solventum

Solventum™ V.A.C.® 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™ V.A.C.® Peel and Place Dressing After Mohs Surgery on the Right Foot

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

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™ V.A.C.® Peel and Place Dressing

The decision was made to use the V.A.C.® Peel and Place Dressing with Solventum™ V.A.C.® Therapy for faster dressing changes and longer dressing wear time. Sharp debridement was performed (**Figure 2**), and the small size V.A.C.® 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™ SensaT.R.A.C.™ 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™ ActiV.A.C.™ 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.

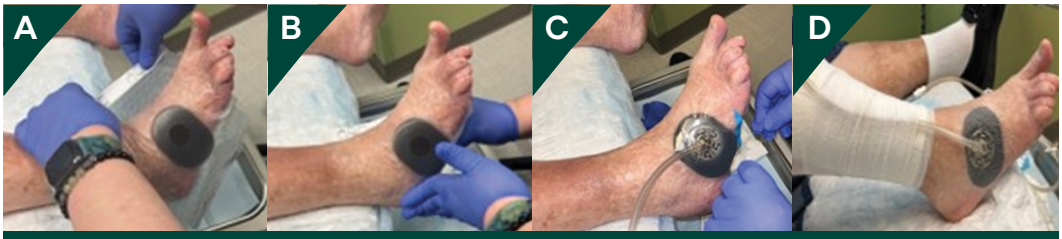

Figure 3. Application of the small V.A.C.® Peel and Place Dressing Kit. A. The dressing was positioned so that the foam portion of the dressing with integrated perforated non-adherent layer completely covered the wound and periwound area. B. The hybrid acrylic and silicone drape, integrated in the dressing 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.

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™ V.A.C.® Therapy with V.A.C.® 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.® Therapy was discontinued, 3M™ Adaptic™ Non-adhering Dressing and wound cleansing with hypochlorous acid solution were used for three weeks. 3M™ Promogran Prisma™ 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**).

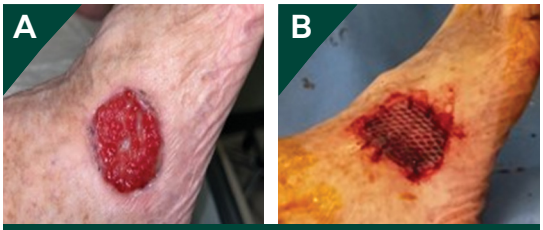

Figure 7. Four weeks after Mohs surgery. **A.** The wound bed was ready to undergo a split-thickness skin graft. **B.** Intraoperative split thickness skin graft.

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.® 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.® Therapy with V.A.C.® Peel and Place Dressing resulted in increased granulation tissue development, epithelialization, wound size reduction and successful graft take.

Clinician experience

V.A.C.® 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.® 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.

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

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

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

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™ V.A.C.® 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™ V.A.C.® Peel and Place Dressing

Transition from traditional negative pressure wound therapy to V.A.C.® 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.® 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™ SensaT.R.A.C.™ Pad was placed over the medial malleolus. Negative pressure of -150 mmHg was applied due to wound over wetting using the Solventum™ ActiV.A.C.™ 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.® 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.® 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.® 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.™ Pad had been placed. This deformation was resolved within five days of discontinuing therapy.

Figure 3. Wound after five days of therapy.

Figure 4. Application of a small size V.A.C.® Peel and Place Dressing.

Figure 5. Wound after an additional five days of therapy was discontinued.

Follow-up

Bioactive glass wound matrix was utilized after discontinuation of V.A.C.® 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.® 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.® 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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NOTE: Specific indications, limitations, contraindications, warnings, precautions and safety information exist for these products and therapies. Please consult a clinician and product instructions for use prior to application. Rx only.

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

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

Boris A. Zelle, MD, MBA, FAAOS, FAOA; University of Texas Health San Antonio; San Antonio, TX

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™ V.A.C.® Peel and Place Dressing

V.A.C.® Peel and Place Dressing with Solventum™ V.A.C.® 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™ V.A.C.® Ulta Therapy Unit was used to apply -125 mmHg negative pressure.

Treatment

After one week of therapy, the V.A.C.® 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.® Peel and Place Dressing. The next dressing change occurred after seven days, and the third V.A.C.® 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.® Therapy using three total V.A.C.® Peel and Place Dressings (**Figure 4**). Repeat irrigation and debridement were performed in preparation for surgical closure of the wound, and Solventum™ Therapy was applied over the closed incision.

