

Multifunctional Wound Dressing Gives Us Unexpected Outcomes



Universitair Ziekenhuis Brussel

Valerie Hanssens, Jeannine Spinnael, Verpleegkundig Specialist Wondzorg
University Hospital Brussels (Jette, BELGIUM)

INTRODUCTION

81 year old woman suffering with 2 year old large deteriorating ulcer. The cause of the ulcer is venous insufficiency combined with atherosclerosis. By the time she came to our hospital the wound was heavily infected with pseudomonas and was excruciatingly painful. Her previous vascular surgeon had told her that surgery was not an option due to her age. Debridement could not be performed due to the intense pain. The wound was constantly wet with an offensive odour and the patient was getting more and more depressed over her situation.

AIM

To increase the patient's quality of life by reducing the pain and to find an acceptable dressing regime.

METHOD

She was put on a 10 day course of antibiotics. Initially her pain made it impossible for us to perform debridement. Gentle wound cleansing with wound cleanser followed by saline solution was all she could tolerate. Barrier crème was applied onto the fragile surrounding skin due to the high amount of wound fluid. We applied polymeric membrane silver dressings* covered by an absorption pad and short stretch compression bandages. Dressing changes were performed twice a week. After a few dressing changes, when the pain level was decreased, we could perform occasional gentle debridement.

RESULTS

Pain reduced dramatically after application of the first dressing. The wound was cleaner after a few days, we no longer saw the gelatinous film or slough that earlier covered the wound surface, instead we saw signs of new granulation tissue. After 4,5 months, the wound was a third of its original size, by 10 months it was fully closed.

DISCUSSION

We started off with the approach that; *since the wound would never heal we would at least try to make her daily life less traumatic*. In spite of the wound being heavily exuding, dressing changes twice a week were sufficient when combined with the amount of compression therapy that her atherosclerosis allowed. The pain relief was impressive and the patient found the dressings very comfortable.

*PolyMem® Silver Wound dressing

Manufactured by Ferris Mfg Corp, Burr Ridge, IL 60527 USA. This case study was unsponsored. Ferris Mfg. Corp. contributed to this poster design and presentation.



5th March

The wound surface is covered with fibrin and a gelatinous biofilm. Wound edges red, warm and painful. Wound size 17cmx12cm with high exudate level. The patient tested positive for Pseudomonas aeruginosa + Staphylococcus aureus and was put on a 10 day course of antibiotics. We protected the wound edges with a barrier crème, applied a polymeric membrane silver dressing and instituted gentle compression.



8 March

Dramatic improvement after 3 days. Most of the fibrin and biofilm has been absorbed by the dressing and we can see early signs of new granulation tissue formation. The wound was already less painful so we could perform a gentle debridement without protests from the patient.



6 August

In spite of colonization of Staphylococcus aureus the wound is healing nicely. Healthy granulation tissue covers the entire wound surface which now measure 9cm x 4cm. Since the beginning of June dressing changes are only needed once per week. Moderate exudate level, no pain.



15 October

The wound is completely epithelialised and has been for several weeks. The fact that this wound healed amazed us all. During the entire process the polymeric membrane dressing has been very comfortable for the patient and we never had problems with it sticking to the wound surface. We appreciated the excellent absorbent capacity as well as the extra padding it gave under the compression bandages.

BIBLIOGRAPHY

1. Beitz AJ, Newman A, Kahn AR, Ruggles T, Eikmeier L. A polymeric membrane dressing with antinociceptive properties: analysis with a rodent model of stab wound secondary hyperalgesia. J Pain. 2004 Feb;5(1):38-47.
2. Burd A, Kwok CH, Hung SC, Chan HS, Gu H, Lam WK, Huang L. A comparative study of the cytotoxicity of silver based dressings in monolayer cell, tissue explant, and animal models. Wound Repair and Regeneration 2007;15:97-104.