Successful Use of a Newly Available Liquid Bandage on Non-Healing Burn Wounds

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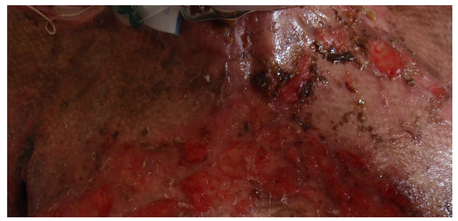
Introduction

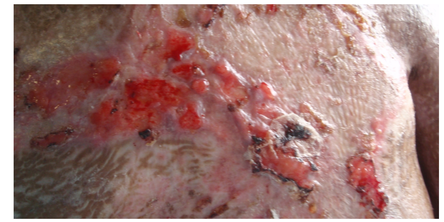
A liquid bandage that consists of a non-toxic, poly(urea-urethane) liquid emulsion polymer is newly available. The FDA has cleared claims on the product "to cover intact skin and minor cuts, scrapes, burns or irritations of the skin, to help keep them clean and dry and help protect them from infection". The product adheres to the contours of the skin and forms a hydrophobic, elastomeric coating that provides a barrier against moisture, infection and further injury. The product is a single component solution that forms a uniform film that is permeable to oxygen and therefore allows healing. No information is currently available in the literature on the use of this product on non-healing hypertrophic burn wounds.

Methods and Results

A 56 year-old patient with 50% TBSA burns involving the neck, chest, back and both upper extremities underwent serial excision and grafting procedures during her initial burn treatment. The course was complicated by extensive patchy skin breakdown in the regions of her chest and back which was unresponsive to multimodal therapy over a two-month period. Two similarly appearing wounds were identified on the patient's shoulder and chest. Liquid bandage solution was applied topically to these wounds using an atomizer or sterile cotton applicator (at regular intervals).



Open non-healing wounds about the chest



Half-way through treatment. Wounds are reduced in size and beginning to close

DATE	Wound #1 (Chest)	Wound #2 (Shoulder)
Day #1	13cm x 4 cm	2cm x 2cm
Day #7	11cm x 2 cm	2cm x 2cm
Day #12	7cm x 1cm	2cm x 2cm
Day #14	3cm x 1cm	1.5cm x 1cm
Day #16	CLOSED	CLOSED

Application of non-adherent contact dressing over liquid bandage to reduce friction from clothing

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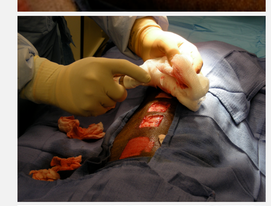
Conclusion

Conventionally a multimodal approach with antibiotic treatment and topical wound care is used to manage this difficult problem. This treatment was an investigational use of the product for an expanded indication. This is the first report of this therapy in successful management of chronic refractory wounds.

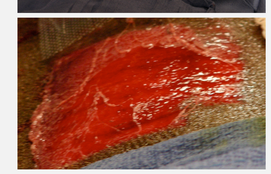
Future Work

Liquid Bandage application as a hemostatic agent on excised wounds prior to skin grafting

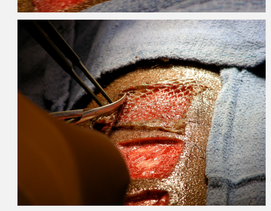
Using liquid bandage as a topical treatment for partial thickness burns



Applying numerous "coats" on excised wounds



Polymer formation on the surface of a donor site



Split-thickness skin graft "sandwiched" in liquid bandage.