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

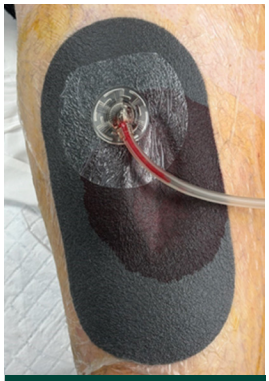

Figure 2. Application of the medium-sized V.A.C.® Peel and Place Dressing.

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

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

Follow-up

After four days, Solventum™ Prevena™ 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™ 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.® Peel and Place Dressing with Solventum™ V.A.C.® 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.® 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™ V.A.C.® Peel and Place Dressing Following Delayed Surgical Healing of a Below-the-Knee Amputation

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

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™ V.A.C.® Peel and Place Dressing

Solventum™ V.A.C.® Therapy with the large V.A.C.® 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.® 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.® 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™ V.A.C.® 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.® 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.® 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.

Use of Solventum™ V.A.C® Peel and Place Dressing to prepare a Diabetic Foot Ulcer for Charcot reconstruction

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

Patient & diagnosis

A 66-year-old male presented with a Wagner stage 3 diabetic foot ulcer (DFU) located on the left plantar heel and midfoot that had been present for 116 days. The patient had a body mass index of 36 kg/m^2, diabetes, coronary heart disease, and hypertension. His medical history included obstructive sleep apnea, hypothyroidism, neuropathy, gastroesophageal reflux disease, atrial fibrillation, Charcot foot, and osteomyelitis.

Procedure

Excluding antibiotics, no previous wound care had been provided for this DFU. Sharp debridement was performed and resulted in wound dimensions of 6.0 cm x 5.6 cm x 3.3 cm.

Initial application of Solventum™ V.A.C.® Peel and Place Dressing

Treatment goals included promotion of granulation tissue formation, removal of infectious materials, reduction of edema, and preparation of the wound bed for Charcot foot reconstruction. Solventum™ V.A.C.® Therapy was initiated using the large size Solventum™ V.A.C.® Peel and Place Dressing (**Figure 1**). The integrated dressing was applied such that the foam edges completely covered the wound and periwound area and so the hybrid acrylic and silicone drape did not pull or stretch. Negative pressure at -125 mmHg was applied using a Solventum™ ActiV.A.C.™ Therapy Unit.

Figure 1. Application of a large Solventum™ V.A.C.® Peel and Place Dressing. **A.** The pre-cut hole in the dressing was oriented for easy attachment of the Solventum™ SensaT.R.A.C.™ Pad to the Solventum™ ActiV.A.C.™ Therapy Unit without bending the tubing. **B.** The integrated dressing was applied so that the foam edges completely covered the wound and periwound area and so the hybrid acrylic and silicone drape did not pull or stretch.

Treatment

The first dressing change occurred after five days of V.A.C.® Therapy with V.A.C.® Peel and Place Dressing. The dressing was easy to remove, and no pain or complications occurred. The wound was cleansed by soaking and washing with a hypochlorous acid solution. Wound depth improved, and healthy granulation tissue was visible. Hyperhidrosis and patient noncompliance with off-loading were observed, but wound healing was progressing well.

The second dressing change occurred after an additional seven days of V.A.C.® Therapy with V.A.C.® Peel and Place Dressing. The wound was cleansed by soaking and washing with a hypochlorous acid solution. The wound bed showed increased granulation tissue and there was mild maceration of the periwound skin, likely due to hyperhidrosis (**Figure 2**). A small blister had formed on the foot dorsum and resolved quickly without additional treatment. Wound dimensions had decreased to 4.5 cm x 3.9 cm x 2.3 cm.

Figure 2. Wound size continued to decrease after 12 days of Solventum™ V.A.C.® Therapy with Solventum™ V.A.C.® Peel and Place Dressing. Periwound maceration was most likely due to hyperhidrosis.

Treatment (cont.)

After an additional four days of Solventum™ V.A.C.® Therapy with V.A.C.® Peel and Place Dressing, the dressing was removed, and therapy was discontinued as the treatment goals had been met. Periwound maceration was visible and likely related to the dressing and hyperhidrosis. Despite continued patient noncompliance, granulation tissue had increased, and wound depth improved. Wound dimensions were 4.5 cm x 3.9 cm x 1.8 cm.

The patient continued to receive hyperbaric oxygen treatment (HBOT) during V.A.C.® Therapy with V.A.C.® Peel and Place Dressing. The dressing was left on and the Solventum™ ActiV.A.C.™ Therapy Unit was disconnected during HBOT sessions, as described in the manufacturer's instructions for use. After HBOT, the ActiV.A.C. Therapy Unit was reconnected and negative pressure application was reinitiated.

