The use of a micronutrient containing skin care regime in managing periwound skin condition seen in a wound center population

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INTRODUCTION
The health of periwound skin is intimately connected with the healing of the wound and the general health of the patient. Venous disease and venous insufficiency ulcers are associated with damaged periwound skin, and such damaged skin often acts as a locus for new areas of ulcer formation.

The use of micronutrient containing products to improve skin health is one method of addressing the general health of periwound skin. Previous studies have shown the potential of this skin management method to improve patient health.

PROBLEM
Venous dermatitis is frequently associated with venous ulcers given the common root causes, namely edema and venous hypertension. Tenderness, pain, and burning in the periwound with visible erythema and either weeping or dry/scaly skin is common.

OBJECTIVE
To evaluate a new cleanser and skin protectant barrier on skin with poor health.

METHOD
A convenience sample of twelve patients was used to measure changes in skin condition during skin management with a cleansing spray followed by a skin protectant paste. Each of these patients had periwound skin that was in poor health. The periwound area was cleansed and barrier was applied on the skin (“The Periwound Protocol”) before compression treatment during each visit to our wound center. A proprietary blend of plant derived nutrients, which has potential ability to nourish, moisturize, and protect sensitive skin has been incorporated into a range of skincare products including cleansers, moisturizers, barriers and zinc oxide thickened barriers. The skin protectant contains white petrolatum as the barrier (active ingredient) and zinc oxide added as a thickener (inactive ingredient). It is claimed that these products provide additional moisture and nourishment to dried skin, and improve the appearance of redness.

Skin health was monitored via photography and via patient records.

CASE PRESENTATIONS
AC is a 53 y/o male with a history of venous insufficiency and stasis ulcer of the left lower extremity. The periwound skin was treated with cleanser, zinc oxide cream. The ulcer itself was treated with collagen and compression garments.

AM is a 67 y/o female who was hospitalized with cellulitis to the right lower extremity from a traumatic wound. Past medical history includes obesity and venous insufficiency. The wound was highly exudative and treated with advanced wound dressings. The periwound was treated with standard protocol.

BF is a 54 y/o female with venous insufficiency who was recently hospitalized with cellulitis and a venous stasis ulcer. She was treated with the periwound protocol, standard wound dressings and compression.

CB is a 65 y/o male with a history of pseudo Kaposi’s Sarcoma who presented on 3/5/12. He was treated with collagen to the wound bed and the periwound protocol as well as compression.

CE is an 84 y/o female with a history of chronic venous insufficiency and sensitive skin. After other periwound treatments failed, the periwound protocol was initiated; standard wound care and compression provided. Additionally, patient underwent endovenous ligation.

CP is an 80 y/o female with a history of venous insufficiency, presents with chronic ulcers which were biopsied and found to have no evidence of malignancy. She was treated with the periwound protocol, wound care dressings and with mild compression.

DC is a 68 y/o female with a history of stasis ulceration and venous stasis dermatitis. The wound was treated with antimalarial dressings and compression and the periwound protocol was initiated. The ulcer itself was treated with collagen and compression, the periwound protocol was initiated.

EN is an 82 y/o female with a history of venous insufficiency and peripheral arterial disease presented with a posterior stasis wound with heavy exudate. It was initially treated with the periwound protocol, which resolved the denuded area. However, due to the extremely heavy exudate the posterior tissue remained denuded until better exudate control dressings were used.

JC is a 48 y/o male who presents with a history of stasis ulceration and venous stasis dermatitis. The wound was treated with antimalarial dressings and compression and the periwound protocol was initiated.

MN is an 84 y/o female with history of venous stasis dermatitis and venous ulceration. The wound was treated with collagen and compression, the periwound protocol was initiated.

RI is a 75 y/o female with history of venous stasis dermatitis, and mild periwound cellulitis with edema. Her periwound was treated with the periwound protocol and the wound was treated with antimicrobial silver dressings with compression.

FU is a 54 y/o male with a history of venous insufficiency and localized cellulitis to the periwound. The periwound was treated with the periwound protocol, the wound with a silver dressing and compression.

SV is a 61 y/o female with a history of diabetes, coronary arterial disease, venous insufficiency who presents with multiple wounds to bilateral lower extremities. Coumadin levels required hospitalization to regulate. She was treated with the periwound protocol. The ulcers were covered with basic wound care and compression.

DISCUSSION
A recent publication (Hunter et al.) has discussed in depth the ability of micronutrient and antioxidant element containing products to manage inflamed periwound conditions when compared to products that do not feature such beneficial elements. The exact reason for such benefits is not known with certainty and much scientific work remains to be done to probe the mechanisms of action of the studied skin care products. Other clinical studies that indicate benefits of using such micronutrition and antioxidant containing products, have been performed in the field of pressure ulcer incidence reduction, and skin tear incidence reduction. This research builds on the evidence base associated with these specially formulated skin care products.

CONCLUSION
In each patient, improvement in skin condition was seen in the first week of the study. Further comparative studies are warranted.

REFERENCES

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