

28yr old male Bilateral Hallux amputation.

Reduced pain after first dressing change with HRWD®.

Improved quality of Life: Able to return to Work.

Effectiveness of a Hydro-Responsive Wound Dressing to promote healing where devitalised tissue is present within the wound bed: A crossover case study

By Laurel Atkinson - Podiatrist, Cornwall Partnership Foundation Trust

Introduction

This crossover study aims to evaluate the effectiveness of Hydro-Responsive wound dressing (HRWD®) (active) in treating foot wounds when compared to a moist healing primary foam dressing (control).

Product literature for this HRWD® indicates that impregnation of ringers solution allows for continuous irrigation facilitating autolytic debridement whilst promoting granulation. The dressing pad absorbs wound exudate, bacteria, necrotic and fibrinous material reducing the risk of recontamination and maintains a moist wound healing environment.

Method

The patient is a 28 year old male smoker who first presented to the emergency department with frost bite, both hallux particularly affected. Over the next few months the participant was found to have probable Berger's Disease. His feet were being managed conservatively at home and during this time he developed wet

gangrene in both 1st digits. Almost 8 months after first presentation a clinical decision was made to perform a bilateral hallux amputation, healing by secondary intention. Both amputation sites presented with a mix of slough, connective tissue and granulation within the wound bed. At this point the participant was invited onto the crossover study.

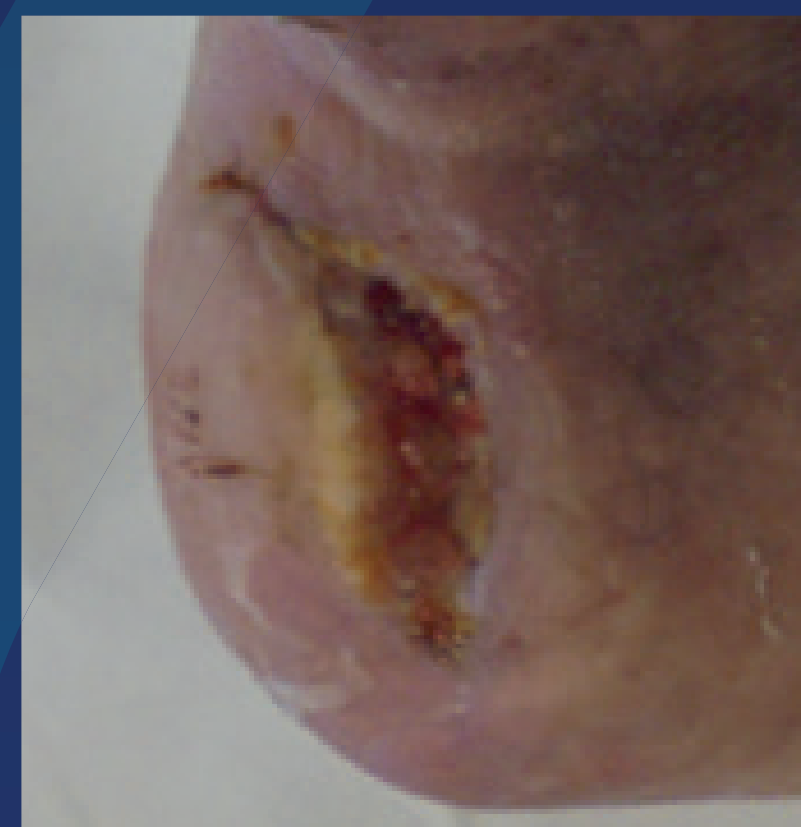
The left hallux amputation wound measured 2.88cm² (figure 1a) at first visit and received the active dressing; the right hallux amputation wound measured 3.45cm² (figure 1b) and received the control dressing. The participant received optimised standards of care, application of dressings twice weekly and the provision of offloading footwear. Wounds were photographed, traced and measured using Image-J software. After 4 weeks the control dressing was crossed over to a Hydro-Responsive wound dressing (HRWD®).

