

3M Sponsored Session:

Unwrapping the Complexity of Venous Leg Ulcers

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Presenter: Bart Maene, RN BScN BSc Wound and Tissue Repair

Venous leg ulcers (VLUs) are the result of a combination of impaired venous return and chronic ambulatory venous hypertension. VLUs are the most common type of lower extremity wound, affecting approximately 1% of the western population during their lifetime. These wounds are a significant burden for patients and health-care systems. The annual cost to treat VLUs in the U.S. is estimated to be \$14.9 billion. Patients with a healed VLU have a 55% chance of recurrence within 12 months of closure. Furthermore, 28% of patients experience more than 10 VLU episodes in their lifetime.

Figure 2. Compression Bandages



Assessment and Diagnosis

International expert consensus recommendations classify VLUs as simple, complex or mixed etiology (see Figure 1).

Compression Therapy

International expert consensus recommendations define compression as key to the management of VLUs. The application of external compression (see Figure 2) initiates a variety of complex physiological and biochemical effects involving the venous, arterial and

lymphatic systems. Provided the level of compression does not adversely affect arterial flow and the right application technique and materials are used, the effects of compression can be dramatic.

Compression in Lymphedema Treatment

In obstructive lymphedema, lymphatic wall muscular fibers become damaged and the spontaneous contractility becomes ineffective in lymph transport because of low generated pressure and lymphatic valve insufficiency. In this scenario, the lymph-propelling task is

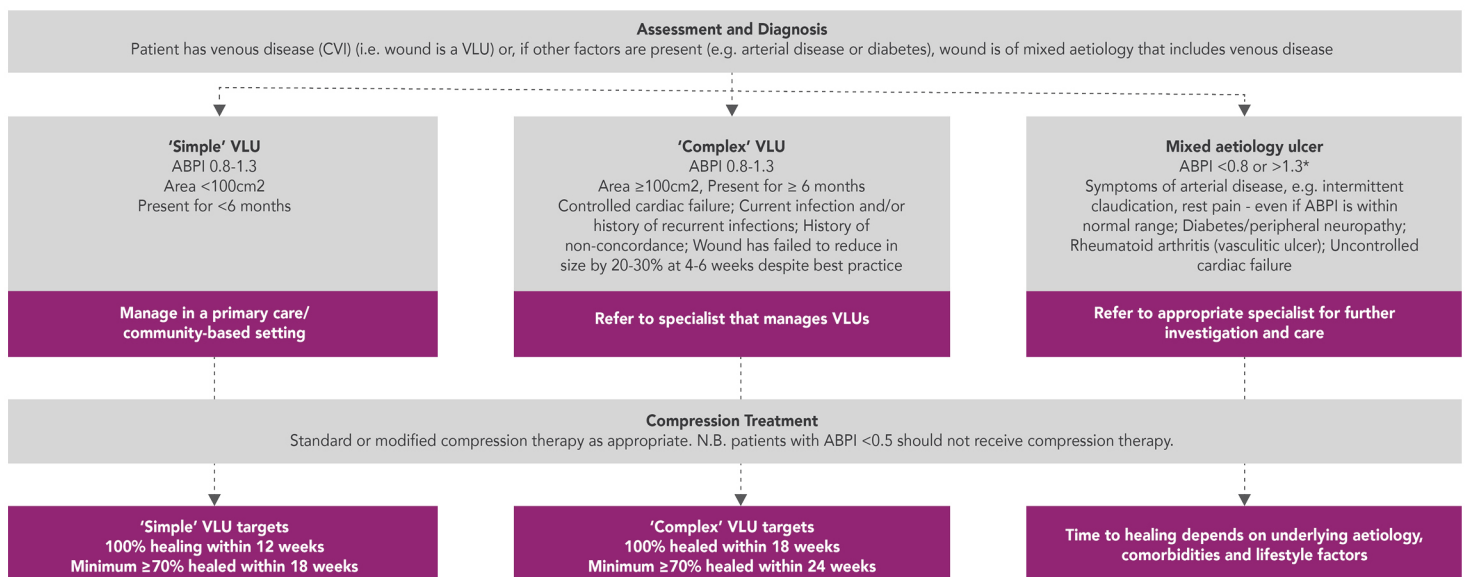


Figure 3. Physiologic Sequence of Venous Return During Ambulation: Foot Pump, Distal Calf Pump, Proximal Calf Pump



taken over by leg muscle contractions (see Figure 3). The ideal compression system is an inelastic, conformable, low-profile sleeve with an anatomical fit around the patient's leg that allows functional activities, that does not slip; that provides, in rest, a safe and tolerated pressure but generates effective working pressures and is easy to reproduce and apply by clinicians.

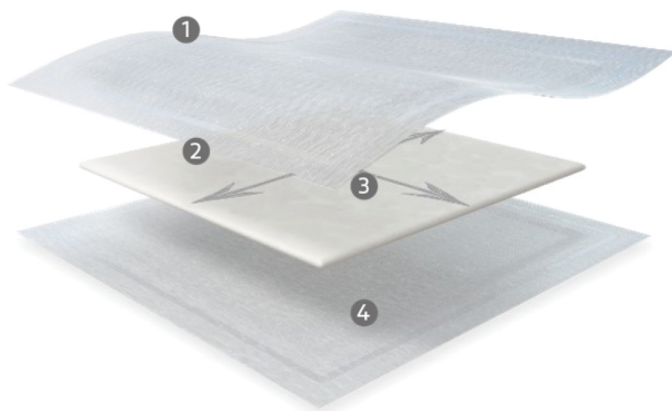
3M™ Coban™ 2 Two-Layer Compression System

3M advanced the science of compression therapy by designing materials engineered with Intelligent Compression Dynamics to create a comfortable, inelastic sleeve that stays in place and is comfortable to wear. In compression, dynamic refers to the difference between high and low working pressure points, reflecting intermittent changes in pressure caused by the patient's own muscle movement.

3M™ Kerramax Care™ Super-Absorbent Dressing

The 3M™ Kerramax Care™ Super-Absorbent Dressing uses Exu-Safe™ technology for highly exuding wounds.

Figure 4. 3M™ Kerramax Care™ Super-Absorbent Dressing



The dressing (see Figure 4), indicated for moderately and highly exuding leg ulcers, pressure injuries and diabetic foot ulcers, is comprised of:

1. Soft, non-woven material
2. Horizontal wicking layer
3. Super-absorbent core with Exu-Safe™ technology
4. Heat-sealed border

The 3M™ Kerramax Care™ Super-Absorbent Dressing absorbs and retains high levels of exudate; is soft, comfortable and foldable; sequesters bacteria and MMPs; is easy to apply (using either side); can be used under all forms of compression and can be left in place for seven days.

3M™ Kerracel™ Gelling Fiber Dressings

Kerracel dressings are a primary wound contact dressing range with high absorption and retention capacity (see Figure 5). They are designed to create a moist wound healing environment by managing moderate to highly exuding wounds and micro-contouring to the wound bed.

The 3M™ Kerracel™ Gelling Fiber Dressing is easy to apply, comfortable, can be used under compression, can be cut, supports vertical absorption and can be worn for seven days.

Figure 5. 3M™ Kerracel™ Gelling Fiber Dressing



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