

CASE STUDY

Complete Pain Relief Using Polymeric Membrane Dressings* to Treat a Category III Skin Tear to Complete Closure

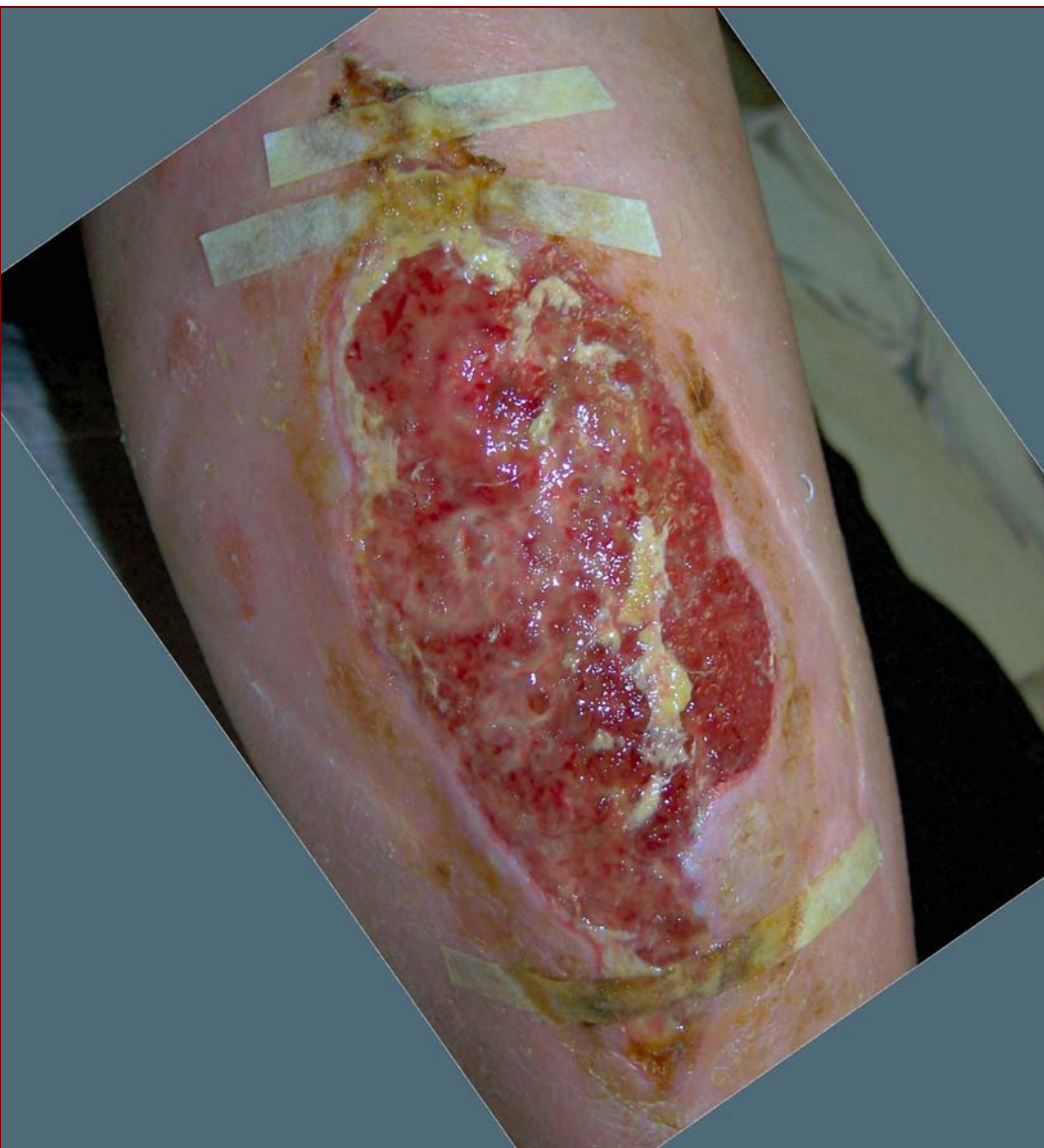
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PROBLEM

