

Treatment of hard to heal DFU with monofilament debridement lolly and hydrobalance dressing

Tracy O'Farrell,
Stomal Therapy Nurse / Wound Care Nurse, Innisfail Hospital

Situation

Patient

Intellectually disabled 54 year old man with diabetes, obesity and hypertension managed by medication.

The patient has peripheral neuropathy of feet and developed a diabetic foot ulcer from poor fitting shoes and pressure from callus build up.

Initial treatment

Surgical debridement was performed in OR. Follow up post-op dressings were impregnated gauze ribbon changed twice daily and cleaned with PHMB solution. A combine absorbent dressing was then placed over foot.

If no improvement, surgeon was planning to amputate foot to prevent infection from spreading due to medical history.

After 5 weeks of treatment regime with gauze dressings (Figure 1-2)

- Total length of sinuses and wound: 16 cm
- Odour
- Macerated periwound edges
- Sinus from between last two toes through the wound area on ball of foot travelling down arch of foot with two sinus openings
- Moderate green exudate
- Hard stringy slough and debris

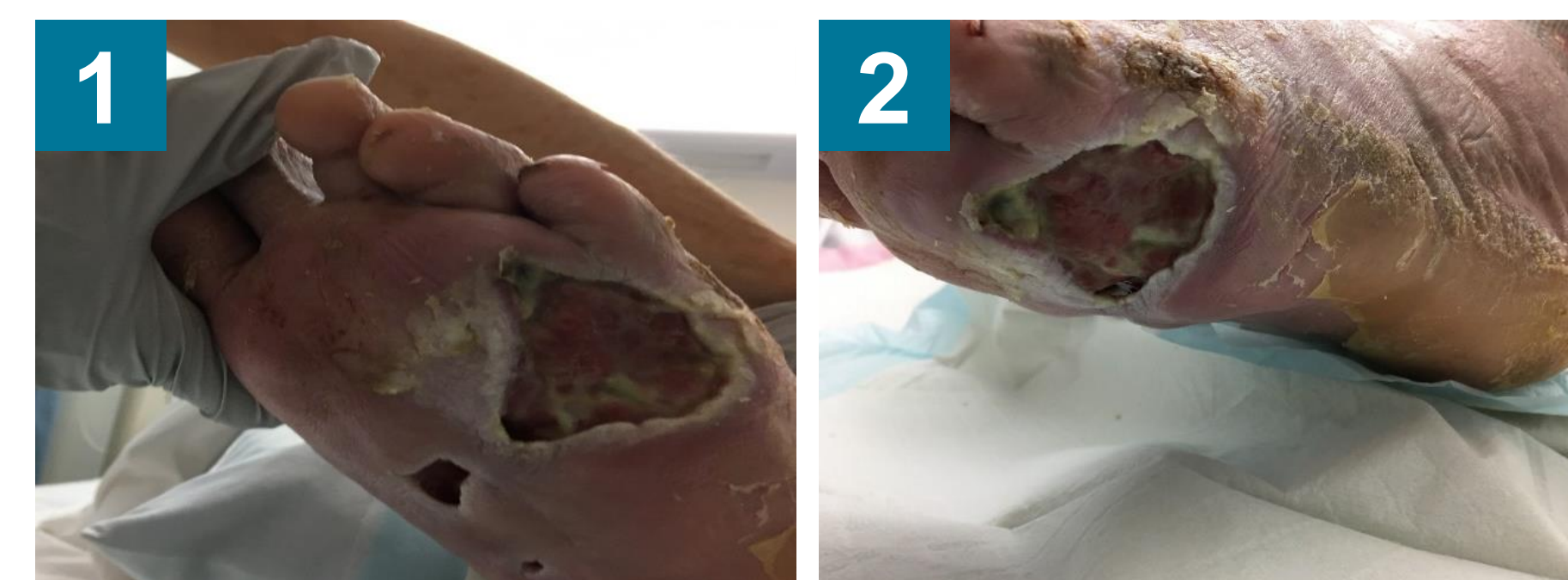


Figure 1 & 2: Diabetic foot ulcer on presentation after 5 weeks of initial treatment regime

Action(s) taken/treatment provided

New treatment regime

A review of treatment regime and dressings was conducted at 5 weeks post-operation due to deterioration of wound, odour and possibility of future amputation of foot.

The hospital was able to access and evaluate new products due to new contract release.

Dressing Plan

- Clean and debride with monofilament fibre lolly* and monofilament fibre pad**
 - PHMB solution used as solution of choice for cleaning
 - Dress with biocellulose hydrobalance dressing*** dipped in PHMB solution
- Pack with biocellulose hydrobalance dressing dipped in PHMB solution
 - One ribbon strip of biocellulose hydrobalance dressing 1x21 cm for sinus on sole of foot through to open wound bed
 - One 10x10 cm square of biocellulose hydrobalance dressing packed into open wound bed
 - Small strip cut off and packed into sinus between toes
- Covered with gel-forming wound contact layer****
- Absorbent combine dressing applied over top with tape (Figure 3)
- Same wound care plan repeated every 2-3 days until day nine.

The hydrobalance dressing helped to improve granulation and epithelialisation, reduced wound edge maceration and offered pain relief on contact.

DAY NINE

At Day 9, the wound was showing signs of clean red granulation tissue, no wound edge undermining or connection to sinus running through arch of the foot or up to the small toe.

The sinus running through the arch of the foot had closed as had the toes sinus into the main wound bed.