Follow-up

V.A.C.® Therapy with V.A.C.® Peel and Place Dressing resulted in decreased wound depth and formation of healthy granulation tissue. This helped prepare the wound bed for successful Charcot foot reconstructive surgery with a frame. 3M™ Promogran™ Collagen Matrix with ORC and Silver was applied after the Charcot reconstruction procedure and wound closure was achieved within three months (**Figure 3**).

Figure 3. Wound closure achieved three months after Charcot foot reconstruction.

Clinician experience

Application and removal of V.A.C.® Peel and Place Dressing was easy and pain-free. The integrated dressing allowed for fast dressing changes and required only one person. Use of the large V.A.C.® Peel and Place Dressing resulted in a significant decrease of foot edema. Periwound skin maceration occurred and was related to hyperhidrosis and noncompliance. Wound bed preparation was achieved despite challenges of patient noncompliance with offloading instructions and hyperhidrosis.

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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.

Use of Solventum™ V.A.C® Peel and Place Dressing Use Over a Split-Thickness Skin Graft After a Right Foot First Ray Amputation

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

Patient & diagnosis

A 41-year-old female presented to the emergency department for a complicated diabetic foot infection (**Figure 1**) that required amputation of the first ray of the right foot (**Figure 2**). The patient had a history of neuropathy, hypertension, diabetes, hypercholesterolemia, and anemia.

Figure 1. Diabetic foot infection of the right foot at presentation. **A.** Dorsal view **B.** Lateral view.

Figure 2. Wound one day after amputation of the first ray of the right foot.

Procedure

The patient underwent a first ray amputation of the right foot and received systemic antibiotics. Solventum™ Veraflo™ Therapy with Solventum™ Veraflo Cleanse Choice™ Dressing was used to provide hydromechanical removal of infectious materials, non-viable tissue, and wound debris. Veraflo™ Therapy parameters included instillation of 8 mL of normal saline with a 2-minute dwell time at 2-hour intervals and negative pressure application of -125 mmHg. After two days, the patient was discharged from the hospital and wound management was transitioned to Solventum™ V.A.C.® Therapy with Solventum™ V.A.C.® Granufoam™ Dressing. Dressing changes occurred at least every three days.

The patient visited our clinic five weeks after the amputation for help with wound closure (**Figure 3**) V.A.C.® Therapy was discontinued, and the wound was cleansed with hypochlorous acid solution and 3M™ Promogran Prisma™ Collagen Matrix with ORC and Silver was applied. Additionally, we referred the patient to transitional care for assistance with poorly controlled hyperglycemia.

Figure 3. Wound five weeks after amputation.

Initial application of Solventum™ V.A.C.® Peel and Place Dressing

After one week, the wound measured 4.5 cm length x 3.0 cm width x 0.1 cm depth and hypergranulation tissue was present. To help prepare the wound for a split-thickness skin graft (STSG), ultrasonic debridement was performed and a small Solventum™ V.A.C.® Peel and Place Dressing was applied. The integrated dressing was positioned so that the foam covered the wound and periwound area. Negative pressure of -125 mmHg was applied using the Solventum™ ActiV.A.C.™ Therapy Unit.

Treatment

The dressing was changed five days later by a home healthcare provider. On the patient's next visit to the clinic two days later, robust granulation tissue was observed, and Solventum™ V.A.C.® Therapy was discontinued. The wound was mechanically debrided with saline and was covered with an antibacterial foam dressing and gauze. A split-thickness skin graft was performed four days later and was bolstered using a small V.A.C.® Peel and Place Dressing and Solventum™ ActiV.A.C.™ Therapy Unit.

Follow-up

V.A.C.® Therapy was discontinued five days after the STSG procedure (**Figure 4**). 3M™ Adaptic™ Non-Adhering Dressing was applied and after two weeks of treatment, healing had progressed well (**Figure 5**). At a follow-up appointment five weeks after the STSG procedure, graft take was 100% and complete wound closure was achieved (**Figure 6**).

Figure 4.
Split- thickness skin graft after five days of Solventum™ V.A.C.® Peel and Place Dressing Therapy.

Figure 5.
Two weeks after grafting procedure.

Figure 6.
Five weeks after grafting procedure.