Outcome measures include % reduction in wound area and estimated % of wound bed granulation at 4, 6 and 10 weeks.

Active Wound



Week 0 (Figure 1a)



Week 4 (Figure 2a)



Week 6 (Figure 3a)

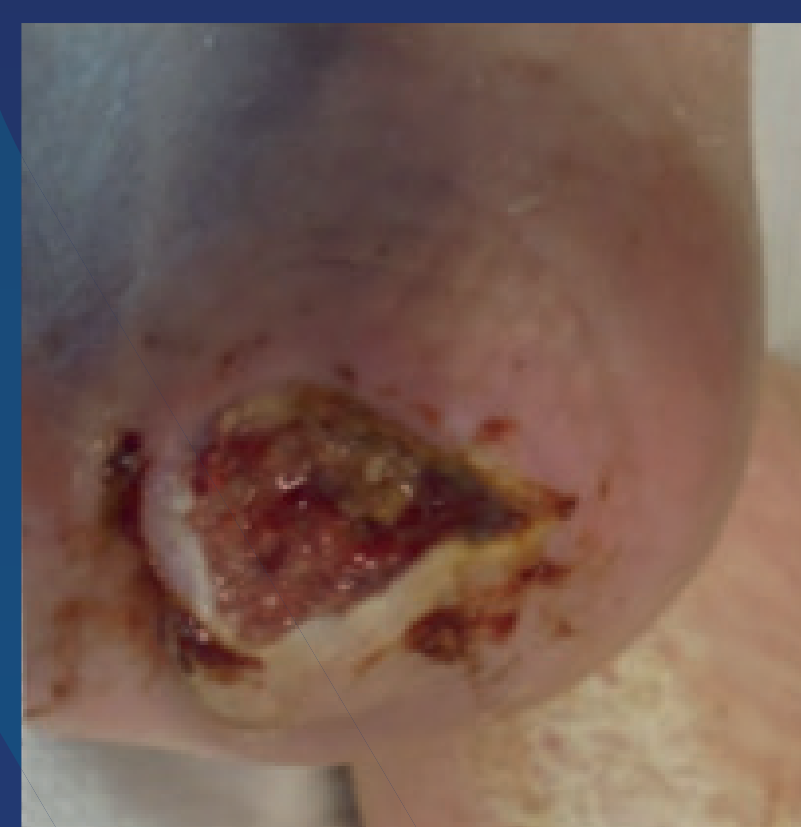


Week 10 (Figure 4a)