The granulation has filled the wound bed and reduced the exudate level and odour. (Figure 4 & 5)

* Debrisoft® Lolly (Lohmann & Rauscher)

** Debrisoft® Pad (Lohmann & Rauscher)

*** Suprasorb® X (Lohmann & Rauscher)

**** Lomatuell® Pro (Lohmann & Rauscher)

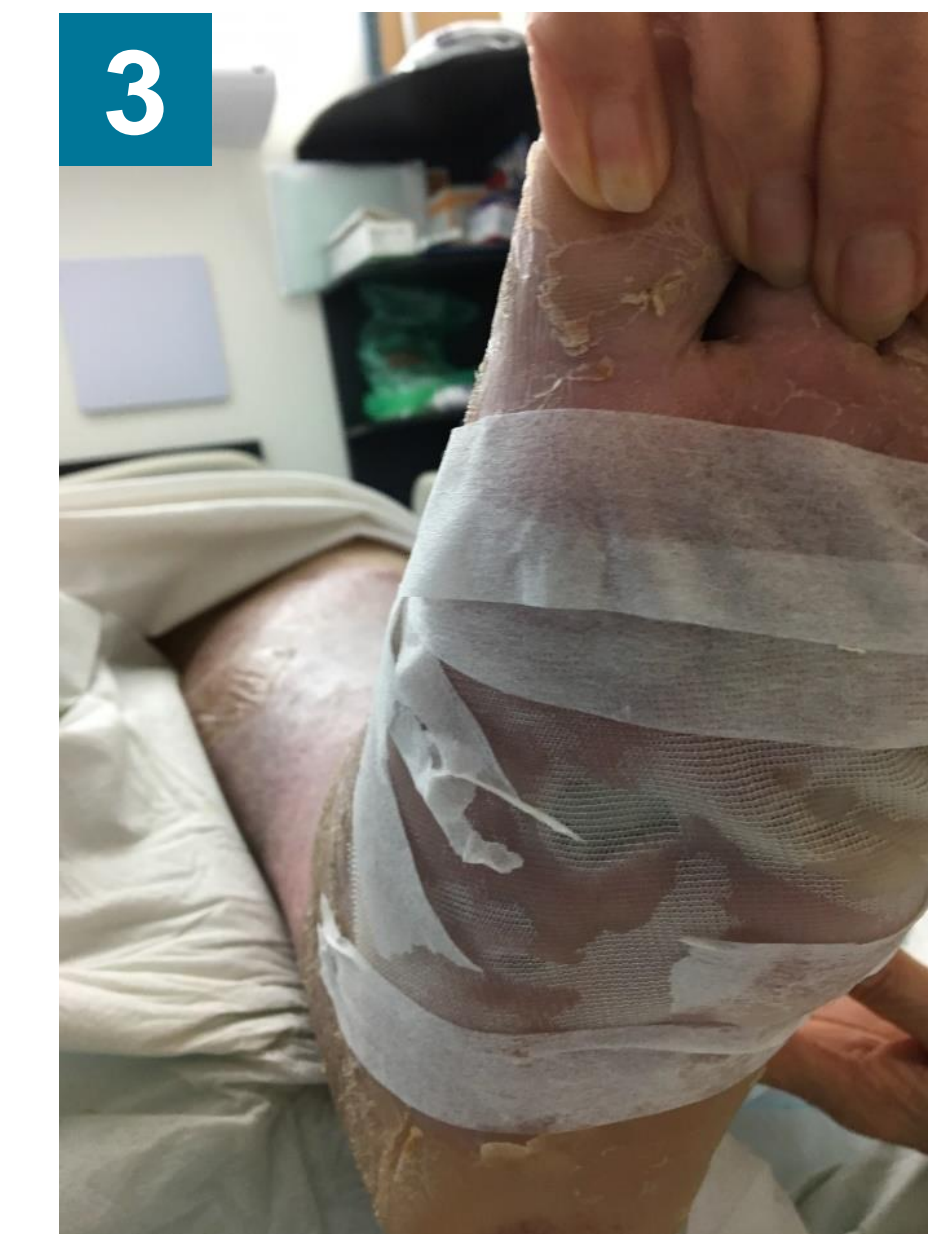


Figure 3: Wound with dressing applied



Figure 4 & 5: Diabetic foot ulcer on presentation after 5 weeks of initial treatment regime

Outcome(s)

Patient was able to be transferred to a rehabilitation facility to free up a surgical bed and be closer to his family. He also avoided amputation.

Total cost of dressings over 9 days of treatment (\$AUD)

| | |
|---|---------|
| ■ Monofilament fibre pad 10x10 cm x1 | \$9.95 |
| ■ Monofilament fibre lolly x3 | \$29.85 |
| ■ Biocellulose hydrobalance packing rope x 3 | \$33.63 |
| ■ Biocellulose hydrobalance dressing 9x9 cm x3 | \$31.51 |
| ■ Wound contact layer 10x10 cm x3 | \$6.57 |
| ■ Basic absorbent combine dressing 10x20 cm x 3 | \$3.00 |

Grand Total for 9 days healing: **\$114.51** in dressing materials

Lesson(s) learned

After 5 weeks using a wound dressing regime including gauze and time consuming twice-daily dressing changes, the wound had deteriorated, rather than progressed towards healing. The change of dressing plan to include mechanical debridement and an advanced hydrobalance biocellulose dressing resulted in granulation and wound progression in just 9 days.

Dressings were cost effective and saved time as did not need to be changed so regularly. The patient avoided amputation and was able to be discharged to rehabilitation facility.