Protecting the Skin from Moisture

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The wound care nurse and the nursing staff have many challenges in maintaining skin integrity. One of my greatest challenges is preventing ulceration under immobilizers, splints, and compression hose.

One problem to be addressed is the moisture that naturally accumulates from continuing perspiration under these devices. Prolonged moisture may cause the skin to macerate, reducing its resistance to injury and increasing the risk for ulceration. Maceration is evident when the involved areas of skin appear white and wrinkled. Steps must be taken keep the skin dry and protected. A variety of moisture barrier products is available to protect the skin from maceration; I found one product particularly helpful.

I was treating a patient who wore immobilizers on both legs. When I removed the immobilizers to assess the skin, both legs were completely wet from perspiration. I found a commercially available liquid baby powder that contains cornstarch to keep the legs dry. The product applies like a lotion, but leaves a mild powder dusting and fragrance. It did not cake on the skin surface and helped control moisture. To apply the product, the affected extremity should be washed with mild soap and warm water, then rinsed and patted completely dry. The product should be applied over the entire affected area under the immobilizer, splint, or compression hose. One daily application is usually all that is needed. The skin should be assessed daily because patients are at continual risk for impaired skin integrity.

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Commentary from Ferris Mfg. Corp.

Multifunctional PolyMem[®] dressings have been used to manage wound exudate and help protect the periwound skin from maceration.

In a representative case study,¹ a 54-year-old man fell down a bluff, injuring his ankle. Postsurgical treatment included application of an external fixation device, wet-to-dry dressings, and negative pressure wound therapy. Dressing changes were painful. The wound had two areas of exposed tendon and was draining large amounts of serous exudate. The periwound skin was edematous, erythematous, and discolored. The treatment goal was to prepare the wound for a skin graft and provide effective outpatient treatment.

PolyMem dressings were applied because they help decrease inflammation, swelling, and procedural and persistent pain. The dressings help concentrate the inflammatory cells vital for healing at the site of injury. PolyMem Max[®] dressings were chosen for extra absorbency to wick away the large amount of exudate and protect the periwound skin. Dressings were changed twice a week. After 1 week, swelling, inflammation, and exudate decreased while optimal moisture levels were maintained. There was notable granulation over the tendons and no problems with periwound skin maceration. Subsequently, a skin graft was performed and the patient's wound went on to heal.

Reference

 Stamps J. Traumatic Wound with Exposed Tendons Prepared for Grafting with Extra-Thick Polymeric Membrane Dressings. Poster presented at the 3rd Congress of the World Union of Wound Healing Societies, Toronto, Ontario, Canada. June 4–8, 2008.



The first treatment using PolyMem dressings. The fixation device has been removed for photos. The patient had no complaints of pain.



The split-thickness graft after 7 weeks use of PolyMem dressings.

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