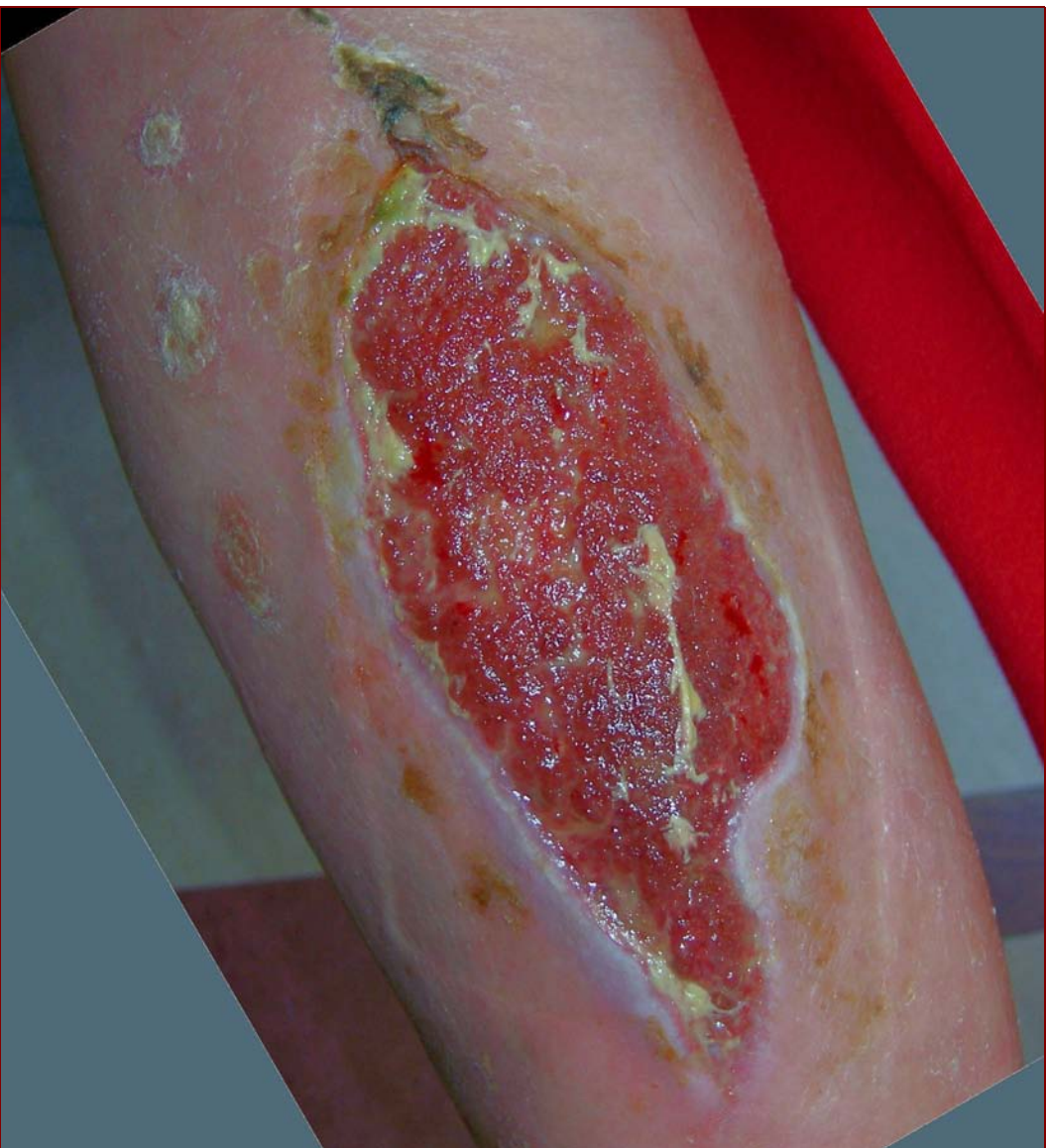
A 51-year-old female long-term-care resident suffered a fall, resulting in a large hematoma to her R lateral shin. Co-morbidities included currently well-controlled diabetes with a BMI of 31.6 and HbA1c of 5.7, chronic anemia, psoriasis with long-term topical steroid use, hypothyroidism, and recent pin placement in the L leg with a secondary infection. The patient fell a second time, breaking open the area of the hematoma into a 13.0 cm x 5 cm x 0.1 cm full-thickness skin tear. Steri-strips were applied, but the ER personnel found no salvageable flap and were unable to suture the wound. The patient was sent back to her room with antibiotic ointment and a non-adherent dressing to be changed twice a day. She was seen by the wound team the day following the second fall.

