

CASE STUDY: DISTAL NEUROPATHIC FOOT ULCER ON AN IMMOBILISED 86 YEAR OLD PATIENT



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BACKGROUND

86 year old male with a distal, neuropathic foot ulcer. The patient is also suffering from spinal stenosis, osteoporosis and rheumatoid arthritis, which he has been afflicted by for approximately 30 years. He is non-diabetic, but presents neuropathy and swelling of the lower limbs. The patient also uses compression stockings (open in the toe area) and moves around by using a wheelchair. Walking skills and self-reliant transfers from wheelchair to sitting position are very limited. The wound is being off-loaded by spacious indoor/outdoor footwear.

CLINICAL ASSESSMENT AND TREATMENT

ABI measurements:

- Aug/2014 with index 1.2/1.2
- Sep/2016 with index 1.42 on the right and 1.2 on the left

Wound:

Patient stubbed his right 1st toe tip in early August 2016, following 4 weeks of standard care which did not result in expected healing rate of 40% reduction of the wound size.

Important medical information:

Earlier pressure ulcer at the same foot took 18 months to heal.

Wound treatment procedure:

Woulgan to be applied in a thin layer 2x per week. As a secondary dressing, polyurethane sheets and fixation were used. Daily care by home care unit and regular follow ups by podiatrist.



Figure 1: Wound at presentation

At presentation - 1st September 2016
After 4 weeks of standard of care treatment, the healing rate was not as expected:
Initiation of Woulgan treatment by foot therapy unit.

- Size of the wound: 1,5 cm²



Figure 2: Week 3 of Woulgan treatment

Week 3 - 22nd September 2016

- 58% reduction of wound area in 3 weeks
- Same procedure and secondary dressing: Woulgan applied twice weekly

Week 6 - 11th October 2016

(Figure 3)

- Further 27% reduction of wound area in these 3 weeks
- As the wound was improving well, it was decided not to change the treatment

Week 8 - 25th October 2016

(Figure 4)

- Healing rate: new 50% reduction of wound area in the last 2 weeks
- Wound starts to fill up
- Same procedure continuing



Figure 3: Week 6 of Woulgan treatment



Figure 4: Week 8 of Woulgan treatment

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Week 12 - 24th November 2016
(Figure 5)

- Healing rate: new 66% reduction of wound area these last 4 weeks
- New procedure: The progression was so good that it was decided to change over to one weekly application of Woulgan
- Same cover dressing was used

Week 20 - 17th January 2017
(Figure 6)

- Wound closed
- Further treatment: Self-reliant/assisted daily inspection
- This to be accompanied by application of fatty basic ointment (non-perfumed).
- Off-loading: Protected indoors and outdoors by spacious shoes.

Week 25 - 23rd February 2017
(Figure 7)

- Wound is still closed but further follow-up visits with podiatrist will be needed due to callus formation to the previous wound area, which might cause higher risk for recurrent pressure ulcer



Figure 5: Week 12 of Woulgan treatment



Figure 6: Week 20 of Woulgan treatment



Figure 7: Week 25 of Woulgan treatment

RESULTS AND DISCUSSION

Challenging distal wound on a neuropathic foot on an elderly immobilised person with comorbidity. Information in patient's medical history indicated a prolonged healing as the patient earlier had a pressure ulcer on the same foot that was stalled for 18 months. Hence, 5 months to completed healing equals 13 months of saved costs and patient suffering. In this case, it was decided to use Woulgan until complete healing was achieved.

- The improvement of the wound was visible from visit to visit
- No to minimal aggravating maceration of the surrounding skin was seen
- No safety issues were reported
- Simple to apply and easy to use

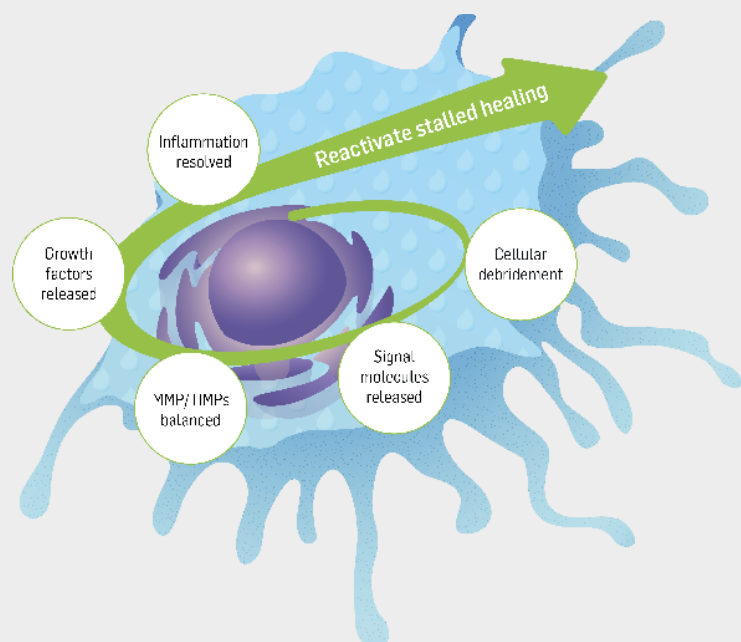


Figure 8: Macrophage as central coordinator of wound healing, activated by Woulgan