

CASE STUDY

# Venous Ulcers in Elderly Patients Close Rapidly Using Polymeric Membrane Wound Filler\* Under a Four-Layer Compression Wrap

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PROBLEM

Elderly ambulatory patients with venous hypertension ulcers are often treated for years with various creams, enzymes, synthetic grafts, gauze and wraps with no long-term improvement. Controlling infection and copious exudate is problematic. This study explores treating three such patients with a unique new protocol.

RATIONALE

Compression such as that provided by a four-layer wrap is the foundation of treatment for venous ulcers. But, direct wound care choices vary widely. Polymeric membrane wound filler wicks exudate directly away from the wound surface. Excess exudate is then pulled through the wound filler into the absorptive layers of a four-layer compression dressing. Polymeric membrane wound filler reduces maceration both by its wicking action and because it contains glycerin. The glycerin also soothes and hydrates the wound. In addition, polymeric membrane wound filler contains a gentle surfactant to continually cleanse the wound bed. The delicate new structures in the wound bed are preserved because usually wound bed cleansing is not needed during dressing changes.

Together, the components of polymeric membrane wound filler draw and concentrate natural healing substances from the body into the wound bed, promoting rapid healing. These components also serve to decrease pain. So, a combination of four-layer compression and polymeric membrane wound filler seems ideal for treating elderly patients with non-healing venous leg ulcers.

METHODOLOGY

Initially the wound and the periwound area were cleansed. Then, standard or silver polymeric membrane wound filler was applied. This was covered with a four-layer compression wrap. Both the wrap and the polymeric membrane wound filler were changed every 5 – 7 days. The periwound skin was cleansed if crusts developed, but the wound bed was not routinely cleansed during dressing changes.

OBJECTIVES

1. Review evidence for the use of polymeric membrane wound filler under a four-layer compression wrap in the treatment of venous hypertension ulcers.
2. 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.
3. Discuss the benefits of using this unique dressing protocol in terms of quick healing.

RESULTS

All of the patients tolerated the treatment well, and in all cases wounds began closing rapidly and wound pain was dramatically reduced. Infections led to relapses, but use of systemic antibiotics and the silver version of the wound filler resulted in renewed healing. Two of the patients' wounds are completely closed. The third patient is much improved and continues to use polymeric membrane wound filler under her four-layer compression.

The choice of using polymeric membrane wound filler was quite cost-effective because: dressing changes are done only every 5 – 7 days, healing usually occurs quite rapidly, and, by eliminating routine wound cleansing at each dressing change, far less nurse time is required than is typical with conventional modern dressings.

CONCLUSION

The simple protocol of dressing venous ulcers with polymeric membrane wound filler under a four-layer compression wrap resulted in rapid healing of the venous ulcers despite the age and significant comorbidities of the study patients. In addition, all of the patients reported dramatic pain relief when using polymeric membrane wound filler. The protocol was also tremendously cost-efficient and convenient.

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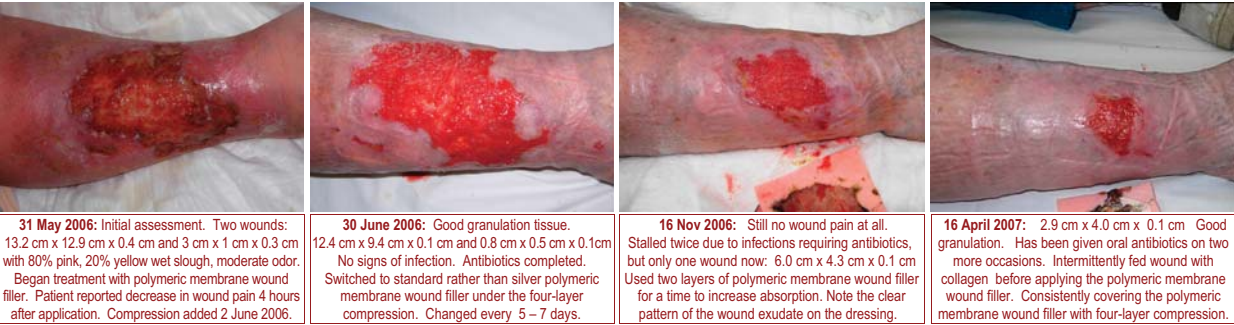
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\*PolyMem® Wic™ Cavity Filler, PolyMem Wic Silver™ Cavity Filler,  
Ferris Mfg. Corp., Burr Ridge, IL 60527

**Patient 1:** This 83-yr-old man with diabetes, arthritis, and a prior hip replacement had a history of venous ulcers. His wife had been treating this Staph Aureus+ ulcer for three months with creams and wraps without improvement when she became unable to care for him due to a broken leg. Using polymeric membrane wound filler under four-layer compression, the wound closed in only four weekly visits to the outpatient wound clinic.



**Patient 2:** This 66-yr-old woman with poorly controlled diabetes, hypertension, and varicose veins has had 9 vaginal deliveries and a bowel resection. She stands all day at work. She developed cellulitis from her foot to her groin from a venous ulcer of over two years' duration. Wound infections have delayed healing, but the ulcer is dramatically smaller and is no longer painful using polymeric membrane wound filler under four-layer compression.



**Patient 3:** Prior to using polymeric membrane dressings, this 69-yr-old woman's wound pain was a constant "10" on the 0 – 10 scale. Her pain decreased to a "5" by the second dressing change, and it continued to diminish as the wounds healed. She suffered a major setback when she acquired MRSA, but she did finally achieve long-term healing using polymeric membrane wound filler covered with four-layer compression.

