

# EVALUATION OF A NEW POLYMERIC MEMBRANE FINGER DRESSING ON TRAUMATIC FINGER AND TOE INJURIES

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## INTRODUCTION

At our teaching hospital we have many different specialties. The Department of Plastic, Reconstructive, Esthetic and Hand Surgery is well known so most traumatic hand injuries from the region get referred to us.

Open wounds of the fingers pose a number of potential problems, even when described as simple or superficial. There is always risk of infection, injury to underlying structures or chronic tenderness/pain. Treatment recommendations must take into consideration wound size, geometry, depth, location, duration, contamination, associated injuries, age of the patient, and patient cooperation as well as other factors. In general, stiffness is the most common single problem following treatment of a finger injury. We use a variety of different wound dressings when treating traumatic finger injuries, the most common ones being paraffin gauze or hydrocolloids.

## AIM

To evaluate a new polymeric membrane dressing (PMD) shaped as a finger dressing that is designed to be rolled onto the digits at our hand surgery clinic. We looked at ease of use and patient comfort as well as healing and time savings related to dressing changes.

## METHOD

We had 5 patients, four with traumatic finger injuries and one with a toe injury. One of the finger patients had 2 fingers partially amputated, one had a full and a partial finger amputation, one had full thickness wounds and one had a thumb injury. Suitable sizes of the polymeric membrane finger dressings (PMFDs) were chosen and changed 1-2 times a week. The patients were given extra dressings so they could perform the changes at home if needed. The patients were followed for two months.

## RESULTS

The finger dressings were very easy to apply and stayed in place well without sticking to the wound surface and resulting in painful dressing changes. All the patients found these both comfortable to wear as well as protective due to the perfect fit and cushioning effect. Within the first hours of application pain levels reduced to the extent that the patients could move their fingers in an almost normal manner which seemed to reduce the swelling and make the rehabilitation time shorter. We noted that the debridement and cleansing effect was much faster than anything we had previously used. The thumb and toe wounds closed within the two evaluation months.

## DISCUSSION

A larger population is needed in order to draw absolute conclusions, but our limited evaluation indicates that the wounds seem to heal faster than with traditional dressings we have previously used. PMFDs do not adhere to the wound, and in combination with the cleansing effect had a positive effect on pain reduction during wear time as well as dressing change. The only limitation that was encountered was the sizing and it would have been ideal to have more sizes to choose from. The lack of bigger sizes that was available is one of the reasons that our test population is rather small, especially when treating thumb injuries. (Note: The manufacturer is in the process of producing two larger sizes so this dressing will soon come in 5 sizes).

\*PolyMem® Finger and Toe Dressings with and without Silver. Manufactured by Ferris Mfg, USA. Ferris Mfg. contributed to this poster design and presentation.

