

IMPROVING CLINICAL OUTCOME WHILE REDUCING COST OF TREATMENT

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INTRODUCTION

The Wound Centre first started as a project in 2002. Today it has evolved and is an integrated part of our hospital.

We have a multidisciplinary team consisting of among others dermatologists, vascular surgeons, infection specialists, orthopedic surgeons, dieticians, and of course the wound care nurses and podiatrists pulling the strings.

The majority of our patients are patients with chronic wounds referred to our clinic from other institutions in our region. Our continuous challenge is to improve the clinical outcome, while minimizing resource utilization and cost.

AIM

Evaluate the efficiency of a multifunctional polymeric membrane dressings* (PMDs) in terms of clinical outcome, resource utilization and cost.

METHOD

10 patients (6 males and 4 females) with chronic wounds were included in the evaluation. Their ages ranged between 47 – 89 years. Wounds included three pressure ulcers, one arterial ulcer, three trauma wounds turned chronic, and three diabetic ulcers. All ten patients had prior to the evaluation received our perceived best treatment without showing desired healing progress. For six of the ten that meant advanced wound care dressings – for four it meant Negative Pressure Wound Therapy (NPWT).

We had tracked

- The weekly cost of dressings used
- Number of dressing changes
- Amount of time used at dressings changes

We then started treating these ten patients with PMDs and performed the same measurements.

RESULTS

Clinical Outcome:

Nine of ten patients showed improved clinical outcome (one planned amputation even got cancelled) – one patient's wound became worse. Some representative photo documentation is presented at the bottom of poster.

Resource utilization:

- Number of dressing changes per week was the same.
- Time used for dressing changes was reduced by 23.2% (11.8% versus dressing group and 36.8% versus NPWT)

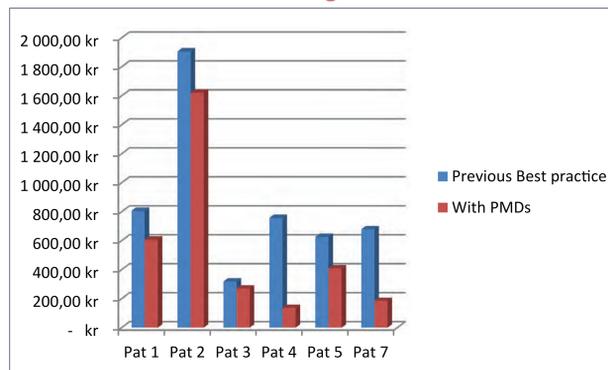
Cost:

- Weekly treatment costs were reduced by an average of 36.7% (median was 29.8%) versus the previous best dressing treatment regime.
- Compared to the non-functioning NPWT treatments the weekly treatment costs dropped a whopping 93.3% (median 90.0%). This is a clear indication that NPWT isn't ideal for all wounds, and that this expensive treatment should be stopped if results aren't seen rather quickly.

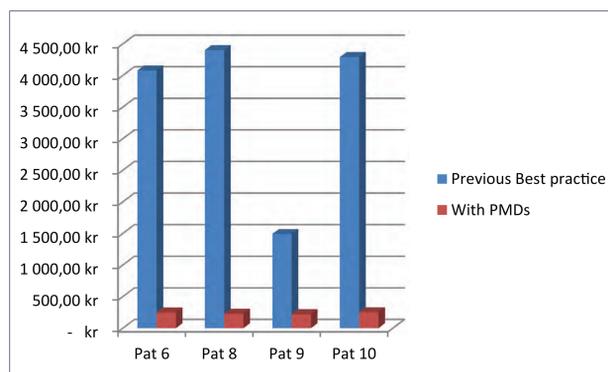
DISCUSSION

Each wound and each patient is different and things vary for the different stages in healing, making scientifically accurate cost studies very difficult. A larger, more rigid study is needed in order to draw absolute conclusions, but our limited evaluation indicates a place for multifunctional PMDs in clinical practices focusing on clinical outcome, effective resource utilization and cost effectiveness.

Cost of Dressings v.s. PMDs



Cost of NPWT v.s. PMDs



Patient 1, A 61 year old woman

Lost 18 kg in 6 months, high white blood counts and very low hemoglobin value, malignancy suspicion. First contact with patient 9 Sept 2011 (no photo available). Circumferential ulcer on right leg that has deteriorated these past 6 months. Previous dressings include soft silicone foams that were changed 3 x week as well as alginates combined with superabsorbent pads and compression for about a month. Due to lack of improvement we started to use PMDs combined with compression therapy the 10 October. (photo from 12 October shows is after the first dressing removal) Granulation tissue improved and the wound decreased in both depth and area very rapidly. The last photo shows the improvement of the wound after one month's use of PMDs. A few weeks later the woman is sent home and her district nurses take over the wound treatment.



Patient 8, 60 year old male

Contracted a stroke and spent several days alone at home sitting on his own urine and feces before he was found. He developed a huge sacral ulcer was debrided and treated with NPWT for several weeks. Images show results of PMDs after 3,5 months. We used the cavity version of PMDs and covered that with a superabsorbent dressing as the exudate level was very high. Home care nurses took over his treatment.



Patient 3, A 61 year old male, paraplegic due to old trauma

Multiple pressure ulcers, sacral and on the lower extremities. Ulcer shown here has been treated by the patient himself the past 6 months and is located on the left malleoli. The ulcer was very deep with palpable bone contact, due to the severity of the wound and patient's condition amputation was recommended, however, the patient was against amputation as well as our suggestion to use NPWT. We started to use PMD's together with compression and to our surprise the wound rapidly started to improve. The images show the difference in less than 5 weeks treatment with PMD.



Patient 10, 65 year old woman with traumatic wound

Suffers from Meniere's disease and her dizzy spells make her fall frequently. Large undermining wound on her lower leg after a traumatic fall. Treated with NPWT three weeks but wanted to stop as she missed her freedom. We then chose to use PMDs, using both the extra thick and the cavity versions combined with compression therapy.

