

### Solventum<sup>™</sup> V.A.C.<sup>®</sup> Peel and Place Dressing

Collection of case studies



### Introduction

This booklet includes case studies across multiple wound types. As with any case study, the results and outcomes should not be interpreted as a guarantee or warranty of similar results. Individual results may vary depending on the patient's condition and circumstances.

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### Use of Solventum<sup>™</sup> V.A.C.<sup>®</sup> Peel and Place Dressing After Mohs Surgery on the Right Foot

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#### **Patient & diagnosis**

An 83-year-old female presented with a surgical wound created during Mohs surgery. The patient was on blood thinning medication and was a former smoker with a history of diabetes, hypertension, gastroesophageal reflux disease, atrial fibrillation, mitral valve regurgitation and basal cell carcinoma.

#### Procedure

The Mohs procedure resulted in a surgical wound on the right foot of 4.0 cm length x 4.0 cm width x 0.2 cm depth (Figure 1). The wound was treated with hypochlorous acid wound cleansing solution and petrolatum gauze for the first 10 days after surgery as per the instruction of the Mohs surgeon.

Figure 1. Presentation of a surgical wound 10 days after Mohs surgery.

#### Initial application of Solventum<sup>™</sup> V.A.C.<sup>®</sup> Peel and Place Dressing

The decision was made to use the V.A.C.<sup>®</sup> Peel and Place Dressing with Solventum™ V.A.C.<sup>®</sup> Therapy for faster dressing changes and longer dressing wear time. Sharp debridement was

performed (Figure 2), and the small size V.A.C.<sup>®</sup> Peel and Place Dressing was selected based on the wound dimensions.

The dressing has a built in perforated non-adherent layer which allows the foam portion of the dressing to cover the wound and periwound area. The Solventum<sup>™</sup> SensaT.R.A.C.<sup>™</sup> Pad was placed to orient tubing in line with the leg to prevent bending or blocking. The tubing was positioned to run up the leg and secured with cotton gauze and a piece of foam. Negative pressure of -125 mmHg was applied using the Solventum<sup>™</sup> ActiV.A.C.<sup>™</sup> Therapy Unit (Figure 3). Total application time took less than two minutes.



Figure 2. Sharp debridement was performed prior to initiating V.A.C.® Therapy.



Figure 3. Application of the small V.A.C.<sup>®</sup> Peel and Place Dressing Kit. A. The dressing was positioned so that the foam portion of the dressing with integrated perforated non-adherent layer completely covered the wound and periwound area. B. The hybrid acrylic and silicone drape, integrated in the dressing design, was smoothed for crease-free coverage without pulling or stretching the drape or foam. C. The pre-cut hole in the dressing was oriented to face up and to facilitate attachment of the SensaT.R.A.C.™ Pad, D. tube placed without bending or blocking the tubing connection to an ActiV.A.C.™ Therapy Unit.

#### Treatment

The first dressing change occurred after five days of therapy. The wound bed showed areas of increased granulation tissue and areas of proteinaceous material. No periwound maceration was observed. Wound dimensions were 3.9 cm length x 3.8 cm width x 0.2 cm depth (Figure 4, next page). During all dressing changes, the wound was cleansed by soaking for five minutes with hypochlorous acid solution. Additional acrylic drape was used to secure the dressing edge where minimal rolling had occurred on the previous dressing.

The second dressing change was performed after seven days of therapy. There was no loss of seal during wear time, and the patient tolerated the dressing without any problems. The wound bed had increased granulation tissue and proteinaceous film, and the periwound skin was soft and supple with no visible irritation. Minimal drainage was observed in the therapy unit canister. 4

The wound area had decreased, with dimensions of 3.7 cm length x 3.6 cm width x 0.2 cm depth (**Figure 5**). Due to scheduling around a holiday weekend, the third dressing change occurred after four days of wear (**Figure 6**). The wound size appeared smaller and had increased granulation tissue.



**Figure 4.** The first dressing change was performed after five days of therapy.



**Figure 5.** The second dressing change was performed after seven days of therapy.



**Figure 6.** The third dressing change was performed after four days of therapy.

#### Follow-up

Four weeks after Mohs surgery, the wound bed was optimally prepared for a split-thickness skin graft procedure (STSG, **Figure 7**).

