for approximately 1 week, and are not dependent on ambulation.

SUMMARY

The Dual Compression System® is easy to teach and after just one application and training, the staff were able to apply consistent, continuous, therapeutic compression along with better overall patient comfort. Utilizing the Dual Compression System® may improve time to wound closure, decrease costs to the clinic, and lead to overall improvement in patient adherence to compression therapy. We observed improvement in the observations previously detailed.1,2