

Use of a novel therapy to manage periwound skin in a specialised wound centre



Author:
Harikrishna KR Nair

Due to chronic and complex wounds of different aetiologies, wound management has become an extremely challenging area for clinicians to obtain good clinical outcomes. Keratinocytes are the major cellular component of the epidermis and they have several critical roles in the wound healing process. Keratinocytes usually migrate from periwound areas, which is why periwound skin plays an important part in wound healing. In this case series, plant-based cream was applied generously to the periwound area during each visit to the wound clinic. As the cream is non-occlusive, it forms a breathable barrier and vanishes into skin. Therefore, the skin condition can be monitored after the cream is applied. The application of this cream helped the periwound skin return to its original healthy state, making the periwound and surrounding skin look healthy and moist. This cream has shown tremendous potential to help treat periwound skin conditions in the management of chronic complex wounds.

Wound management has become very challenging as clinicians are now faced with chronic complex wounds of different aetiologies that need to be managed well to prevent or minimise complications and obtain good clinical outcomes. The TIMES (T=tissue, I=inflammation/infection, M=moisture imbalance, E=epidermal margin, S=surrounding skin) concept focuses on the wound bed, edge and the surrounding skin. Similarly, the Triangle of Wound Assessment (TOWA) accords importance to the periwound skin. Management of periwound skin is crucial in wound healing as keratinocytes usually migrate from the periwound area.

This case series utilised a plant-based cream that consists of aloe vera, cocoa butter and vitamin E and has a pH of 5.5 (Scapagnini et al, 2014; Sandhya and Gowri, 2015; Nagoba et al, 2015; Keen et al, 2016). The cream is also non-occlusive, with a breathable barrier and vanishes into skin. Therefore, the skin condition can be monitored after application.

Methodology

Six patients, three with a diabetic foot ulcer and three with a venous leg ulcer, were chosen by simple random sampling from the Wound Care Unit, Kuala Lumpur Hospital.

The patients' wounds were assessed using the TIMES concept. The periwound skin was classified according to the 2015 Harikrishna Periwound Skin (HPS) Classification 2015 [Table 1] (Nair, 2017). The wounds were cleansed with distilled water and debrided if necessary. A generous layer of cream was applied over the periwound area during each visit to the wound clinic. Subsequently, the wounds were closed and treated using standard care: advanced dressings and offloading for diabetic foot ulcers and compression bandaging to manage the venous leg ulcers.

Table 1. The 2015 Harikrishna Periwound Skin Classification system (Nair, 2017)

HPSC	Periwound condition
Class 0	Normal
Class 1	Fibrous tissue/tissue at risk
Class 2A	Exudate centred with desiccation
Class 2B	Exudate centred with maceration
Class 2C	Exudate centred with allergy
Class 3	Inflammation without infection
Class 4	Inflammation with infection
Class 5	Atypical (senescent cells/cancer/subcutaneous emphysema)

Harikrishna KR Nair is Head and Consultant, Wound Care Unit, Department of Internal Medicine, Kuala Lumpur Hospital, Malaysia

Case study 1: HSPC 2015 – Class 2A

A 52-year-old Malay man with chronic diabetic foot ulcer on the right plantar surface. The wound edges appeared severely macerated and the periwound plantar skin was very dry.

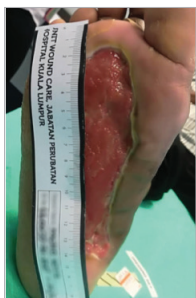


Figure 1a. Day 0



Figure 1b. Day 78

Case study 2: HSPC 2015 – Class 2A

A 65-year-old Chinese man with a chronic venous ulcer at the left ankle. The periwound skin was macerated and there was a high level of exudate. The surrounding skin was dry.



Figure 2a. Day 0



Figure 2b. Day 39

Case study 3: HSPC 2015 – Class 2B

A 52-year-old Malay man with chronic diabetic foot ulcer on the ball of the right foot (metatarsalgia). The wound edges were severely macerated and the periwound plantar skin was dry and tight.



Figure 4a. Day 0



Figure 4b. Day 45

Case study 4: HSPC 2015 – Class 2B

A 64-year-old Malay woman with a venous ulcer on the outer right ankle. The skin surrounding the wound was dry with stasis eczema. The periwound skin was mildly macerated and the wound was producing a high level of exudate.



Figure 4a. Day 0



Figure 4b. Day 49

Case study 5: HSPC 2015 – Class 2B

A 54-year-old Malay man with chronic left diabetic foot ulcer. Skin surrounding the periwound was dry and the wound was highly macerated with high level of exudation from the wound.



Figure 5a. Day 0



Figure 5b. Day 61

Case study 6: HSPC 2015 – Class 2A

A Chinese woman, aged 45, presented with chronic venous leg ulcer. The skin surrounding the periwound was very dry, the wound edges were highly macerated, and the wound was producing exudate.



Figure 6a. Day 0



Figure 6b. Day 7

Conclusion

The use of plant-based cream led to remarkable healing in the six patients in this case series. The application of the cream helped the periwound skin to return to its normal state, leaving it healthy and moist. This cream shows tremendous potential in the management of periwound skin conditions in chronic complex wounds.

The study is limited by the small the sample size. A larger study is required to further support the efficacy demonstrated and endpoints achieved in this case series.

There were no adverse allergic reactions and the clinicians involved encountered no problems when applying the cream. **WAS**

References

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