



## Case study: C119

L-Mesitran®

### Infected diabetic pressure ulcer

A female patient (65yrs) had a pressure sore on her right heel. The patient was hospitalized for abdominal surgery and developed a pressure sore (stage 4) on the coccyx and on both heels stage 2 pressure sores. On one heel the blister opened and got infected. Due to the operation the patient was weak, hardly any appetite. She was also diabetic (Type 2) and her glucose was deregulated after surgery. The coccyx wound was the reason she lost a lot of fluids. The patient was depressed and had to be stimulated to become mobile again and regain appetite. She was bedridden and refused anti-pressure sore mattresses.

The patient was in a lot of pain after surgery and received pain medication (Fentanyl matrix 12,5 mgr), and for the infected coccyx wound antibiotics were administered.

The intact stage 2 ulcer on the right heel showed signs of infection when it broke. Despite the oral antibiotics use. After partial scab removal a hydrogel was applied. After a week the honey based L-Mesitran Tulle was used for better debridement and infection control.

Product: L-Mesitran Tulle

Case study done by: Lian Evers, RN, Aafje Thuiszorg (home-care), Zwijndrecht, The Netherlands (lian.evers@aafje.nl)

### Methods

At the start of the honey treatment the wound was producing high exudates. These exudates removed the gel from the Tulle and the first three weeks the Tulle was changed 1x daily and covered with a foam dressing. After the first three weeks, dressings were changed only 3-4x per week.

### Results

The dressing was applied directly on the wound, after it was cleansed with tap water. The necrotic and infected wound (fig. 1) debrided fast and after appr. 4 weeks a clean and granulating wound bed was observed (fig. 2). The wound epithelised during the next three weeks and after 7 weeks the wound was fully healed (fig. 3). The patient had no pain or sensation during wear time or at dressing changes. No maceration was observed and the dressing created a moist wound environment.

### Discussion

This patient was part of a larger study group to evaluate the honey based tulle product. In total 4 patient were evaluated in the home care setting. Three patients had infected wounds, in 2 cases *Ps. aeruginosa* was established as the culprit. It was established *in-vitro* that the gel on the tulle is able to effectively kill MRSA, ESBL and other antibiotic resistant bacteria (Stobberingh, 2010). In this evaluation with infected patients the *in-vitro* effect was corroborated *in-vivo*.

The debridement of the wounds was fast, which is one of the key features of honey based products (Molan, 2006). The stimulation of angiogenesis by honey based products (Rossitter, 2010)



1. Right heel 02/09/2010



2. Right heel 13/10/2010



3. Right heel 08/11/2010

is clearly demonstrated by the quick epithelisation as described in the above case. The same observation was made in two other patients.

This evaluation shows (in a small sample size) that this product can effectively combat infections and stimulate granulation and epithelisation. When used with heavily exuding wounds daily dressings changes were necessary, but at moderate to low levels of exudate, changes every other three days sufficed.

### Declaration

These case studies were done independently and with patient consent.

### References

- Molan P (2006) The evidence supporting the use of honey as a wound dressing. *Lower Extremity Wounds* 5(1): 40-54
- Rossiter K (2010) Honey promotes angiogenic activity in the rat aortic ring assay. *Journal of Wound Care* 19(10):440-446
- Stobberingh E (2010) Antibacterial activity of honey against ESBL producing strains. Lab report from the Dept. Medical Microbiology Academic Hospital Maastricht (data on file with the author)