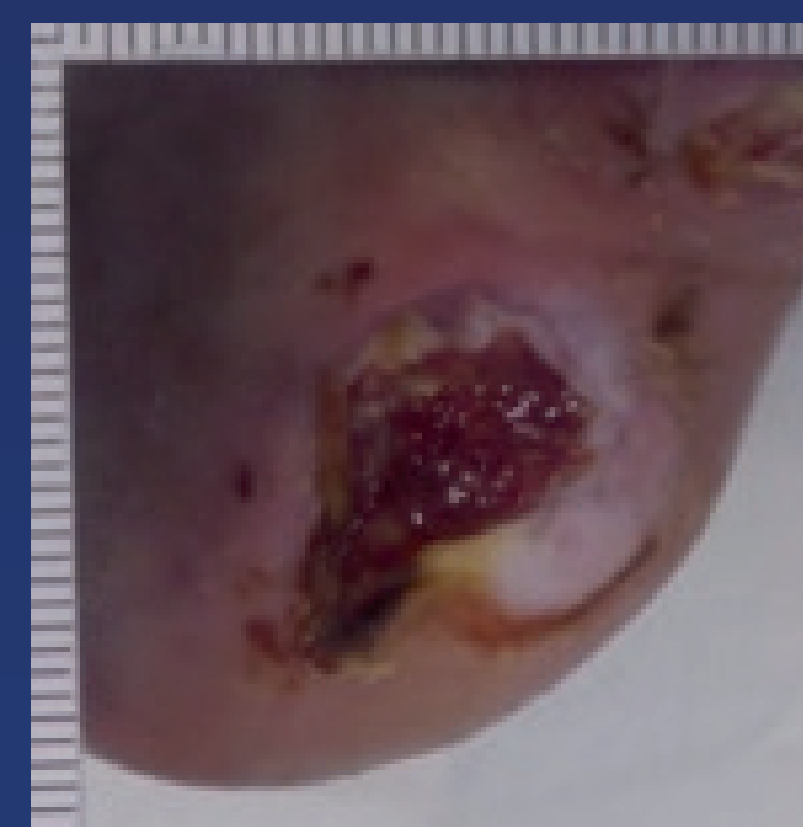
Crossover wound



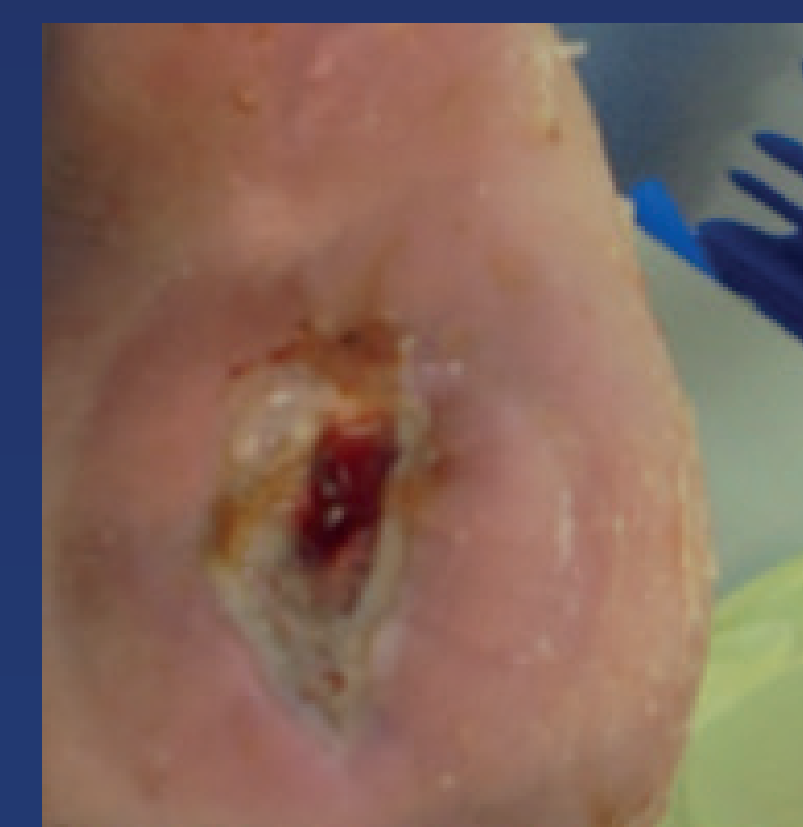
Week 0 (Figure 1b)



Week 4 (Figure 2b)



Week 6 (Figure 3b)



Week 10 (Figure 4b)

Results

Week 4: Wound area reduction: Active 69% (figure 2a) versus control 49% (figure 2b). Wound bed granulation: active 80% versus control 70%.

Week 6: Wound area reduction: Active 83% (figure 3a) versus crossover 71% (figure 3b). Wound bed granulation: 100% versus crossover 100%.

Week 10: Wound area reduction: Active 100% (figure 4a) versus crossover 94% (figure 4b). Wound bed granulation: Healed versus crossover 100%.

Discussion

These results would suggest the Hydro-Responsive Wound Dressing (HRWD®) has shown the ability to promote autolytic debridement and initiate healing in these amputation wounds as compared to a standard foam dressing.

References

Hydro-Responsive Wound Dressing (HRWD®) is a trademark of HARTMANN UKI