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



10 Jan 2006: 13 cm x 5 cm x 0.1 cm
Purulent light yellow exudate. Daily silver polymeric membrane dressings initiated. No wound pain after the first day of treatment.



17 Jan 2006: 11.5 cm x 5 cm
Serous exudate. Changed to standard polymeric membrane dressings. The patient still states she has no wound pain at all.



30 Jan 2006: 10 cm x 4.1 cm
No wound cleansing needed for past week. Continuing polymeric membrane dressings.



7 Feb 2006: 9.8 cm x 3.1 cm
95% granulation tissue. Still no pain at dressing changes or while dressing is in place.



21 Feb 2006: 5.6 cm x 2.2 cm
100% granulation tissue. Dressings are now being changed every other day.



21 Mar 2006: 3 cm x 0.9 cm
100% granulation tissue. Dressings are now being changed every third day.



4 April 2006: Closed. No wound pain during the entire time of treatment (after day 1) with polymeric membrane dressings.

RATIONALE

Polymeric membrane dressings are proven to provide significant wound pain relief by inhibiting nociceptor activity at the wound site. They contain a gentle cleanser, so after initial debridement and/or cleaning no manual wound cleansing is usually needed, allowing for less disruption of the new growth at the wound bed and very quick and easy dressing changes. The clinician's previous experience with polymeric membrane dressings on skin tears led to the conclusion that, “it helps heal them quickly, painlessly and does help the bruising go away.”

Due to the patient’s debilitated state and co-morbidities, infection was a serious concern. Silver polymeric membrane dressings have been found effective against: *Staphylococcus aureus (MRSA and Non-MRSA)*, *Enterococcus faecalis (VRE)*, *Klebsiella pneumoniae*, *Pseudomonas aeruginosa* and *Candida albicans*. Recently, several other modern silver dressings were found to be severely cytotoxic in vivo, but cells in contact with silver polymeric membrane dressings proliferated. This further affirms the author's decision to use silver polymeric membrane dressings.

METHODOLOGY

The dried blood was cleansed from the wound gently with sterile water. Initially, the periwound area was swollen with induration and the wound drained a moderate amount of purulent light yellow exudate. So, a silver polymeric membrane dressing was applied and changed daily for the first week of treatment. When the exudate was no longer purulent, standard polymeric membrane dressings were used instead. These were initially changed daily, then every-other-day, every three days and finally every five days. Polymeric membrane dressings were used to complete wound closure. The wound bled often during the first two weeks, so it was cleansed daily then, but it was not cleansed throughout the treatment as would have been necessary with other dressings.

OBJECTIVES

- 1. Review evidence for the use of polymeric membrane dressings on skin tears.
- 2. Discuss the benefits of using polymeric membrane dressings, which have been shown to help reduce wound pain not only during dressing changes, but also while the dressing is in place.
- 3. Consider the advantages of using polymeric membrane dressings in terms of passive continuous cleansing of the wound bed, which often eliminates painful and time-consuming wound cleansing during dressing changes.

RESULTS

Granulation tissue formed quickly, with complete wound closure in only three months. The patient did not have wound pain at any time after the first day, despite the depth of the wound. Slough was drawn into the dressing, revealing a clean wound bed at dressing changes. So, after the first two weeks, manual wound bed cleansing was not performed.

CONCLUSION

The polymeric membrane dressings were effective and easy to apply. After the initial cleansing and dressing of the wound by the wound team, the patient remained completely free from wound pain. The wound cleaned up quickly and healed in only three months, much faster than the clinician would have expected when using other dressings.

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