

Rapid Closure of Grafted Abdominal Wounds with Polymeric Membrane Dressings*

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BACKGROUND

In our clinic, prior to grafting, we prepare the wounds with a period of vacuum assisted negative pressure. When we have a clean granulating wound surface the split skin graft is applied. The graft is then covered with a petrolatum gauze dressing for five days. The petrolatum gauze frequently sticks to the graft and secondary dressing causing parts of the graft to painfully tear off at dressing changes.

This happened in two obese patients with large abdominal split skin grafts. One of these wounds had undermining and showed signs of infection along the open wound edges where the graft had not taken.

AIM

We needed an easy-to-use, non-adherent dressing that would conform to the wound contours, keep the sites moist, and atraumatically cleanse them so that the grafts would be protected and the wounds would close without complications.

METHOD

We chose to use polymeric membrane dressings. The glycerol in the dressings helps make them non adherent and helps create an increased flow of nutrients directly to the wound site. They contain a built in cleanser; no manual cleansing is usually needed, allowing for minimal disruption of new growth and quick and easy dressing changes. The dressings absorbed the slough, so it was discarded with the dressings.

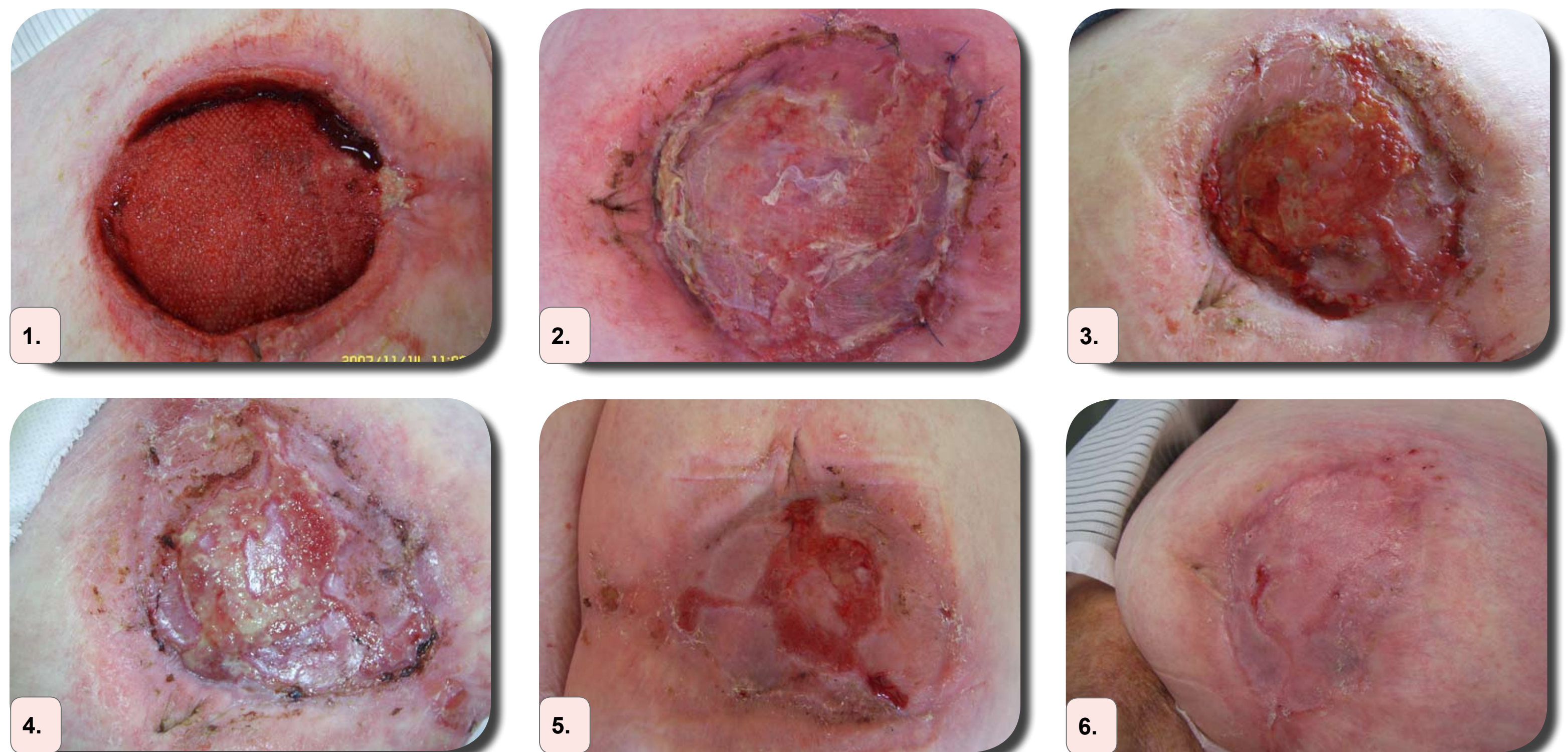
On one of the wounds the silver version was used for a week to decrease the bacterial load. On the other, wound healing was not influenced by the bacterial load, so the standard polymeric membrane dressings were used.

RESULTS

The polymeric membrane dressings did not adhere to the wound beds. The thick yellow discharge along the undermining in the infected wound was cleaned up by the silver dressing after only one week, with no manual wound cleansing at dressing changes. The areas where the grafts had been dislodged quickly reepithelialised. Both wounds were completely closed within a month.