Clinician experience

The use of V.A.C.® Therapy with V.A.C.® Peel and Place Dressing for this patient helped prepare the wound bed for STSG application and facilitated successful graft take that led to wound closure. The home healthcare provider reported no issues removing or applying the dressing. Use of V.A.C.® Peel and Place Dressing allowed for fewer dressing changes and saved time during the dressing application process.

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

Use of Solventum™ V.A.C® Peel and Place Dressing Following a Split Thickness Skin Graft on the Left Leg

Anthony Dardano D.O., F.A.C.S.; Delray Medical Center, Delray Beach, FL

Patient & diagnosis

A 90-year-old female presented with an acute degloving wound from a crushing injury to the left lower leg. No undermining was present, the periwound skin appeared healthy, and there was scant exudate. The patient had a history of hypertension, autoimmune disease, and arthritis. Patient medications included multivitamins and eye drops.

Procedure

Excisional debridement was performed while the patient was under anesthesia. The wound dimensions were 7 cm x 6 cm x 2 cm (**Figure 1**).

Initial application of Solventum™ V.A.C.® Peel and Place Dressing

A split-thickness skin graft (STSG) was applied over the wound after debridement (**Figure 2**). Solventum™ V.A.C.® Therapy with a small Solventum™ V.A.C.® Peel and Place™ Dressing was applied to bolster the STSG and protect the thin periwound skin. Negative pressure was initiated at -125 mmHg (**Figure 3**).

Treatment

The dressing was removed after seven days of therapy. Good graft take and some fibrinous proteinaceous material were observed (**Figure 4**). There was minimal exudate and the periwound skin was healthy. No adverse events or complications were observed. V.A.C.® Therapy was discontinued as therapy goals had been met.

Figure 1. Wound after excisional debridement.

Figure 2. After debridement, a STSG was applied.

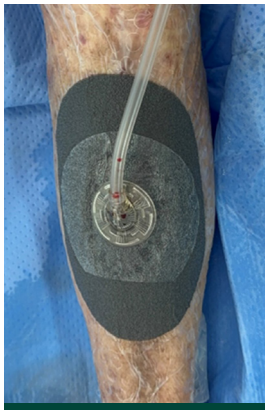

Figure 3. Solventum™ V.A.C.® Therapy with a small Solventum™ V.A.C.® Peel and Place™ Dressing was applied to bolster the STSG.

Figure 4. After seven days, graft take was good and Solventum™ V.A.C.® Therapy with Solventum™ V.A.C.® Peel and Place Dressing was discontinued.

Follow-up

The wound was cleansed with a chlorhexidine gluconate solution. A gauze dressing, impregnated with petrolatum and bismuth tribromophenate, was applied over the wound and secured with an elastic bandage wrap. The wound appeared almost fully healed at the follow-up visit 30 days after the STSG procedure (**Figure 5**).

Figure 5. 30 days after STSG.

Clinician experience

Solventum™ V.A.C.® Therapy was selected to bolster a STSG in this patient with thin skin and tissue loss after a traumatic injury. The V.A.C.® Peel and Place Dressing was easy to apply in the operating room. There was excellent tolerance and treatment goals were achieved within seven days. Dressing removal was performed in less than one minute without pain medication. The patient reported minimal pain, mostly upon drape removal.

Photos courtesy of Anthony Dardano D.O., F.A.C.S.; Delray Medical Center, Delray Beach, FL

Use of Solventum™ V.A.C® Peel and Place Dressing Following a Table Saw Injury of the Left Hand with Partial Finger Amputation

Anthony Dardano D.O., F.A.C.S.; Delray Medical Center, Delray Beach, FL

Patient & diagnosis

An 81-year-old man presented with a table saw injury and partial amputation of the index, middle, and ring fingers of the left hand. The patient was a smoker with a 23.5 kg/m^2 body mass index and had a history of coronary heart disease, hypertension, atrial fibrillation, anemia, hypercholesterolemia, and thrombocytopenia.

Procedure

The wounds ranged from 2.5 to 3.5 cm long and were 1 cm wide (**Figure 1**). They produced a large amount of serous exudate, and the periwound skin was callused. The patient was prescribed intravenous cefazolin.

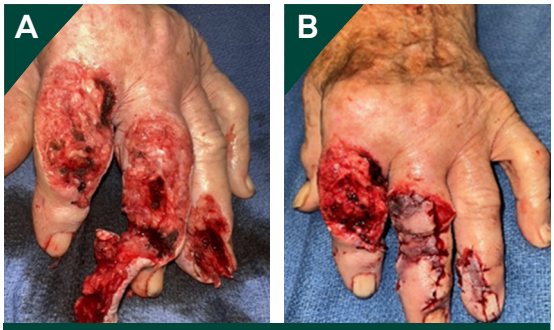

Figure 1. Wound at initial presentation.

