

Treatment of highly-draining leg ulcers using unique super-absorbent dressing with a multi-layer compression bandage system

Kazu Suzuki, DPM CWS, Tower Wound Care Center, Department of Surgery, Cedars-Sinai Medical Center, Los Angeles CA USA

Introduction

In the United States, dressing selection is a major challenge facing health care providers today, especially with thousands of choices available. Sheffield et al. suggests dressing selection should be based on the goals of wound management, including maintenance of moist healing environment, control of wound exudate, and prevention of wound enlargement, while also aiming for cost effectiveness through less frequent dressing changes.¹

Managing wound exudate is a significant factor in successful lower extremity (LE) wound care. Excessive moisture on the wound surface could cause skin maceration and breakdown, bacterial overgrowth, malodor and wound infection.

The aim of this case study is to test the effectiveness of a combined therapy using JOBST® Comprifore, a multi-layer compression bandage system, with Cutisorb® Ultra, a new superabsorbent dressing.

Methods and Materials

Therapy combining compression and superabsorbent dressings offer multi-factorial benefits: Reducing wound drainage leading to less nutrients available for surface bacterial growth, increased arterial capillary flow for higher antibiotic concentration due to increased blood flow, and reduced local edema for a more robust immune function.²

Cutisorb® Ultra is an innovative, low-profile, 5-layer, super-absorbent dressing that provides higher fluid absorption than conventional dressings, even under compression. It requires less frequent dressing changes and helps provide a moist wound healing environment.

JOBST® Comprifore, is a multi-component compression system containing an elastic bandage. According to the Cochrane Systemic Reviews, compression increases ulcer healing rates (vs. no compression) and multi-component systems with an elastic

bandage appear more effective than non elastic materials.³ This combination dressing was changed once per week, out-patient, along with surgical wound debridement as indicated.

Results

The combined treatment of a super absorbent dressing (Cutisorb® Ultra) with a multi-layer elastic compression bandage system (JOBST® Comprifore) can be effective in treating highly-draining leg wounds, with once per week outpatient visits.

PATIENT 1

Female, 80 years old, presented with heavily draining leg ulcer and bilateral leg edema, the result of a non-displaced hip fracture from a fall 6 months prior. She was previously treated unsuccessfully with 30 days of oral antibiotics, diuretics and dressing changes (via visiting nurse).

Before

Severe case of LE lymphedema, large, shallow heavily draining leg ulcers; leg pulses not palpable. Doppler test showed good healing potential mildly obstructed PVR waveforms with SPP of 60's mmHg. Leg wounds anesthetized topically, debrided sharply with scalpel, irrigated with saline, dressed with Cutisorb® Ultra, and wrapped with JOBST® Comprifore multi-layer compression bandage system.



After

By the third office visit, the wound size was dramatically reduced and edema much improved. Both showed steady improvement with complete healing in three months. JOBST® compression stockings prescribed for every day. Leg healed and LE edema controlled at three month follow-up appointment.



PATIENT 2

Female, 92 years old, presented with heavily draining leg ulcer and bilateral leg edema (6 month duration). Complex history includes coronary artery disease with S/P coronary artery bypass graft, aortic stenosis with S/P Transcatheter Aortic Valve Replacement (TAVR) procedure, deep vein thrombosis (DVT) and post-thrombotic syndrome, and LE dermatitis.

Before

Severe case of LE edema, venous insufficiency; leg pulses not palpable. Doppler test showed good healing potential mildly obstructed PVR waveforms with SPP of 50's mmHg. Leg wounds anesthetized topically, debrided sharply with scalpel, dressed with Cutisorb® Ultra, wrapped with JOBST® Comprifore multi-layer compression bandage system.



After

By the fourth office visit, the wound size was dramatically reduced and edema much improved. LE dermatitis was also alleviated due to better exudate management. Steady improvement. Complete healing in 4 months. JOBST® compression stockings prescribed for every day. Leg healed and LE edema controlled by one month follow-up appointment.



PATIENT 3

Female, 82 years old, presented with venous leg ulcer and bilateral edema (3 year duration). Previously treated with skin grafts (2x) unsuccessfully. History of hypertension, 45 packs cigarettes/year; quit smoking in past year.

Before

Venous leg ulcer with visible varicosities, hemosiderin staining on bilateral ankles. Right leg – medical ankle ulcer dorsum foot ulcer; leg pulses not palpable. Doppler test showed good healing potential mildly obstructed PVR waveforms with SPP of 70's mmHg. Leg wounds anesthetized topically, debrided sharply with scalpel, irrigated with saline. All wounds dressed with Cutisorb® Ultra, wrapped with JOBST® Comprifore multi-layer compression bandage system.



After

By the third office visit, the wound size was dramatically reduced and edema much improved. Steady improvement, with complete healing in 4 months. JOBST® compression stockings prescribed for every day.



Reference

1. Sheffield PJ, Smith A, Fife CE, Wound Care Practice, Best Publishing Company. 2004
2. Expert communications. Innovations for Wound bed preparation. Wounds. Sept 2012
3. O'Meara S, Cullum NA, Nelson EA. Compression for venous leg ulcers. Cochrane Database of Systematic Reviews. 2009.