**Problematic Stage IV Pressure Ulcers on Heels closed with Polymeric Membrane Dressings**

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**Introduction**

Pressure ulcers occur in all care settings: hospitals, rehabilitation, nursing homes and the patients home. The heel is the second most common site for the development of pressure ulcers and many of these can be prevented.

Heel pressure ulcers on extremely disabled patients tend to have poor circulation and often become infected. Even with good compliance, which is rare, many heel pressure ulcers never close. Complications associated with heel pressure ulcers include: cost of care, ostomy/nursing, recurrent hospitalisation, pain, lost wages, and amputations.

This study highlights three patients who would not appropriately off-load their heels: an 85-year-old man with severe Parkinson’s, a combative 80-year-old man with Alzheimer’s and a severely contracted 60-year-old woman with Alzheimer’s, all with 3-6 month old stage IV heel pressure ulcers. All these ulcers were acquired during hospitalisation and left to be treated at home.

**Case 1**

85-year-old male with severe Parkinson Disease. Mobile with assistance. Living conditions very hot and humid which could be the reason he could not tolerate the low air-loss bed and kept kicking off his heel protectors.

The heel ulcer developed 3 months ago during hospitalisation for pneumonia. Initially treated with iodine solution and petrolatum gauze in an attempt to dry out the necrosis, however, the dressings stuck like glue to the wound causing great distress during dressing change.

**Case 2**

80 year old male with Alzheimer’s Disease, immobile and very aggressive. The heel ulcer developed 4 months ago during hospitalisation. At home it deteriorated due to the patients constant banging of the heels on the bed rails. Initially treated with iodine solution and a cream containing hyaloronic acid. Dressing changes had been very difficult to perform on this patient due to his agitation.

**Case 3**

A 60 year old woman with Alzheimer’s Disease and reduced mobility. Contracted her heel ulcer during hospitalisation for dehydration. She was in great pain (9 on a scale of 10) and was taking several different types of analgesics to try control it. The local GP had treated it with Halotexan for 4 months but the ulcer kept on deteriorating. The family asked for help in the home when the wound became too unbearable to be in the same room.

**Method**

One patient’s wound was sharp debrided (case 2) prior to first dressing application. Polymeric membrane cavity fillers moistened with a small amount of saline softened the slough and necrosis on the other wounds. On one of the ulcers (case 3) a silver polymeric membrane dressing was used together with a charcoal dressing due to the odour. After initial cleaning Polymeric cavity fillers and polymeric membrane dressings were placed directly on each wound and replaced daily without rinsing or any other intervention. Later, dressing changes were performed every other day or more seldom when indicated.

**Aim**

It was important for us to use a dressing that could easily be changed by the relatives at home. We chose to evaluate PolyMem® in regards to ease of use, cleansing and healing.

**Results**

The patient with Parkinson’s did not tolerate a low air-loss bed. He would not wear heel protectors, perhaps due to the heat (no air conditioning). His previous dressings stuck painfully to his wound, but the polymeric membrane dressings were non-adherent and promoted steady wound healing. The 80 year old man with Alzheimer’s was extremely aggressive when he became impatient, banging his heels on the bed rail. Dressing changes were quick,atraumatic and easy to perform, so his wife was able to do it without irritating him, allowing community nursing visits to decrease from daily to weekly. The 60 year old lady with Alzheimer’s showed an improvement already after 2 days, after which she was quick, atraumatic and easy to perform, so his wife was able to do it without irritating him, allowing community nursing visits to decrease from daily to weekly. The 60 year old lady with Alzheimer’s showed an improvement already after 2 days, after which she was quick, atraumatic and easy to perform, so his wife was able to do it without irritating him, allowing community nursing visits to decrease from daily to weekly.

**Discussion**

Polymeric membrane dressings debriided and kept all the wounds clean and infection-free throughout the healing process. They protected the wounds by providing cushioning and promoted a moist environment which led to complete epithelialisation of the wound. The patient no longer protested over getting dressings. The wound did not need to be cleansed at dressing change. It was important for us to use a dressing that could easily be changed by the relatives at home. We chose to evaluate PolyMem® in regards to ease of use, cleansing and healing.

**PolyMem®**

Polymem® WIC Cavity and PolyMem® MAX Wound dressings. Manufactured by Ferris Mfg Corp, Burm Ridge, IL, 60027 USA. This case study was unsponsored. Ferris Mfg. Corp. contributed to this poster design and presentation.

PolyMem® dressings contain components that continuously cleanse the wound whilst in place, often eliminating the need for cleansing at dressing changes, leading to less disruption of the wound bed, less pain and time saving for the nurses. The hygroscopic glycerol and super absorbent incorporated in the matrix work together, pulling excess fluid and liquefied slough from the wound into the dressing. The glycerol also help maintain the moisture in the wound and prevents the dressing from sticking to the wound surface. Due to how it works with the nociceptor system polymeric membrane dressings often provide dramatic drug-free pain relief which is ideal for debilitated patients. They also help protect the wound area from pressure and shear during movement and provide a cushioning effect which is extra beneficial on pressure ulcers.

**References**

- Drennan DB. Feature: heel ulcers are preventable. ECPN. 2003;97(2):4.
- Agathangelou C. Increased Quality of Life with the help of a Polymeric Membrane Dressing. Poster presented at EWMA 2008 in Lisbon.