Initial application of Solventum™ V.A.C.® Peel and Place Dressing

Excisional debridement of the wounds was followed by placement of a small V.A.C.® Peel and Place Dressing across the hand (**Figure 2**). The goal of therapy was to remove infectious materials, promote granulation tissue formation, and reduce edema in preparation for the placement of a skin graft. Initial application of the dressing was performed by a clinician with expert level experience and was completed within two minutes without complication while the patient was under anesthesia.

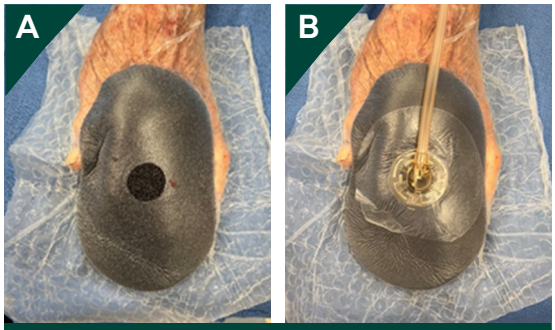

Figure 2. Application of Solventum™ V.A.C.® Peel and Place™ Dressing.

Treatment

After seven days, the patient returned for dressing removal (**Figure 3**) and the wounds showed excellent granulation (**Figure 4**). A full-thickness skin graft was placed and covered with another small V.A.C.® Peel and Place Dressing to bolster the graft (**Figure 5**). Dressing application was completed easily without complications while the patient was under anesthesia. The goals of therapy were to reduce edema and support graft take.

Figure 3. Dressing removal after seven days.

Figure 4. Wound at day seven, before placement of a full-thickness skin graft.

Figure 5. A full-thickness skin graft was placed over the dorsum of the index finger, secured with 5-0 chromic sutures.

Follow-up

After another seven days, the patient returned for follow-up. The dressing was removed easily within one minute while the patient was awake and experienced no pain. As the goals of therapy had been achieved, negative pressure wound therapy was discontinued. The hand was covered with standard petroleum gauze dressing and gauze bandages to support further epithelialization. By postoperative day 21, the wounds continued to heal, and the surface area was greatly reduced (**Figure 6**).

Figure 6. Appearance on postoperative day 21.

Clinician experience

Application of V.A.C.® Peel and Place Dressings was quick and easy to complete within only a few minutes, and removal was even faster. The patient experienced no pain upon removal, even without pain medication.

Photos courtesy of Anthony Dardano D.O., F.A.C.S.; Delray Medical Center, Delray Beach, FL.

Application of the Solventum™ V.A.C.® Peel and Place Dressing to an Evacuated Lower Extremity Hematoma

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Patient & diagnosis

An 82-year-old male presented with a hematoma to his left lateral lower extremity (**Figure 1**). The patient had a prior medical history of type 2 diabetes mellitus, gout, hypertension, hyperlipidemia and mild dementia.

Figure 1A. Wound at presentation. Evacuated hematoma resultant of an avulsion injury on the lateral left leg.

Figure 1B. Residual hematoma was debrided via ultrasound and wound initially managed using gelling fiber and foam dressing.

Procedure

The initial wound dimensions were 3.8 cm x 4.9 cm x 0.3 cm with 0.9 cm undermining from 9 to 3 o'clock. The wound had moderate sanguineous exudate. The patient's residual hematoma was evacuated and debrided via ultrasound. The wound had moderate sanguineous exudate. The wound was managed using gelling fiber and bordered silicone foam dressing for three days.

Initial application of Solventum™ V.A.C.® Peel and Place Dressing

Three days post-initial presentation, the wound exhibited red, granular tissue and measured 3.5 cm x 4.6 cm x 0.3 cm with 0.7 cm undermining from 10 to 2 o'clock (**Figure 2A**). Wound exudate was moderate but was now serosanguineous.

Figure 2A. Wound three days after presentation.

Figure 2B. Placement of V.A.C.® Peel and Place Dressing.

A decision was made to initiate Solventum™ V.A.C.® Therapy with the V.A.C.® Peel and Place Dressing for wound management. This integrated negative pressure wound therapy (NPWT) dressing and drape has a perforated, non-adherent layer designed to help mitigate the incidence of tissue ingrowth and allows for an extended wear time up to seven days. V.A.C.® Peel and Place Dressing was selected for ease of use and reduced time and frequency for dressing changes. Prior to the initial placement of V.A.C.® Peel and Place Dressing (**Figure 2B**), the wound was soaked using hypochlorous acid solution and cleansed mechanically with gauze. No debridement was performed.

