

Healing a panniculus wound

Cardinal Health™ SVED® device¹ with simultaneous irrigation healed a chronic panniculus wound complicated by necrotizing fasciitis

Case study **2**

Description

A 37 year-old, 600-pound woman was admitted to an acute care medical center after developing necrotizing fasciitis as a complication of a chronic group A streptococcus panniculus infection. The patient developed septic shock — multi-organ system failure — requiring ventilation, dialysis and hemodynamic support. The patient underwent standard sepsis protocols. Serial debridement to control infection resulted in an open abdominal wound measuring 130 x 136 cm.

Immediately prior to admission to a long term acute care hospital, a surgical team removed 100 pounds of excess pannus and employed vertical retention sutures to attempt closure of all but 56 cm of the wound. Two large surgical drains were placed along the wound gutter — each drain extending along the lower lip of the wound to the opposite end.

Results

Shortly after admission to the long term acute care hospital, the patient again became septic and was put back on a ventilator. The patient remained on ventilation throughout most of her stay at the long term acute care hospital.

Day 1

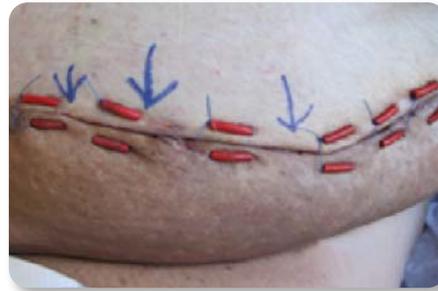
Figure 1A

- Post-surgical view
- Closure of all but 56 cm of wound



Figure 1B

- Post-surgical view
- Sutured wound edges not adhered
- Tunnel depth: 5 to 10 cm



Initial wound assessment found no adhesion of sutured wound edges. Tunneling under the sutures extended 51 cm to the right and to the left of the central open wound. Tunnel depth ranged from 5 to 10 cm. The long term acute care wound care team noted a moderate amount of thick serosanguinous drainage from the base of the midline wound and emerging between openings in the suture line.

Figure 1C

- Post-surgical view
- Surgical drain

To promote moist wound healing, the team managed exudates by irrigating wound tunnels with normal saline, and controlled absorption by using Hydrofiber® Technology² and alginate.



Day 28

Figure 2A

- Open wound: 56 x 36 cm
- Granulated tissue; no adhesion of sutured wound edges
- Tunnel length: 35 cm/track
- Tunnel depth: 5 to 10 cm



Figure 2B

- Same wound after negative pressure wound therapy was set-up with simultaneous irrigation



On day 28, the wound care team removed the surgical drains, as they had become non-functional. The team initiated negative pressure wound therapy with simultaneous irrigation: The Cardinal Health™ SVED® device.

They addressed the wound's challenges as follows:

- **Tunneling:** The team placed Cardinal Health™ White Foam Dressing 5 cm into the tract on each side, and Cardinal Health™ Black Foam Dressing in the central wound defect. This arrangement facilitated the flow of irrigation solution into the area of tunneling, and then — propelled by negative pressure wound therapy — allowed the solution to exit the wound
- **The periwound skin** was protected with hydrocolloid strips, and a thin strip of Cardinal Health™ Black Foam was placed over the suture line. This prevented irrigation solution and drainage from seeping through gaps in the sutures
- **Bioburden:** The team reduced bioburden using Prontosan® Wound Irrigation Solution.³
Irrigation protocol was as follows:
 - Days 1 to 4: Continuous drip infusion; intermittent pressure at -150 mmHg
 - Day 5 to end of therapy: 20 cc bolus administered twice a day; continuous pressure at -150 mmHg
- **Negative Pressure Wound Therapy with simultaneous irrigation:** All components were managed with the Cardinal Health™ SVED® device

Days 29 - 40

The wound care team changed dressings twice a week. At each dressing change, the team incrementally pulled up the lower lip, securing it with Cardinal Health™ Black Foam. The goal was to align the bottom wound edge with the top, in order to achieve adhesion.

Initial assessments showed a reduction in drainage. Subsequent assessments revealed adhesion of the previously open suture line, as well as tunneling closure. By the end of this period, the wound displayed 100 percent granulation, with completely viable wound edges. This was particularly remarkable because the patient remained on a ventilator throughout the treatment—typically a poor prognosis for wound healing.

Using negative pressure wound therapy with simultaneous irrigation, the team was delighted to achieve healing success.

Day 42

Figure 3

- 56 x 13 x 2 cm
- Wound immediately prior to final closure by wound care team

Final closure was performed on-site by the wound care team (advanced practice nurses under the supervision of the team's physician). Although the wound would have closed without any suturing, this uncomplicated procedure made the patient a better candidate for placement in a long term acute care facility.



Day 46

Figure 4

- Total wound recovery

Shortly after this final picture was taken, the patient was discharged to a long term care acute facility in order to treat the neurological complications of her sepsis.



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Conclusion

The massive damage caused by necrotizing fasciitis is a notoriously difficult medical challenge. In this instance, tissue loss and systemic shock were exacerbated by morbid obesity. The patient's ongoing respiratory issues — requiring her continual use of a ventilator — further complicated recovery.

To handle this complex case, the wound care team chose the Cardinal Health™ NPWT system — the only available technology that can deliver two modalities in a single unit: negative pressure wound therapy and simultaneous irrigation. Managed from its console, the SVED® device delivered both therapies concurrently. This freed the wound care team from the time consuming and leakage-prone routine of having to swap devices, alternate therapies and reattach tubing.

Low-residue Cardinal Health™ Black Foam Dressings optimized negative pressure wound therapy drainage. Cardinal Health™ White Foam Dressings were used to fill the wound tunnel, allowing the movement of Prontosan® Wound Irrigation Solution³ in and out of the tunnel. Because the Cardinal Health™ White Foam Dressings remain soft and pliable even when dry, the team did not experience breakage problems when handling and positioning the foam.

The Cardinal Health™ SVED® device provided negative pressure wound therapy and simultaneous irrigation to heal a daunting wound.

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SVED is a registered trademark of Cardinal Health.

1 This device was formerly known as the Innovative Therapies Wound Treatment System or Innovative Therapies SVED device. Innovative Therapies, Inc. was acquired by Cardinal Health in 2015. The features and technological characteristics of the device have not been materially changed.

2 Hydrofiber is a registered trademark of ConvaTec, Inc.

3 Prontosan is a registered trademark of B. Braun Medical, Inc..

Please refer to the Cardinal Health™ SVED® user manual for indications, contraindications, precautions and safety information. Always consult a physician and instructions for use prior to application.

Caution: Federal law restricts this device to sale by or on the order of a physician.

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