

CASE STUDY: TWO DIABETIC FOOT ULCERS ON A FOOT WITH MISALIGNMENTS



BACKGROUND

A 61-year-old woman with juvenile-onset diabetes. Complications of diabetes caused Charcot in the left foot, which was treated with a cast. The patient's right dorsum had been operated for other reasons. Risk Class 3. Numerous removable/attachable paddings are used to ease pressure off the sole. Previous foot wounds have occurred - treatment for these lasted approximately one year. During this year there is also a history of wound infections and repeated antibiotic treatments. The patient had an organ transplant in 2012.

CLINICAL ASSESSMENT AND TREATMENT

Due to the patient's medical history with wounds and all different products used over the previous year, the patient was immensely exhausted mentally in the beginning of the new wound situation. It was clear that neither the patient nor the site wished to start a new year-long process. The site had received Woulgan Beta-Glucan Gel for testing. The new product was suggested to the patient for the following reasons:

- Multiple wound-care products had already been exhausted
- This is a low risk product
- The product was easy to use

At presentation - 31st May 2016

After discussion with the patient, treatment with Woulgan was initiated. Treatment regimen: new Woulgan application twice a week.

- Wound at Charcot limb, left foot 3mm x 6mm
 - Wound at left foot big toe 5mm x 3mm
 - Wound at Charcot limb: Surrounded by thick macerated skin, punctuating ulcer with some secretion
 - Wound at big toe: Oozing wound, surroundings were reddening
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- Wounds were debrided and callus was removed

Week 2 - 13th June 2016

(Figure 1 and 2)

- Wound at Charcot limb: had enlarged since the last visit, partly because there was less maceration, and non-vital skin had been removed from the surrounding area
- Wound at the toe had clearly improved. Absorbent dressing with a silicon-coated pad has been used as a secondary dressing
- Debrided. Calluses around the Charcot limb were removed and maceration was treated with circular dermal curette. Wounds were rinsed and Woulgan gel and secondary bandage applied to both wounds. Both wounds were off-loaded



Figure 1: Wound at Charcot limb in week 2 of Woulgan treatment



Figure 2: Wound on big toe in week 2 of Woulgan treatment

Week 2-4

- 23rd June: The Charcot limb wound deteriorated and became infected. Antibiotic treatment prescribed. The condition got under control and it was decided to continue the use of Woulgan. After deterioration the wound again showed improvement
- 27th June: The condition of the wound on the Charcot limb was unchanged, but had not worsened either. The infection was under control, but swab tests were taken to confirm that
- The condition of the wound on the big toe was pretty good

Week 4 - 30th June 2016

(Figure 3 and 4)

- Big toe wound was closed and Woulgan treatment terminated
- There was minimal callus and this was removed with a curette. Big toe was still protected by a foam dressing and basic cream and Ceridal oil were applied to the skin
- The wound on the Charcot limb can be observed as clean and well granulated. Although there is still some maceration, there is also visible epithelialisation around the wound.
- The doctor decides to continue the antibiotics treatment for the infection
- Shoe paddings for the patient to ease pressure were prepared



Figure 3: Wound at Charcot limb after 4 weeks of Woulgan treatment



Figure 4: Woulgan treatment on big toe wound was terminated after 4 weeks

Week 4-8

- 11th of July: Woulgan treatment on Charcot limb was terminated
- 27th of July 2016: (Figure 5 and 6) Follow-up visit at the clinic. Clean new skin at the previous Charcot limb wound and notably reduced calluses.
- There is still some haematoma in the centre but no visible wound
- The plenary surface of the big toe has remained in good condition and clean, even callus-free
- For off-loading the patient has received new speciality footwear and paddings. Also, the patient has been encouraged to continue to use this to prevent new wounds from developing



Figure 5: Wound at Charcot limb after 8 weeks of treatment with Woulgan



Figure 6: Wound on big toe completely healed, 4 weeks after termination of Woulgan treatment

RESULTS AND DISCUSSION

- After 8 weeks of treatment with Woulgan, the big toe wound was fully healed and the Charcot limb was closed
- The medical history of the patient indicated a long healing time so Woulgan was applied right from the start
- The health care professionals claimed that Woulgan was easy to use and experienced no safety issues
- The patient experienced the dressing changes and the application of Woulgan as comfortable and painless