A large-size V.A.C.® Peel and Place Dressing was placed over the wound and periwound area. The Solventum™ SensaT.R.A.C.™ Pad was placed so that the tubing was superior to the foot and would extend up the left leg. Solventum™ ActiV.A.C.™ Therapy Unit was initiated at -125 mmHg of subatmospheric pressure. Total application time of the V.A.C.® Peel and Place Dressing was less than two minutes.

Treatment

On Day 10 after the initial presentation, the patient returned to the clinic. Wound size reduction was noted (3.5 cm x 4.3 cm x 0.1 cm), and the undermining was resolved (**Figure 3**). A medium-size V.A.C.® Peel and Place Dressing was applied.

Figure 3. Wound at Day 10.

Figure 4A. Wound at Day 14. Periwound skin appeared moist.

On Day 14, periwound skin was noted to be moist (**Figure 4A**), erythema was observed around the edge of the drape and tissue deformation was noted underneath the location of the SensaT.R.A.C.™ Pad (**Figure 4B**). To address these issues, a large-size V.A.C.® Peel and Place Dressing was reapplied to allow the SensaT.R.A.C.™ Pad to be placed below the wound (**Figure 4C**).

Figure 4B. Erythema and irritation along the outline of the dressing and drape interface.

Figure 4C. Large-size V.A.C.® Peel and Place Dressing oriented to offset the SensaT.R.A.C.™ Pad, which was placed inferior to the wound.

Treatment (cont'd)

On Day 21, the wound measured 3.8 cm x 3.0 cm x 0.1 cm (**Figure 5**), and wound edges were attached. Periwound skin was noted to be moist but not macerated. On Day 28, the patient returned to the clinic. The wound was characterized by red, healthy granulation tissue and measured 4.0 cm x 2.5 cm x 0.1 cm (**Figure 6**). V.A.C.® Therapy was reapplied with V.A.C.® Peel and Place Dressing.

Seven days later (Day 35), the wound was epithelializing, and the clinician elected to discontinue V.A.C.® Therapy with V.A.C.® Peel and Place Dressing and switch to 3M™ Promogran Prisma™ Matrix dressings with compression.

Figure 5. Wound at Day 21 and prior to one-week suspension of V.A.C.® Therapy.

Figure 6. Wound at Day 28 before the reinitiation of V.A.C.® Therapy with V.A.C.® Peel and Place Dressing.

Follow-up

On Day 48, the wound margins had contracted further, and the wound bed displayed healthy tissue granulation and appreciable re-epithelialization (**Figure 7**). By Day 63, the wound had fully epithelialized (**Figure 8**).

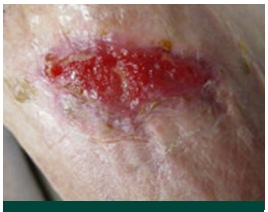

Figure 7. Wound on Day 48.

Figure 8. Epithelialized wound on Day 63.

Clinician experience

The patient reported that he experienced no pain or discomfort with V.A.C.® Peel and Place Dressing changes. For this patient, V.A.C.® Therapy with V.A.C.® Peel and Place Dressing was a well-tolerated intervention for wound management and through its creation of an environment that promotes wound healing, contributed to a positive healing outcome as evidenced by granulation tissue development, wound contraction and epithelialization.

Compared to traditional reticulated open cell foam dressings, use of the V.A.C.® Peel and Place Dressing saved time and cost in terms of reduced application time and fewer outpatient and/or home care visits. The ease of dressing application and reduced pain during dressing changes improved the NPWT experience for the patient, his family and clinicians involved in his care. The seven-day extended wear and easier dressing application also addressed other challenges in using NPWT, including patient transportation issues and clinic scheduling.

V.A.C® Peel and Place Dressing is indicated for closure of wounds via secondary intention, which includes epithelialization during the proliferation stage of healing. Use of the product as a primary epithelialization dressing is not indicated.

As with any case study, the results and outcomes should not be interpreted as a guarantee for warranty of similar results. Individual results may vary depending on the patient's circumstances and condition.

NOTE: Specific indications, limitations, contraindications, warnings, precautions and safety information exist for these products and therapies. Please consult a clinician and product instructions for use prior to application. Rx only.

