

CASE STUDY

# Polymeric Membrane Cavity Filler\* Dramatically Enhances Quality of Life for Patient with Dehisced Abdominal Wound

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PROBLEM

A 63 year old hypertensive woman with a midline abdominal incisional wound post-aneurysm repair suffered a dehiscence within 13 days of staple removal. The patient was seen in the emergency room, where the 17 cm x 6 cm x 5 cm wound was surgically debrided and she was prescribed wet-to-dry normal saline gauze dressings to be changed twice daily. Wound pain was 10 on the 0 – 10 scale during treatment and intermittent in between. When the wound nurse was consulted three days later, the wound remained bloody and avascular with large amounts of drainage.

RATIONALE

Polymeric membrane dressings can help reduce wound pain not only during dressing changes, but also while the dressing is in place, by inhibiting nociceptor activity at the wound site. Glycerol in the dressing prevents sticking. Starch co-polymers give the dressings superior absorption by locking exudate in the dressing in gel form. The dressings contain a gentle cleanser, so after the initial treatment no manual wound cleansing is usually needed, allowing for less disruption and cooling of the new growth at the wound bed and very quick and easy dressing changes.

The ingredients in polymeric membrane dressings work together to draw and concentrate healing substances from the body into the wound bed to promote rapid healing. Polymeric membrane dressings are available in a cavity filler form, without the semipermeable backing, so that all of the surfaces can absorb wound fluid. Therefore, polymeric membrane cavity filler was initiated.

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METHODOLOGY

The wound bed was flushed with saline initially. Polymeric membrane cavity filler was placed into the large wound and topped with an abdominal pad secured with tape. Dressings were changed every-other-day with no wound cleansing or rinsing. As healing progressed, dressing change frequency was further decreased to 2 or 3 times per week. Silver polymeric membrane cavity filler replaced the pink polymeric membrane cavity filler once a week to keep bioburden under control.

OBJECTIVES

- 1. Explore how much a patient's quality of life can be improved by dramatically decreasing the frequency and painfulness of dressing changes.
- 2. Recognize that polymeric membrane dressings contain ingredients which work synergistically to continuously cleanse wounds, which can help prevent infection.
- 3. Learn that polymeric membrane dressings are not only non-adherent, but they can also inhibit the nociceptor response at the wound site, which can provide dramatic long-term wound pain relief.

RESULTS

The patient's pain during dressing changes immediately dropped to 0 – 1 with no pain at all between dressing changes. Nine days after initiating polymeric membrane wound filler, the wound was fully granulating. The wound is closing steadily and is now only 1.5 cm x 1 cm x 0.5 cm with scant serosanguineous drainage. The wound bed remained clean and, because traumatic rinsing or cleansing was not needed, it bled far less.

\*PolyMem Wic® and PolyMem Wic Silver® Cavity Filler are made by Ferris Mfg. Corp., Burr Ridge, IL 60527 USA · www.polymem.com

CONCLUSION

Use of polymeric membrane cavity filler dramatically diminished the patient's pain and promoted brisk granulation of her wound. Painful wound cleansing was completely eliminated and the dressings only had to be changed 2 – 4 times per week instead of 14 times per week. The wound closed steadily without infection or other complications. All of these improvements saved both material costs and clinician time and greatly enhanced the patient's quality of life.

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10 August (left): The aortic aneurysm surgical site continues to dehisce. With the switch to polymeric membrane cavity filler under an ABD, dressing change pain, which was 10, decreased to 0 – 1. 19 August (r): Steri-strips are detaching, revealing sloughy subcutaneous tissue. But, granulation tissue is already forming where the cavity filler has made contact.



4 September (both photos):

17 cm x 6 cm x 5 cm: Fully dehisced (left). Polymeric membrane cavity filler (right) keeps the aorta and surrounding tissue clean and appropriately moist without cleansing or even rinsing during dressing changes. Clean, fully granulated edges are pulled together to reseal.



15 September (both photos):

In just 11 days (5 dressing changes), the cavity size (left) has decreased to only 4 cm x 2.75 cm x 2 cm deep. The wound bed remains clean, but silver polymeric membrane cavity filler (right) is used as a precaution once a week to decrease bioburden.



29 September (left):

The wound continues to close without causing discomfort to the patient.

18 October (right): Polymeric membrane cavity filler is now replaced only twice a week. A standard 4 x 4 covers the wound area. (This treatment continued to complete closure.)

