

## CASE STORY:

# 16 MONTHS OLD STALLED NEUROPATHIC FOOT ULCER ON A PATIENT WITH A HIGH COMORBIDITY



## BACKGROUND

55 years old female with a neuropathic foot ulcer. She has diabetes type II, in addition to: hypertension, adiposity, hypercholesterolemia, gout and personal problems that may influence her compliance. Her diseases require a lot of additional medication. This patient had a well-regulated blood sugar level. The Hba1c was reported to be between 6 and 8.

## CLINICAL ASSESSMENT AND TREATMENT

The wound was measured to be 0,7 cm long, 0,7 cm wide and 5 mm deep. It had been stalled at this size for a long time.

The wound was 16 months old and a lot of resources had been spent on attempting to heal it. In addition to manpower, a lot of different standard of care treatments had been used: honey, silver dressings, then honey again. None of them led to significant results.

This evaluation started in late March 2016.

### Earlier procedure used for several months:

- Dressing soaked with tempered PHMB solution on the wound for 20 minutes
- Peeling of heels and removing of callus on both feet
- Mechanical debridement with sharp tool
- Zinc paste around the wound edges
- Off-loading by cutting and adjusting felt (Haplafilt) to the plantar side/forefoot
- Honey products to the wound surface
- Fibre dressing
- Foam dressing on top
- Fixation

### New procedure:

It was decided to continue with most of the same procedures, but:

- Woulgan treatment initiated and honey treatment discontinued
- Instead of using single layers, several layers of fibre dressing were used
- Skin care of the surrounding skin was offered
- Dressing changes carried out twice a week

## WOUND BED PREPARATION - TIME PRINCIPLES

### T-tissue:

No necrosis. The honey product had debrided the wound properly. The wound bed tissue was red and fresh. A lot of callus around the wound - on the outside of the big toes on both feet, bilateral on hallux valgus. Callus removed by using a sharp scalpel and a curette when debriding the wound. The honey product resulted in a lot of moisture. After checking the medical records, it was confirmed that the wound healing had stopped.

### I-infection/inflammation:

No clinical signs for infection. No odour. No pain. No need for antibiotics. After discussion with the patient's physician, no compression was offered at this time but it was decided to follow the wound closely and consider compression at a later stage.

### M-moisture:

Despite using high absorbent fibre dressing in the wound, the surrounding edges were very macerated. This was one of the biggest challenges with this wound. To try to avoid this moisture it was decided to change the moisturizing agent and put several layers of the fibre dressing on the wound.

### E-edge/epithelialisation:

Macerated wound edges and no progress in healing. Wound edges were protected with zinc paste. The patient's special shoes and soles needed to be renewed and an appointment with an orthopaedic technician was arranged.

**Table 1: >57% reduction in wound size after 4 weeks treatment**  
(left bar = length in cm / right bar = date)



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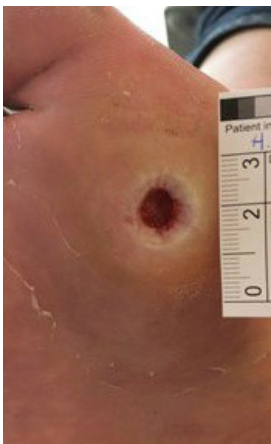
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### NURSE'S COMMENT:

"After doing some research I decided to evaluate the Woulgan Bioactive Beta-Glucan Gel. I got in contact with the company and was offered samples for evaluation. I had some prior knowledge about the product, but not any personal experiences. In the beginning, several professionals were involved. The foot therapist showed me how they created a good off-loading by using felt. The depth of the wound was measured by using a needle. The wound surface was measured and documented by using a product called KLONK (table 1)."

Table 2: Development of the wound during treatment with Woulgan (see also table 1)

Date	25th March '16 (1 <sup>st</sup> treatment)	31st March '16 (3 <sup>rd</sup> treatment)	10th April '16 (6th treatment)	20th April '16 (8 <sup>th</sup> treatment)	28th April '16 (last treatment – no picture taken, see table 1)
Size	0,6928 cm	0,6080 cm	0,5484 cm	0,4013 cm	0,3870 cm Wound surface reduction measured >57% after 4 weeks of treatment



31st March 2016.

After debridement.

Some reduction visible after the first week of treatment.



10th April 2016. Before (left) and after (right) debridement.

Wound surface had reduced. Procedure was continued.

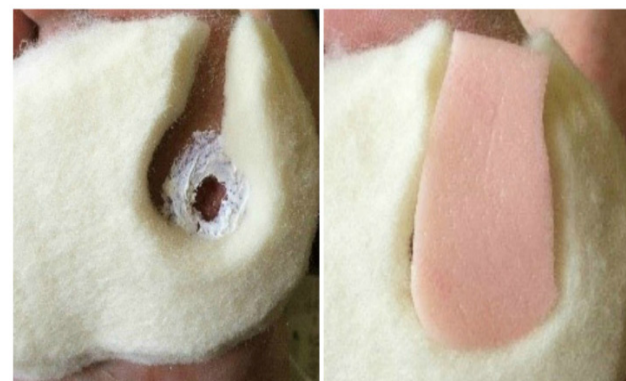


20th April 2016. Before (left) and after (right) debridement.

Less maceration. Good improvement. Procedure was continued.

### PROCEDURE: OFF-LOADING IS IMPORTANT IN THE TREATMENT OF DFU'S

1. Felt used for off-loading
2. Wound edges protected and Woulgan applied in a thin layer
3. Wound covered with fibre dressing in several layers
4. Foam dressing applied on top
5. Fixated



### NURSE'S COMMENT:

"I experienced the healing to improve during the period I followed up with the patient. The improvement was significant and visual. I experienced that this new procedure started a process to fill up the wound with granulation tissue. After 5 weeks of treatment, the depth of the wound was measured only 3 mm. I was the only person taking care of this wound during this period. Hence the procedures were done in the same way at every dressing change".

The nurse also points out that holistic care is important in wound care; nutrition, off-loading, weight control and focus on additional diagnosis.

Finally, she scores the product: "On a scale from 1 to 10 (with 10 being the best), I would give the product an 8."

### PATIENT'S IMPRESSION:

"On a scale from 1 to 10 (with 10 being the best), I give the product a 10 on conformity."