Photos courtesy of Dot M. Weir, RN, CWON, CWS; Saratoga Hospital Center for Wound Healing and Hyperbaric Medicine, Saratoga Springs, New York. Dot Weir, RN, CWON, CWS is a paid consultant of Solventum.

Application of Solventum™ V.A.C.® Peel and Place Dressing Over Proximal Midline and Lateral Abdominal Wound Sites

Kara Couch MS, CRNP, CWCN-AP, FAAWC; George Washington University Hospital, Washington, DC

Patient & diagnosis

A 70-year-old female presented with a dehisced midline abdominal wound, lateral abdominal wound following colostomy reversal and a lower left quadrant (LLQ) surgical drain (**Figure 1**). Two weeks prior to her visit to our clinic, she underwent an exploratory laparotomy, lysis of adhesions and colostomy reversal. The patient's medical history included diverticular disease, multiple abdominal surgeries, total parenteral nutrition and a peripherally inserted central catheter line.

Figure 1. Initial presentation of a dehisced midline abdominal wound, colostomy reversal site and LLQ drain.

Procedure

Systemic antibiotics and debridement were used as needed. During her first visit to our clinic, Solventum™ V.A.C.® Therapy with Solventum™ V.A.C.® Granufoam™ Dressing was initiated to protect the wound and promote wound healing. Placement of the Solventum™ V.A.C.® Granufoam™ Dressing was complicated due to the need for careful cutting and placement of the dressing into the shallow superior midline wound and deeper inferior space. The dressing was removed after three days.

Initial application of Solventum™ V.A.C.® Peel and Place Dressing

Treatment transitioned to V.A.C.® Therapy with Solventum™ V.A.C.® Peel and Place Dressing to save time and avoid the need to cut the dressing during application. As the wound depth was less than 6 cm, a large-size V.A.C.® Peel and Place Dressing was placed diagonally so that it covered the medial and lateral abdominal wounds and LLQ drain (**Figure 2**). The adhesive edge of the drain patch was trimmed back because it was in the placement field and to avoid leakage back into the drain. The chlorhexidine gluconate impregnated patch over the drain was not disturbed. Negative pressure of -125 mmHg was applied and good contact was confirmed across all three wounds. The patient was discharged to continue recovery at home.

Figure 2. Application of a large-size V.A.C.® Peel and Place Dressing over proximal wounds and drain.

Treatment

After five days of wear, the dressing was removed (**Figure 3**). The midline wound was significantly contracted, and the colostomy reversal site was closed. The midline wound was cleansed, and a medium-size V.A.C.® Peel and Place Dressing was applied so that it only covered the midline wound (**Figure 4**). A bordered foam dressing was applied over the colostomy reversal site and LLQ drain. After an additional seven days of therapy, the V.A.C.® Peel and Place Dressing was removed, and V.A.C.® Therapy was discontinued (**Figure 5**). The LLQ drain had been removed by her surgeon one day prior to this visit with no complications.

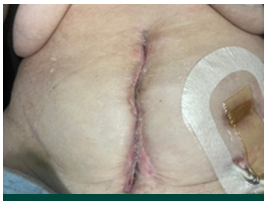

Figure 3. After five days of therapy, the colostomy reversal site had closed.

Figure 4. Application of a medium-size V.A.C.® Peel and Place Dressing over the midline abdominal wound.

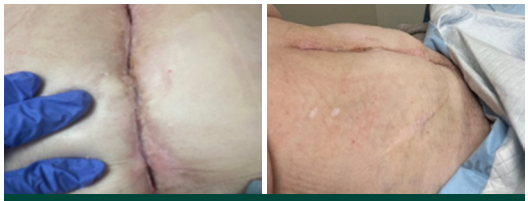

Figure 5. After an additional seven days of treatment, the midline wound was almost fully closed (left), and the defects visible at presentation had resolved (right).

Follow-up

After two visits to our clinic and a total of 12 days of treatment with V.A.C.® Therapy and V.A.C.® Peel and Place Dressing, the midline wound was almost completely closed. A small area of the wound remained open. Hydrogel, collagen powder and adhesive dressings were applied to that area until full closure was achieved, which occurred within a few days. The wound healed with good cosmetic results, and no large defects were observed on the abdomen.

Clinician experience

Although V.A.C.® Therapy with V.A.C.® Granufoam™ Dressing was a good choice for this patient, dressing application was complicated due to variable depths of the superior and inferior midline wound. The integrated design of V.A.C.® Peel and Place Dressing simplified application over this anatomical location, without interfering with the proximal drain. Dressing application was fast, requiring about 90 seconds. The periwound skin remained healthy, and the patient reported no pain during dressing removal. At presentation, the patient had a noticeable divot and involution of the midline wound site, which had completely disappeared after 12 days of treatment.