Solventum<sup>™</sup> V.A.C.<sup>®</sup> Therapy with V.A.C.<sup>®</sup> Peel and Place Dressing was applied over the STSG for five days (**Figure 8**). At this dressing change, the graft take was approximately 95%. After V.A.C.<sup>®</sup> Therapy was discontinued, 3M<sup>™</sup> Adaptic<sup>™</sup> Non-adhering Dressing and wound cleansing with hypochlorous acid solution were used for three weeks. 3M<sup>™</sup> Promogran Prisma<sup>™</sup> Collagen Matrix with ORC and Silver was used over a small area where epithelization was slower, until closure was achieved nine weeks after STSG (**Figure 9**). Follow-up of this patient after six months showed the STSG healed well (**Figure 10**).



**Figure 7.** Four weeks after Mohs surgery. **A.** The wound bed was ready to undergo a split-thickness skin graft. **B.** Intraoperative split thickness skin graft.



Figure 8. Five days after STSG



Figure 9. Nine weeks

after STSG



Figure 10. Six months after STSG

The patient reported no pain at V.A.C.<sup>®</sup> Peel and Place Dressing removals and commented that this dressing was more convenient than previous wound management experiences. In this patient, use of V.A.C.<sup>®</sup> Therapy with V.A.C.<sup>®</sup> Peel and Place Dressing resulted in increased granulation tissue development, epithelialization, wound size reduction and successful graft take.

#### **Clinician experience**

V.A.C.<sup>®</sup> Peel and Place Dressing removal took less than 30 seconds and dressing changes were simple and required only one person. Fewer products were also used with V.A.C.<sup>®</sup> Peel and Place Dressing. Per the clinician, the periwound skin looked intact and relatively healthy, the level of edema decreased with each dressing change and wound bed preparation was achieved quicker than anticipated.

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Photos courtesy of Robert J. Klein, DPM, FACFAS, CWS; RCPS (Glasgow); University of South Carolina School of Medicine - Greenville; Prisma Health, Greenville, SC.

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# Use of Solventum<sup>™</sup> V.A.C.<sup>®</sup> Peel and Place Dressing Following Staged Achilles Repair of the Right Foot

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#### **Patient & diagnosis**

A 40-year-old female with a history of chronic Achilles tendinopathy for approximately one year affecting the right foot. Previous medical history includes lupus and hypertension.

#### Procedure

The patient underwent a staged Achilles repair including adjunct anchor hardware removal in light of additional complications. As primary wound closure was not possible, traditional Solventum<sup>™</sup> V.A.C.<sup>®</sup> Therapy was initially applied using traditional dressings with dressing changes every 48-72 hours but no less than three times per week.

#### Initial application of Solventum<sup>™</sup> V.A.C.<sup>®</sup> Peel and Place Dressing

Transition from traditional negative pressure wound therapy to V.A.C.<sup>®</sup> Peel and Place Dressing occurred after approximately 10 days (**Figure 1**). The decision to switch dressings was taken due to patient compliance with traditional negative pressure wound therapy and in order to reduce time spent on dressing changes and for the longer wear time. The medium-sized V.A.C.<sup>®</sup> Peel and Place Dressing was selected. The integrated and perforated non-adherent layer allowed negative pressure to be delivered to the wound and surrounding soft tissue. The Solventum<sup>™</sup> SensaT.R.A.C.<sup>™</sup> Pad was placed over the medial malleolus. Negative pressure of -150 mmHg was applied due to wound over wetting using the Solventum<sup>™</sup> ActiV.A.C.<sup>™</sup> Therapy Unit (**Figure 2**). Off-loading with a walking boot was utilized to afford traction on the wound site and to aid in tendon healing.



**Figure 1.** Wound at initial presentation after 10 days of traditional negative pressure wound therapy.



**Figure 2.** Application of a medium-sized V.A.C.<sup>®</sup> Peel and Place Dressing.

#### Treatment

After five days, the dressing was changed. The wound bed showed rapid development of granulation tissue and a reduction of wound depth (**Figure 3**). The periwound skin showed signs of mild periwound irritation. The small-sized V.A.C.<sup>®</sup> Peel and Place Dressing, which has an up to 7-day wear time, was applied to the wound based on the positive wound healing trajectory and to reduce further periwound irritation (**Figure 4**). Dressing changes occurred every five days as a trial to see how the extended dressing wear was tolerated past three days in light of the wound location. Dressing removal was performed after an additional five days and V.A.C.<sup>®</sup> Therapy was discontinued. The wound size was reduced, and areas of re-epithelialization were observed (**Figure 5**). The mild periwound irritation was resolved, though a mild transient dermal deformation was present where the SensaT.R.A.C.<sup>™</sup> Pad had been placed. This deformation was resolved within five days of discontinuing therapy.



