Diabetic foot, *Ps. aeruginosa*

A 52 year old male diabetic patient, Type 2 (DM), has been on biphasic human insulin (Mixtard) for the past four years. He suffers from renal disease (end stage) and he is on haemodialysis.

On 31/08/2008 the patient had a ray amputation (5th toe left foot). The post-op wound did not heal and the patient was referred from the orthopaedic clinic to the Diabetic Foot Clinic. Not only did the patient have the toe wound; he also had a diabetic ulcer with dirty slough on the side of the foot. Ulcer size 3cm x 3cm. The wound produced moderate yellow exudate. The patient himself was unable to take care of the wounds. On 25 November wound cultures were taken for analysis in the ISO 15189 accredited laboratory of the hospital. The wound was colonized with *Ps. aeruginosa*, resistant against amoxicillin (Augmentin) and piperacillin/tazobactam. The wound was sloughy, deep and the peri wound area was red with green exudate, indicating the *Ps. aeruginosa* infection. Prior to this treatment the wound was dressed with hydrogel (Intrasite), silver dressing (Acticoat / AQUACEL Ag), NaCl-gel (Hypergel), superoxidated solution (Dermacyn), iodosorb powder, alginate dressings (Kaltostat) and film dressings (Melolin). These dressings had little to no effect, evidenced by the infection and the deep wounds.

The wound size on the lateral side is after 36 days (pic. 5) appr. 1.5cm x 1.5cm, which is a 50% reduction. The treatment with the Ointment, on top an alginate and covered by a film dressing, was continued. The oral antibiotics were continued, due to the presence of slough and malodour. The wounds look clean after 22 days (pic. 4). From now on an alginate dressing is used on top of the ointment because of the exudates. The alginate also keeps the ointment in situ.

The wound size on the lateral side is after 36 days (pic. 5) appr. 1.5cm x 1.5cm, which is a 50% reduction. The treatment with the Ointment, on top an alginate and covered by a film dressing, was continued. The systemic antibiotics were continued too.

The clinical team commented that this patient did not take good care of the wound and his diabetes. In addition, the patient was not compliant with oral medication intake and faced challenges to visit the hospital for follow-up (he is a senior citizen home resident). However, the use of L-Mesitran Ointment has significantly improved the wound healing.

**Conclusion**

Diabetic foot care in Malaysia is a challenge for clinicians, especially when the wound is infected. Uncontrolled infection of the lower limb in diabetic patients is almost always treated with an amputation (Yusof, 2007). In this case the *Ps. aeruginosa* infection in a 52 year old DM patient was successfully controlled in a 36 day period. Furthermore, the wound decreased 50% in size. Amputation of the foot was therefore avoided. In this case the honey-based L-Mesitran Ointment proved to be a valuable addition in diabetic foot care to treat wounds and control infections, without any adverse reactions or influence on blood glucose levels.

**Declaration of interest**

This case study was done independently and with the written consent of the patient.

**References**


**Product:** L-Mesitran® Ointment.

**Case study done by:** Dr HariKrishna R, MD; Shahanisah Ahmad, RN; Noor Hayati Arbi, RN. Diabetic Foot Clinic, Kuala Lumpur general Hospital (HKL), Kuala Lumpur, Malaysia.

**Method & Observations:**

On the first day (pic 1) of the treatment the wound was cleansed and the Ointment applied. The wound is dirty with slough, moderate yellowish exudates, size 3x3cm. The wound spreads to the lateral side. Since the patient is also on haemodialysis it was impossible to treat the wound daily, so the patient was instructed to do dressing changes himself at home. The patient was administered metronidazole (Flagyl), Unasyn and Papase because this is the standard treatment at HKL. On day 10 (pic. 3) the wounds had a slight malodour. The wounds were cleansed with superoxidated solution and the Ointment was applied and covered with a film dressing. The oral antibiotics were continued, due to the presence of slough and malodour.

The wounds look clean after 22 days (pic. 4). From now on an alginate dressing is used on top of the ointment because of the exudates. The alginate also keeps the ointment in situ.

The wound size on the lateral side is after 36 days (pic. 5) appr. 1.5cm x 1.5cm, which is a 50% reduction. The treatment with the Ointment, on top an alginate and covered by a film dressing, was continued. The systemic antibiotics were continued too.

The clinical team commented that this patient did not take good care of the wound and his diabetes. In addition, the patient was not compliant with oral medication intake and faced challenges to visit the hospital for follow-up (he is a senior citizen home resident). However, the use of L-Mesitran Ointment has significantly improved the wound healing.