

# THE USE OF POLYMERIC MEMBRANE DRESSINGS\* ON A LARGE VARIETY OF DIFFERENT WOUNDS IN A SURGICAL SETTING

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## INTRODUCTION

Falun Hospital is a county hospital covering 250 000 inhabitants. By initiative of the chief surgeon a part time wound clinic opened in one of the surgical wards 2005. The main goal of the clinic was to let the nurses take care of the wounds in order to offload the surgeons. Today the clinic has evolved to work in a multidisciplinary fashion.

A variety of patient groups are treated at the wound clinic today. We see many different types of wounds.

Our patients are usually referred to wound clinic arrive via surgical departments after discharge, from the ER or other health clinics.

## AIM

To standardize wound care treatment at our surgical department by consistency with dressing material and follow-up with the same personnel.

## METHOD

About a year ago we started to use Polymeric membrane dressings\* (PMDs) on our most challenging cases. PMDs contain a surfactant, glycerin and a super absorbent starch. These ingredients work synergistically to draw and concentrate the body's natural healing substances into the wound bed to promote rapid healing whilst continuously cleansing the wound.

Apart from our own surgical cases, most patients are acute referrals.

Examples of wounds are post-op complications, burns, pressure ulcers, traumatic injuries and skin-grafts.

PMD is applied at the first consultation depending on the type of wound. If possible the patient or community nurse change the dressing at home and the patient is assessed at the clinic by the same nurse every 1-2 weeks.

## RESULTS

We saw an improvement of all wounds. The cleansing and debridement action of PMD was very effective leading to faster granulation formation. Unfortunately we couldn't follow all the evaluated 11 cases until total closure as the patients were often taken over by the community nurse or themselves once the wounds started to improve but we were very satisfied with the results we could follow.

## DISCUSSION

We found the polymeric membrane dressings very easy to handle as visual indicators show when it is time to change' and the wound doesn't need additional cleansing. Due to this the patients found it easy to manage the dressing changes themselves which freed time and resources from the clinic and health care professionals as well as the patients themselves.

Unfortunately the assortment of dressings varies between the municipality and county which can lead to a lack of consistency. Not all our patients were able to continue with these dressings once they were taken over by their local hospital.



Our PMD evaluation covered 11 patients with a variety of different wound types. Apart from the 6 cases described below we also treated 4 pressure ulcers and a severe sunburn. We saw rapid cleansing as well as healthy granulation formation in all of these cases. As mentioned earlier, follow-up until complete closure was often not possible since the patients or their district nurses took over the wound care once the healing progressed.

70 year old woman with severe vascular disease. First came to us in April when we started her on PMDs and saw a rapid improvement of the wound bed. Next time we saw her was in November after a revascularisation. We started to use PMD again with great results. Continued treatment with PMD at home with the help of her district nurse.



OP for epithelial cancer on lower leg 16 November and the donor site was covered by a film dressing. Due to leakage we changed to PMDs on the 25th November. As soon as we started to use PMD the patient commented on the reduction of pain. After 5 days almost completely epithelialized. Control a week later showed complete healing (only 2 dressings applications needed to achieve healing).



Traumatic 10 cm long skin tear on arm that had been sutured at the ER. During the follow-up visit at our clinic we discovered that the flap had become necrotic. Ulcer area when starting with PMD is 6 x 2 cm (22/11 2010). Two and a half weeks later it has shrunk to 1 x 0,3 cm.



Breast enhancement 5 years ago. During surgery to remove a malignant mass in the right breast the surgeons discovered silicone leakage. The defect implant was replaced by a new larger implant. During the post-op check up the tissue looked strained and was showing signs of becoming necrotic. PMD initiated. Debridement effect from PMD so effective that the patient can keep the new implant.



Motor cross accident with leg fracture and compartment syndrome leading to tissue necrosis. PMDs started beginning of September (no photo available) with the goal of debriding necrosis and achieving a graftable wound surface. The wound cleaned up rapidly with visible improvement at each dressing change. On the 25/8 (one week prior to PMD) it measured 9,5 x 3,5 cm. One month later the wound had shrunk to 5,8 x 2,5 cm and was ready for grafting.



Post op infection in the groin after a thrombectomy. Initially treatment with negative pressure wound therapy (NPWT) to stimulate granulation tissue, stopped due to development of fat necrosis and damage to surrounding skin. PMD (cavity version) initiated 24/10. We saw rapid debridement and granulation formation within the first week.

