

# REPORT OF EXPERIENCES:

Non Adherent Dressings in Fragile Skin Conditions: The Use of Soft Silicone Coated Polyurethane Foam Dressing (Mepilex®) in Hereditary and Acquired Bullous Skin Diseases.

**Hauke Schumann M.D.**

**Gabriele Beljan M.D.**

**Doris Höping**

**Prof. Leena Bruckner-Tuderman M.D.**

Department of Dermatology,  
University Hospital Muenster, Germany





## **Silicone soft coated polyurethane foam dressing**

Here we present our experience with soft silicone coated polyurethane foam dressing (Mepilex) in wound management of patients with hereditary and acquired fragile skin conditions. Twenty-two patients seen as out- or inpatients were evaluated. Thirteen patients suffered from recurrent blistering caused by hereditary epidermolysis bullosa (EB), nine from acquired bullous diseases including bullous pemphigoids, pemphigus vulgaris, EB acquisita, subcorneal pustulosis, toxic contact dermatitis and blistering as a result of radiation therapy. The age of the patients spanned from 1 to 91 years.

## **Wound healing**

To assess its capacity to influence wound healing and to protect lesional skin from further blistering Mepilex was applied to pressure areas like elbows, knees and feet and to other areas with chronic or acute wounds.

The patients/parents gave informed consent to apply Mepilex as a wound care product. Patients, parents of young children and nurses were instructed how to use the soft silicone dressing.

The wounds were cleaned with skin disinfectants e.g. 0,1% Lavasept (Polyhexanid) or Octenisept (Octinidinhydrochlorid 0,1% - Phenoxyethanol 2%) and Mepilex was directly applied onto the wounds. It was recommended to change dressings daily in order to check for blistering, signs of infection and to exclude adverse events. However, some patients left the dressing for up to five days.

In most cases Mepilex had to be fixed with conventional bandages. The size of the assessed lesions was measured before the first application of Mepilex. Secretion, epithelialization, inflammation were documented, viable and non viable tissue was estimated before the first application, at each clinical visit and at the end of the treatment. At each visit photos were taken.

## Results

We observed good wound healing of acute and chronic wounds, with fast epithelialization in most cases. Mepilex showed good capacity to absorb wound secretion. The soft silicone adhesive layer did not tear the EB skin and only in one case of an acute eruptive pemphigus vulgaris the Mepilex dressing removed the epidermis when it was changed. No allergic reactions were observed.

After complete reepithelialization Mepilex can protect pressure points like knees, elbows, shoulders from mechanically induced painful lesions, especially in children with EB. However new blisters can occur under Mepilex dressing and need to be treated. Most patients with hereditary EB continuously develop blisters. Eleven out of 13 EB patients added Mepilex to their standard wound dressing products. Especially EB patients with restricted ability to change dressings by themselves used Mepilex as an “easy to handle” product which could be changed without assistance.

However patients need to be instructed that careful inspection of the wounds to exclude e.g. wound infection is as important as sterile drainage of blisters that occur under the Mepilex dressing. As with every other dressing product rare dressing changes can result in adverse events.

## Positive remarks

- Good wound healing and epithelialization
- Excellent protection and padding
- Good absorption
- Atraumatic to wound bed
- No or little pain during dressing changes
- No allergic reactions
- Easy to handle
- Independent wound care
- Removal of crusts when combined e.g. with creams or gels

## **Problematic aspects**

- Softening of wound edges
- Initial spreading of wound borders
- Can be too adhesive in acute eruptive phase of pemphigus
- “Easy to handle” might lead to unreflected long term application
- Ulceration, superinfection and hypergranulation under unreflected long term application
- In incontinent patients the dressing might absorb urine

## **Frequent EB patients’ comments**

- Good healing
- Good protection
- Good absorption
- Easy to handle

## **Conclusion**

The application of soft silicone coated polyurethane foam dressings like Mepilex in acute and chronic wounds in fragile skin conditions shows good wound healing, epithelialization, protection and it can be used as an “easy to handle” dressing. Strong secretion of wounds in bullous diseases can result in initial softening at the wound edges under Mepilex before reepithelialization starts. Since Mepilex is much easier to handle than many other wound dressings some patients tended to unreflected long term use which can cause adverse effects. Dressing changes every 4<sup>th</sup> or 5<sup>th</sup> day can result in ulceration and widening of wounds. Therefore especially when wounds are infected, daily dressing changes and careful cleaning before application are required.

In acute phases of superficial blistering or in newborns with extremely fragile skin the adhesive effect might be too strong and the product should be handled with care.

## Figure legends

### Patient 1:

An acute erosion after mechanically induced blistering under the right foot of a patient with EB acquisita (A) showed complete epithelialization within 4 weeks (B). To protect from shearing forces Mepilex was used as a “dressing shoe” after the initial lesion healed (C). Mepilex was fixed with a cohesive conforming bandage.



Patient 1A



Patient 1B



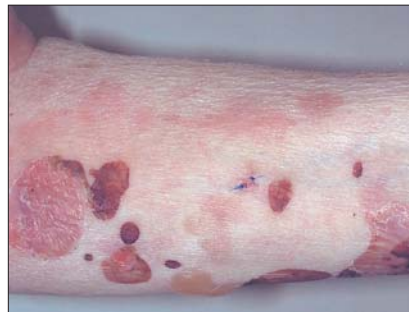
Patient 1C

### Patient 2:

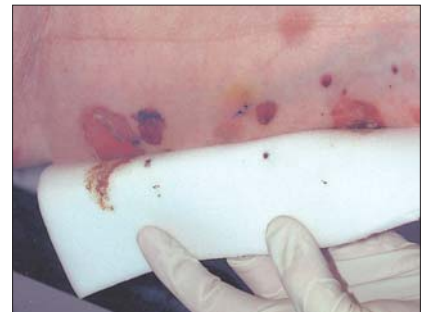
Blistering of the lower arm in bullous pemphigoid (A). Good wound healing and epithelialization under Mepilex. However, new blisters occurred under the dressing in the early phase of the therapy, but blister roofs were not removed by the dressing change (B). Wound secretion was absorbed by Mepilex (C).



Patient 2A



Patient 2B



Patient 2C

**Patient 3:**

Chronic wounds at the shoulders of a teenager with EB showed good wound healing under Mepilex. It was protective and easy to handle (A). Circular incision of the Mepilex dressing allowed adaption to this region (B). However, careful wound cleaning and dressing changes every day in infected superficial wounds are important in order to avoid adverse events.



Patient 3A



Patient 3B

**Patient 4:**

Bullosis diabeticorum and consecutive diabetic ulcer (A). Good absorption, wound healing and reduction of shearing forces at a pressure point of the lateral left foot (B).



Patient 4A



Patient 4B



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Mölnlycke Health Care AB (Publ), Box 1380,  
SE-402 52 Göteborg, Sweden.  
Phone +46 31 722 30 00  
[www.tendra.com](http://www.tendra.com)