

Use of a Glycerine-Containing Horseshoe-Shaped Dressing for the Treatment of Sacral Pressure Sores

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In an attempt to prevent surgical patients from developing pressure sores, a number of products were evaluated over a two-year period in our hospital. To reduce shearing forces, a great number of nursing institutions apply a film or a hydrocolloid wound dressing to the skin. However, the anatomy of the buttocks does not make it easy to hold a dressing firmly in place, and when using hydrocolloid wound dressings, the condition of intact skin can deteriorate. The nursing staff in our hospital developed a horseshoe shaped dressing that is adapted to the anatomy. This new shape covers both the sacrum and the ischial tuberosities. Various nursing teams in different departments used the *Elasto-Gel™* dressing (Southwest Technologies, Inc., Missouri, USA) which contains 65% glycerine and was cut into a horseshoe shape. Its use was compared with use of a film or hydrocolloid dressing for prevention of sores. After two years of experience, the results were very positive:

- Shearing forces are to a large extent eliminated, reducing the risk of pressure sores.
- The skin under the dressing remains in good condition because the blood flow is ideal.
- The dressing remains intact on removal and does not leave a residue on the skin.
- Patients find the material and its shape comfortable because it conforms to the anatomy and does not roll up or disintegrate.

In addition, there was a saving in nursing time, and the patients' quality of life was greatly improved. The present study supports our belief that using the *Elasto-Gel™* horseshoe shape may be cost-effective for surgical patients of many kinds because the length of hospital stay and the costs of renting special mattresses are reduced.

Poster No. 42: Wound Healing Properties and Hypertrophic Scarring Under a Hydrocolloid and a Hydrogel in a Contact Burn Pig Model

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The purpose of this research was to assess an animal model for hypertrophic scarring and necrotic tissue disintegration after deep second-degree burns and also to assess the use of a hydrocolloid and a hydrogel to prevent the scarring in burns.

A dark-pigmented pig was burned with a 170°C brass block (7x7 cm). Six equal burn wounds were made on each side of the pig. On the right flank, the burn wounds were dressed with a 10x10 cm hydrogel sheets (*Elasto-Gel™*, Southwest Technologies, Inc.) and on the left side 10x10 cm hydrocolloid wafer (DuoDERM[®], ConvaTec) were used. All wounds were photographed at every dressing change. On day 7, a biopsy was taken (1x7 cm, -1 cm deep) from two wounds, one from the left and one from the right flank. This was repeated every 7 days until all wounds had been biopsied. Each biopsy was properly prepared for microslides and the samples were histologically examined. Faster necrolysis, epithelialization and greater contraction were found under the hydrocolloid dressing. No bacteria and limited inflammation was seen under the hydrogel. Better quality of healing and fewer signs of scarring were obtained under the hydrogel dressing. We cannot therefore conclude which dressing is better, but we believe that the hydrogel dressing should be used in wounds where bacterial loading is a problem and where inflammation is severe.

This study gave useful information on the necrolysis and epithelialization rate under different dressings. Additional studies are required to determine whether the dark-pigmented pig will provide a reliable scarring model.

Poster No. 51: Preserving the Tissues of Problematic “Non-Healing” Wounds Using a Glycerine-Based Wound Dressing

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Elasto-Gel™ (EG) (Southwest Technologies, Inc.) is a unique hydrogel. It has special properties because of its high glycerine content (65%). It creates a nearly ideal moist wound healing environment and conserves both the viable and damaged (necrotic) tissues.

Based on our experience with EG dressing in the debridement and treatment of problematic and irregular wounds, we used the dressing on a 15 year old boy burned by high voltage injury. The punctate entry was on the head (face and skull) and the exit sites were on his feet, including the head of the 1st metatarsal bone on the right foot, and the head of the 5th metatarsal bone on the left foot. EG was used almost continuously before and after necrosectomy and grafting.

The child can now stand, walk and work without any problems. We therefore recommend *Elasto-Gel™* for temporary covering of skin defects and also for saving the tissues of electric burn wounds.

Poster No. 65: Cost-Effective Healing of Shallow Chronic and Non-Chronic Wounds

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This presentation will describe two patients treated with *Elasto-Gel™* (Southwest Technologies, Inc.).

Case 1

This elderly woman had had a post-radiation ulcer on the bridge of her nose for years. Plastic surgery was planned but there was a delay of eight weeks. The area was treated with two small pieces of *Elasto-Gel™*. There was no exudate, the wound healed in eight weeks and surgery could be canceled.

Case 2

This man had a squamous carcinoma removed from his face leaving a 1 cm cavity wound to be closed later. He was promised that if there was no sign of disease for one year, he could have the defect surgically corrected by skin flap. However, after eight weeks of dressing with *Elasto-Gel™*, the defect was healed. Plastic surgery was canceled.

We have achieved similar results for a decubitus ulcer and in other situations where there was minimal exudate. The product is said by the manufacturer to last about ten days and can stay on for four to five days at a time (removed for wound cleansing and then reapplied). If the amount of exudate is very low, the *Elasto-Gel™* can be used for six to eight weeks if cleansed periodically. So far there have been no infections and the patients find the dressing very comfortable and easy to manage. The number of dressing changes required is minimal and the healing time is very short. The product is very cost-effective and the cosmetic results are good.