**Figure 4.** Wound after five days of therapy.



Figure 5. Application of a small size V.A.C.<sup>®</sup> Peel and Place Dressing.



**Figure 6.** Wound after an additional five days of therapy was discontinued.

#### Follow-up

Bioactive glass wound matrix was utilized after discontinuation of V.A.C.<sup>®</sup> Peel and Place Dressing with continued wound healing observed at three weeks (**Figures 6-7**).



**Figure 6.** Wound after one application of bioactive glass wound matrix.



**Figure 7.** Wound three weeks after bioactive glass wound matrix application.

#### **Clinician experience**

The V.A.C.<sup>®</sup> Peel and Place Dressing application was quick and easy, requiring only minimal trimming or shaping of the drape. The clinician observed that it would be beneficial to consider use of V.A.C.<sup>®</sup> Peel and Place Dressing for every patient when appropriate as the wound moved through the healing continuum. In this case, it was beneficial to step down the dressing size based on the wound's healing trajectory and disposition.

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Photos courtesy of Ralph J. Napolitano, Jr., DPM, CWSP, FACFAS; OrthoNeuro, Columbus, OH; Heritage College of Osteopathic Medicine, Ohio University, Athens, OH.

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# Use of Solventum<sup>™</sup> V.A.C.<sup>®</sup> Peel and Place Dressing After Surgical Drainage of an Abscess on the Right Thigh

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#### **Patient & diagnosis**

A 50-year-old male presented two days after treatment of an abscess on the right thigh. The patient was a former smoker with a history of diabetes and obesity.

#### Procedure

After the initial incision and drainage of the abscess, the patient was treated with cefazolin and conventional negative pressure wound therapy to manage purulent exudate. Repeat irrigation and debridement of the abscess was performed two days later, resulting in an open wound of 11 cm length x 4 cm width x 4 cm depth (**Figure 1**).

#### Initial application of Solventum<sup>™</sup> V.A.C.<sup>®</sup> Peel and Place Dressing

V.A.C.<sup>®</sup> Peel and Place Dressing with Solventum<sup>™</sup> V.A.C.<sup>®</sup> Therapy was selected to extend the time between dressing changes and prepare the wound bed for closure, promote granulation tissue formation and reduce edema (**Figure 2**). Dressing application took two minutes to perform in the operating room. The Solventum<sup>™</sup> V.A.C.<sup>®</sup> Ulta Therapy Unit was used to apply -125 mmHg negative pressure.

#### Treatment

After one week of therapy, the V.A.C.<sup>®</sup> Peel and Place Dressing was easily removed, with no pain reported and no pain medication used. The periwound skin looked healthy, and wound depth had a 1.5 cm improvement (**Figure 3**). No debridement or cleansing was needed before application of the second V.A.C.<sup>®</sup> Peel and Place Dressing. The next dressing change occurred after seven days, and the third V.A.C.<sup>®</sup> Peel and Place Dressing was applied by a home care provider with no complications reported. At the scheduled follow-up, four days later, the wound bed had increased granulation tissue and appeared ready for closure after 18 days of V.A.C.<sup>®</sup> Therapy using three total V.A.C.<sup>®</sup> Peel and Place Dressings (**Figure 4**). Repeat irrigation and debridement were performed in preparation for surgical closure of the wound, and Solventum<sup>™</sup> Therapy was applied over the closed incision.



**Figure 1.** Open wound two days after incision and drainage of an abscess on the right thigh.



**Figure 2.** Application of the medium-sized V.A.C.<sup>®</sup> Peel and Place Dressing.



**Figure 3.** The first dressing change was performed after one week of therapy.



**Figure 4.** After three weeks of therapy using V.A.C.<sup>®</sup> Peel and Place Dressing, the wound appeared ready for surgical closure.

