

# USE OF A CONTACT LAYER WITH SILVER UNDER A NEGATIVE PRESSURE DRESSING

Jeff Kring<sup>1</sup>, MPT, CWS, Barbara Carlson<sup>1</sup>, RN, BSN, CWOCN, and Elizabeth C. Konz<sup>2</sup>, PhD, RD

(1) Sutter General Hospital, Sacramento, CA (2) Hollister Incorporated, Libertyville, IL.

## Goals

---

To provide clinical experience in the use of a contact layer with silver\* (CLS) under a negative pressure dressing.

## Purpose

---

Negative pressure dressings (NPD) have been used successively with non-adherent dressings to protect fragile structures such as bone, tendon and skin grafts. The purpose of this case series is to demonstrate the effectiveness of a CLS in providing the necessary protection from adherence of the foam dressing, as well as to provide an antimicrobial to the wound dressing decreasing the bioburden. Two patients were chosen for their complicated wound beds. Negative pressure was needed to facilitate granulation, and the silver contact layer was intended to decrease the bacterial load in the dressing.

## Methods

---

Patients received sharp excisional debridement to decrease necrotic tissue to an acceptable level for the NPD. A CLS was placed across the wounds and margins

and topped with a polyurethane foam dressing.\*\* Suction was applied at 125 mm Hg on a continuous setting. Both the CLS and foam were changed three days per week with debridement as needed.

## Results

---

Patients progressed to have 100% granular wounds that either closed with epithelial migration under the CLS, or closed with a split thickness skin graft under the CLS. Decreases in discomfort were recorded while patients had the CLS under their NPD.

## Discussion

---

Use of non-adherent contact layers are not uncommon under NPD. The CLS allowed the sponge to be placed out over the margins without detriment to the skin allowing for quicker application of the NPD. No difference in the amount of granulation was noted in the instances where the wounds were only partially covered with the CLS as compared to when only the foam was against the wound. This demonstrated that the CLS did not impair granulation. Significant decreases in odor occurred after silver was used under the NPD, suggesting a possible decrease in bioburden.

\* Product used was Restore Contact Layer Dressing, Silver with TRIACT Technology by Hollister Wound Care LLC.

\*\* Product used was V.A.C. GranuFoam Dressing by KCI.

## Case Study 1

A 76-year-old female with a history of uncontrolled diabetes, obesity, and mild Parkinson's disease. Her cardiac condition required her to have emergent surgery and pacer placement at another establishment.

Her wound was reported to have been due to an IV extravasation at the right volar aspect with resultant tissue necrosis. Patient was sent home with wet to dry gauze dressings.



Treatment of this necrotic wound included sharp debridement and silver-based alginate dressings, until a negative pressure device could be ordered and placed. It was then decided to use a contact layer with silver to protect the exposed tendon, ease discomfort with dressing removal, and provide an antimicrobial agent in the dressing. Original measurements were 10.0 cm X 6.3 cm X 1.5 cm.



The patient's wound was closed in 12 weeks; five weeks with negative pressure dressings, and another seven weeks with a contact layer with silver to allow epithelial migration.



## Case Study 2

A 57-year-old female S/P TRAM flap for reconstruction of a right sided mastectomy. She was seen due to complete necrosis of the abdominal mesh and overlying tissue. The patient had been cleansing in the shower and applying a silver-based cream per her physician. Original measurements were 10.5cm X 11.0cm X 0.5cm.



The end goal was to have an appropriate base to place a skin graft. Due to insurance issues, the graft was delayed to the extent that it became evident that epithelial migration was going too close to the wound. Even after the negative pressure dressing was discontinued, the contact layer with silver was continued due to the epithelial migration it promoted.

The treatment of this wound was first to sharply debride necrotic tissue with the goal of having the wound appropriate for negative pressure dressings. Due to the discomfort with the removal of the negative pressure dressing, it was decided to use a contact layer with silver for its additional antimicrobial activity in the wound dressing as well as the ease and painlessness of removal of the negative pressure dressings.



The wound was closed in 25 weeks with only eight weeks using negative pressure and the use of a contact layer with silver.



See Instructions for Use for important information regarding the use of this product at [www.hollisterwoundcare.com/products/ifus.html](http://www.hollisterwoundcare.com/products/ifus.html).

\* **Caution:** Federal law restricts this device to sale or on the order of a physician or licensed healthcare professional.

#### FINANCIAL ASSISTANCE/DISCLOSURE

The support of Hollister Incorporated and Hollister Wound Care LLC for this clinical presentation is gratefully acknowledged.

\* Restore Contact Layer Dressing, Silver with TRIACT Technology by Hollister Wound Care LLC.

Hollisterwoundcare and logo are trademarks of Hollister Incorporated. Restore and TRIACT are trademarks of Hollister Wound Care LLC. Covered under U.S. Patent No. 6,794,555 and 6,270,792.

V.A.C. GranuFoam is a trademark of KCI.

©2008 Hollister Wound Care LLC.

910278-408

## Conclusion

- Non-adherent contact layers are not uncommon under negative pressure dressings. The contact layer with silver allowed the sponge to be placed out over the margins without detriment to the skin, allowing for quicker application of the negative pressure wound therapy.
- The use of the contact layer with silver reduced or eliminated pain at dressing changes.
- Decreases in odor occurred once silver was used under the negative pressure dressing, suggesting a decrease in bioburden.

As Presented at  
**Third Congress  
of the World Union of  
Wound Healing Societies**

June 4-8, 2008  
Toronto, Ontario, Canada

  
**hollisterwoundcare**  
An alliance of Hollister Incorporated and Laboratoires URGO

Manufactured for  
**Hollister Wound Care LLC**  
1580 South Milwaukee Avenue  
Suite 405  
Libertyville, Illinois 60048  
1.888.740.8999

Distributed in Canada by  
**Hollister Limited**  
95 Mary Street  
Aurora, Ontario L4G 1G3  
1.800.263.7400

[www.hollisterwoundcare.com](http://www.hollisterwoundcare.com)