Photos courtesy of Kara Couch MS, CRNP, CWCN-AP, FAAWC; George Washington University Hospital, Washington, DC.

Application of the Solventum™ V.A.C.® Peel and Place Dressing to a Residual Limb after High Amputation

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Saratoga Hospital Center for Wound Healing and Hyperbaric Medicine, Saratoga Springs, New York

Patient & diagnosis

A 53-year-old female presented with a wound on her left residual limb after a high amputation. The patient had a history of smoking, cardiovascular disease, peripheral artery disease, hypertension and pulmonary complications (**Figure 1**).

Figure 1. Wound during a dressing change, four months after high amputation.

Procedure

The patient had previously been managed with Solventum™ V.A.C.® Therapy using Solventum™ V.A.C.® Granufoam™ Dressing. With traditional negative pressure therapy use, the patient experienced substantial pain (10/10) during dressing changes.

Initial application of Solventum™ V.A.C.® Peel and Place Dressing

When the wound size had decreased to 225 cm^2 (**Figure 2**), treatment was transitioned to the large-size Solventum™ V.A.C.® Peel and Place Dressing in an outpatient setting. The initial dressing was applied by a home health care nurse with no prior product training (**Figure 3**). A negative pressure of -150 mmHg was initiated. Dressing changes occurred every three to seven days.

Figure 2. Wound at evaluation, one week before the initial application of V.A.C.® Peel and Place Dressing.

Figure 3. Application of V.A.C.® Therapy with a large-size V.A.C.® Peel and Place Dressing.

Treatment

Due to transportation problems, the first dressing change occurred after five days and was performed by the home health nurse. The next dressing change occurred three days later when the patient was seen in the clinic. Granulation tissue formation was noted at wound edges, and the wound size measured 182 cm^2, a reduction of 43 cm^2 (**Figure 4**).

After 26 days of treatment, wound size was 94 cm^2 (**Figure 5**). Continued reduction in size and progress toward wound healing were observed at subsequent clinic visits (**Figures 6-7**).

Figure 4A. Wound after eight days of treatment.

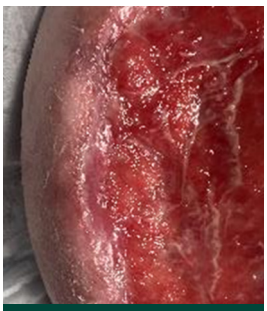

Figure 4B. Enlarged view of granulation tissue formation along wound margins.

Follow-up

The wound continued to progress towards closure, and after about three months, V.A.C.® Therapy with V.A.C.® Peel and Place Dressing was discontinued. Treatment was switched to 3M™ Promogran Prisma™ Matrix dressings, with twice weekly dressing changes (**Figure 8**).

Figure 5. After 26 days of treatment, the wound area was 94 cm^2.

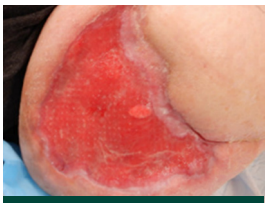

Figure 6. After 34 days of treatment.

Figure 7. After 43 days of treatment, wound area was 90 cm^2.

Figure 8. After about three months, treatment was switched to Promogran Prisma™ Matrix Dressings with twice weekly dressing changes.

Clinician experience

Prior to V.A.C.® Peel and Place Dressing use, the patient experienced significant pain during dressing changes. For this patient, V.A.C.® Therapy with V.A.C.® Peel and Place Dressing was well-tolerated, resulted in no pain (0/10) or discomfort and contributed to a positive healing outcome as evidenced by granulation tissue development and progressive wound area reduction.

V.A.C.® Peel and Place Dressing allowed for a seven-day extended wear period and enabled home care providers with little or no experience using V.A.C.® Therapy to apply dressings effectively. The incorporated non-adherent layer and hybrid acrylic-silicone adhesive drape of the dressing helped address the patient reported pain during dressing changes, while the extended dressing wear times helped minimize logistical challenges such as patient transportation issues and clinic scheduling.

Photos courtesy of Dot M. Weir, RN, CWON, CWS; Saratoga Hospital Center for Wound Healing and Hyperbaric Medicine, Saratoga Springs, New York.

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

These case studies are the results of physicians' clinical experience. 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 circumstances and condition.

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