#### Follow-up

After four days, Solventum<sup>™</sup> Prevena<sup>™</sup> Therapy was discontinued and wound management transitioned to dry dressings (**Figure 5**). Follow up visits at 10 days and two weeks after surgical closure showed wound improvement. The stitches were removed after three weeks, and the patient was discharged from treatment (**Figure 6**). The patient provided a follow-up photo three months after initial treatment and the wound had healed well (**Figure 7**).



**Figure 5.** Closed incision after four days of Prevena<sup>™</sup> Therapy.



**Figure 6.** Sutures were removed three weeks after surgical closure.



**Figure 7.** Three months after presentation.

#### **Clinician experience**

Use of the V.A.C.<sup>®</sup> Peel and Place Dressing with Solventum<sup>™</sup> V.A.C.<sup>®</sup> Therapy resulted in fewer dressing changes. Dressing changes were uncomplicated and were performed in the clinic and home care settings. In this patient, use of V.A.C.<sup>®</sup> Peel and Place Dressing helped prepare the wound bed for closure after incision and drainage of an abscess.

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Photos courtesy of Boris Zelle, MD; University of Texas Health San Antonio, San Antonio TX.

# Use Soventum<sup>™</sup> V.A.C.<sup>®</sup> Peel and Place Dressing Following Delayed Surgical Healing of a Below-the-Knee Amputation

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#### Patient & diagnosis

A 28-year-old male with a history of post-traumatic arthritic deformity of the lower left leg and foot had undergone previous reconstruction attempts. However, the limb was deemed beyond salvage orthopedically and a below-the-knee amputation was performed. Delayed surgical healing was observed three weeks after surgery.

#### Procedure

As primary wound closure was not possible, the patient was referred for wound care (**Figure 1**). Negative pressure wound therapy was recommended to promote the development of granulation tissue.

#### Initial application of Solventum<sup>™</sup> V.A.C.<sup>®</sup> Peel and Place Dressing

Solventum<sup>™</sup> V.A.C.<sup>®</sup> Therapy with the large V.A.C.<sup>®</sup> Peel and Place Dressing was applied over the wound and negative pressure at -125 mmHg was initiated (**Figure 2**). Dressing application times were short as only minimal trimming and shaping of the drape to fit the lower leg anatomy was required. A knee crutch provided offloading and ambulatory aid to the patient. The integrated and perforated non-adherent layer allowed negative pressure to be delivered to the wound and surrounding soft tissue.

#### Treatment

After seven days, the dressing was changed. The wound bed showed rapid development of granulation tissue and a reduction of wound depth (**Figure 3**). However, increased moisture and mild irritation of the periwound skin was noted. V.A.C.® Therapy was continued with the large V.A.C.® Peel and Place Dressing and the negative pressure increased to -150 mmHg to help reduce moisture.

After seven days, the dressing was removed, and V.A.C.<sup>®</sup> Therapy was discontinued. The wound size was reduced, and areas of re-epithelialization were observed (**Figure 4**). The mild periwound irritation and amount of moisture were improved.



**Figure 1.** Wound at initial presentation.



**Figure 2.** Application of the large-sized V.A.C.<sup>®</sup> Peel and Place Dressing.



**Figure 3.** The first dressing change was performed after one week of therapy.



**Figure 4.** Wound after 14 days of therapy.

#### Follow-up

Following the discontinuation of Solventum<sup>™</sup> V.A.C.<sup>®</sup> Therapy, an antibacterial foam dressing was applied to the wound with dressing changes every seven days. After three weeks of dressing use the wound was fully healed (**Figures 5-7**).



**Figure 5.** Wound after seven days of antibacterial foam dressing use.



Figure 6. Wound after 14 days of antibacterial foam dressing use.



**Figure 7.** Wound fully closed after 21 days of antibacterial foam dressing use.

#### **Clinician experience**

The V.A.C.<sup>®</sup> Peel and Place Dressing application was quick and easy, requiring only minimal trimming or shaping of the drape. The clinician observed that it would be beneficial to consider the use of V.A.C.<sup>®</sup> Peel and Place Dressing for every patient when appropriate as the wound moved through the healing continuum.

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Photos courtesy of Ralph J. Napolitano, Jr., DPM, CWSP, FACFAS; OrthoNeuro, Columbus, OH; Heritage College of Osteopathic Medicine, Ohio University, Athens, OH.

For more information about Solventum<sup>™</sup> V.A.C.<sup>®</sup> Peel and Place Dressing, contact your Sovlentum Representative.

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