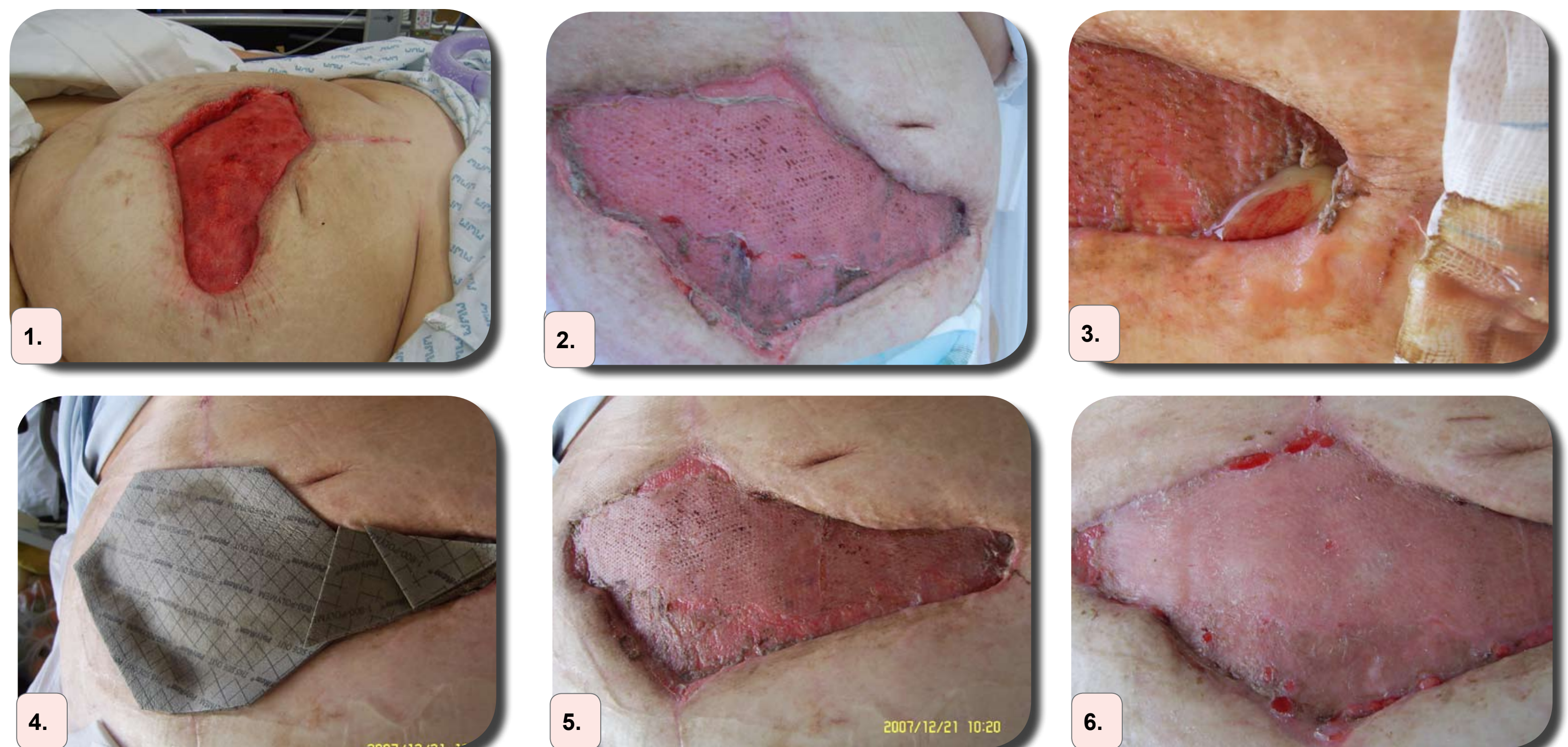
CONCLUSION

Large abdominal grafts on obese patients are often associated with complications that delay healing. The combined properties of the polymeric membrane dressings facilitated these quick reversals: from failing grafts to closure.



This man required one month of topical negative pressure to prepare the wound for split skin grafting. Grafting was performed on the 15 November.

1. **15 November** wound prior to grafting.
2. **22 November** after painful removal of petrolatum gauze that has been in place for 5 days. A layer of biofilm has been removed prior to first application of polymeric membrane dressing
3. **26 November**. No biofilm on the wound. The small parts of the graft that have taken look healthy. Wound very clean.
4. **30 November**. Debridement of loose yellow fibrin easy, nice granulation tissue underneath.
5. **3 December**. Very nice evolution. No cleansing needed during dressing change.
6. **20 December**. Fully closed 4 days after this photo was taken.



This lady also required one month of topical negative pressure prior to split skin grafting. This wound turned out to be rather problematic with undermining and pocketing on the wound edges.

1. **12 December**. Prior to grafting.
2. **18 December**. Petrolatum gauze removed, areas where the graft has not taken and subtle signs of infection (undermining). First application of polymeric membrane dressing.
3. **20 December**. Purulent exudate from the part of the wound with undermining. An antimicrobial silver version of the polymeric membrane dressing was applied due to infection signs.
4. **21 December**. Removal of antibacterial polymeric membrane dressing. We wanted to observe the wound on a daily basis until the infection subsided.
5. **21 December**. After one day with polymeric membrane silver dressing the status of the wound and graft have improved. These dressings are great for protecting the graft while cleansing the exposed areas on the edges of the wound.
6. **4 January**. We changed back to the standard version of the polymeric membrane dressing on the 26 December. Now almost fully closed.

*PolyMem® and PolyMem Silver® Wound dressings

Manufactured by Ferris Mfg Corp, Burr Ridge, IL 60527 USA.

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