Moisture Balance Is the Key to Healing When Using Biological Dressings

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PROBLEM/GOAL
Biologic dressings are encouraged to use by healing of wounds in a moist environment. Polymeric membrane dressings (PMD) create a moist environment on the wound bed.

METHODS
Polymeric membrane dressings, secondary to traditional dressings, were applied to three chronic wounds: 2 leg ulcers, and a head wound.

For the 2 leg ulcers, the surgeon applied the traditional petrolatum gauze at 24 hours post-surgery. Polymeric membrane dressings were applied.

For the head wound patient, polymeric membrane dressing was initiated 2 weeks after the initial application of the biologic dressing and the secondary traditional dressing.

Polymeric membrane dressings were changed every 2-3 days.

Comparisons were made between the clinician’s past experiences using the traditional secondary dressing approach compared to their new experiences using the polymeric membrane dressing in terms of:

1. maintaining appropriate moisture in the wound bed
2. the number of re-applications of the biologic dressings
3. speed of granulation tissue formation
4. time to closure
5. ease of dressing change
6. reduction of pain
7. participation in care

RATIONALE
Polymeric membrane dressings (PMD) contain components that help to help create an ideal moist healing environment and inhibit the nociceptive response that is responsible for the sensation of pain and the sensation of inflammation.

The clinician needs to

1. Review the advantages of using the PMDs:
   a. ease of application and removal of dressings
   b. reduction of time for dressing changes
   c. reduction of pain
   d. decreased frequency of dressing changes and reduce the need for manual cleansing during dressing changes and the resulting potential for disrupting new tissue

2. Discuss the reduced risk of infection from the use of polymeric membrane dressings and the reduction in pain.

PMDs contain glycine, wound cleanser and absorbent which help to optimize wound bed moisture. Prevent the debridement of the biologic dressing and reduce the risk of the PMD adhering to the wound bed.

OBSERVATIONS

Patient 1: 53 year male with non-healing, odorless, painful left lower extremity venous ulcer.

Wound Measures: 3.5 cm x 7.0 cm x 0.5 cm

Wound pain: 5 on a 0-10 pain scale. The pain was due to the previous dressing approach.

New granulation tissue was visible by day 17 after initiating the polymeric membrane dressing.

Patient 2: 67 year old male with a 2 year old chronic head wound. The patient was discharged to home care two weeks after biological dressing application in the hospital.

The polymeric membrane dressing initiated over the biologic dressing.

PROGRESS OF CLOSURE
10 days of biological dressing 0 cm x 0 cm x 0 cm
24 hours of treatment 6 cm x 6 cm x 0.25 cm

Wound Measures: 6 cm x 6 cm x 0.2 cm

CONCLUSION
Polymeric membrane dressings optimized healing outcomes with dramatic positive results. Wounds progressed two times as fast as expected. There were virtually no dressing changes and the various ulcer patients experienced a significant reduction in pain. The polymeric membrane dressing helped to reduce both dressing changes and procedural wound care.

PMDs are now the standard of care with patients and the families did not need to change the secondary dressing i/d between nursing visits.

REFERENCES

BIBLIOGRAPHY
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