**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 spinalstenosis, 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.

**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 1:** Wound at presentation

**At presentation** - 1st September 2016
After 4 weeks of standard 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

**Figure 3:** Week 6 of Woulgan treatment

**Figure 4:** Week 8 of Woulgan treatment

**Figure 1:** Wound at presentation

**Week 3 - 22nd September 2016**
- 58% reduction of wound area in 3 weeks
- Same procedure and secondary dressing: Woulgan applied twice weekly
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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

RESULTS AND DISCUSSION
Challenging distal wound on a neuropatic 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