

CASE STUDY

Polymeric Membrane Dressings* Provide Pain Relief and Quick Healing of Burn

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CLINICAL PROBLEM

On September 29th a 70-year-old wheelchair-bound female spilled scalding ham juice on her right thigh which resulted in a second-degree burn. The patient’s history includes CREST Syndrome, a non-healing ulcer to the left foot related to CREST Syndrome, and a right below-knee amputation related to peripheral arterial disease. Initial wound care by the patient was to apply petrolatum ointment and silver sulfadiazine 1% cream. No improvement was seen and patient reported the wound to be very painful. The patient was seen in the outpatient wound clinic by a nurse practitioner.

The patient’s protein intake was adequate, but a multivitamin and vitamin C supplements were added to the diet. The right thigh wound initially measured 5.7 cm x 17 cm with a moderate amount of serous drainage.

When the silver sulfadiazine 1% cream was used for management of the burn wound, the wound required twice-a-day dressing changes. This treatment modality has the added steps at each dressing change of cleansing the wound, usually with a sterile product, placing the silver sulfadiazine on a non-adhering dressing, and securing with a gauze bandage wrap and often an elastic bandage wrap to hold dressings in place.

CURRENT APPROACH

The burn area was debrided and the new plan of care consisted of a polymeric membrane dressing changed three times per week, secured with soft cloth tape on the edges to maintain good contact with the wound. The dressing was then covered with stretch netting. Polymeric membrane dressings are very simple to use: just remove the old dressing and apply a new one – it is that easy! This method of treating a burn saves on dressings, and there was no need to cleanse the wound because the polymeric membrane dressing has a wound cleanser built into the dressing that thoroughly and continuously cleanses the wound while the dressing is in place.

OBJECTIVES

- 1. Identify polymeric membrane dressings as suitable for use on second degree burns.
- 2. Discuss the benefits of choosing polymeric membrane dressings for wound care management of second degree burns.
- 3. Identify the advantages of using polymeric membrane dressings to decrease wound bed pain, enhance wound healing and improve cost-effectiveness.

PATIENT OUTCOME

The right thigh burn wound completely epithelized in 14 days with initiation of polymeric membrane dressings on a patient with a challenging chronic underlying disease. Polymeric membrane dressings created an optimal healing environment by concentrating the body’s naturally produced growth factors, nutrients and regenerated cells in the wound bed.

After the third dressing change, this patient reported excellent relief from her wound pain. No further wound cleansing was necessary after the polymeric membrane dressing was initiated. The wound bed appeared much pinker and needed fewer serial debridements than expected when using typical burn dressings. The exudate was well contained by the absorbent polymeric membrane dressing components.

CONCLUSION

Polymeric membrane dressings are soft, flexible, absorbent and non-adherent. This dressing decreased inflammation, relieved wound pain, increased patient comfort, effectively absorbed exudate, softened fibrin, decreased the need for debridement, prevented maceration and decreased the number of dressing changes required. This dressing also provided a more rapid healing rate than experienced with other dressing types for similar wounds. Only six dressings were used in the course of this wound's management. Polymeric membrane dressings are both cost efficient and time efficient. The quick and easy “on and off” change protocol of polymeric membrane dressings decreased the burn wound’s exposure to air during the dressing change process which reduced the risk of possible infection. Polymeric membrane dressings were excellent dressings to use on this second-degree burn.

Burns are some of the most painful wounds: a dressing that decreases pain and decreases the time required for healing is important to both the patient and to the clinician.

BIBLIOGRAPHY

- 1. Murrey MT, Chuang AH, Runner RR, Paustian PW, McPherson III JC, McPherson Jr. JC. Pluronic F-68 reduces post-burn edema. Abstract Presented at 3rd Annual Symposium on Advanced Wound Care. Richmond, Virginia. 1993.
- 2. Rodeheaver G. Controversies in topical wound management. WOUNDS 1989; 1(1):19.
- 3. Alvarez O Moist Environment For Healing. Matching the Dressing to the Wound. Ostomy Wound Management.1988; 21: 64-83
- 4. Lee SK. A doctor's perspective on moist wound healing. The Remington Report 2001;9(3):66-70.
- 5. Worley CA. So, what do I put on this wound? Making sense of the wound dressing puzzle: Part II. Dermatol Nurs. 2005;17(3):203-205
- 6. Hess CT. Wound Care Clinical Guide 5th Edition. Lippincott Williams & Wilkins. Ambler, PA 2005;275-6.

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*PolyMem® Wound Dressings,
Ferris Mfg. Corp., Burr Ridge, IL 60527



October 3:
Second degree burn.
Wound 5.7 cm x 17 cm
Moderate amount serous drainage
with 50 - 75% dressing saturated.
Erythema present.
Polymeric membrane dressing applied.



October 10:
Erythema decreased.
Patient reports wound pain relief.



October 12:
Polymeric membrane dressings
manage wound drainage.
Wound continues to improve.



October 17:
Wound epithelized.