Case Study

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Cardinal Health™ Negative Pressure Wound Therapy

Healing A Recalcitrant Wound

Optimizing Outcomes by Using the Cardinal Health™ SVED® Device

Harbor Hospital of Southeast Texas, Orange, TX.
DeWona Helveston, RN

Description

A 79 year old Caucasian male was admitted to an acute care medical center with a severe paroxysmal cough and a bacterial infection of a surgical wound site on the left chest. This trauma caused partial extrusion of his implantable cardioverter defibrillator (ICD). The ICD had been introduced two weeks earlier to address chronic coronary artery disease and progressive heart failure.

After removal of the ICD, the patient's home care included negative pressure wound therapy with V.A.C.® Therapy and antibiotics to treat the wound. The wound, however, remained infected and dehisced.

Results

Due to his underlying heart condition—now unameliorated by an ICD—the patient exhibited shortness of breath, leg edema and rales. The patient was admitted to a long term acute care facility located within the acute care medical center.

Upon admission to the long term care facility, the patient's cardiac status was medically stabilizedt and IV antibiotics were given for the wound infection. Although symptoms of infection abated, the undermining and tunnel in the wound remained unchanged.

The patient's cardiologist emphasized that he needed a new ICD as soon as possible. However, the surgical team required resolution of the patient's existing left chest wound before undertaking the procedure—this time through the right chest wall. Prompt healing was essential. The long term acute care wound care team initiated negative pressure wound therapy with the Cardinal Health™ SVED® device, applying continuous pressure at -120 mmHg.

Day 1

Figure 1

- Shallow pocket wound in left chest: 3.5 x 1.5 cm
- Undermining from 7 to 9 o'clock
- Small amount of serous drainage



Day 3

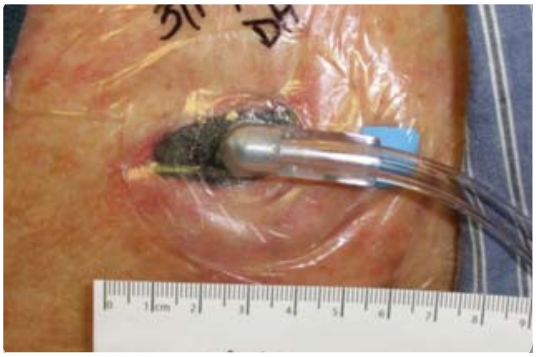
Figure 2A

- Shallow pocket wound in left chest: 3.5 x 1.5 cm
- Unchanged from previous measurements



Figure 2B

- Left chest wound with Cardinal Health™ Black Foam Dressings



The wound care team followed standard protocol. They changed Cardinal Health™ Black Foam Dressings 3 times a week, applying 3M™ Cavilon™ No Sting Barrier Film as a skin protectant.

Day 8

Figure 3

- Left chest wound: 3 x 1.5 cm
- No undermining



As the left chest wound was diminishing and no longer presented undermining, the wound care team discontinued therapy with the Cardinal Health™ SVED® device. The left chest wound was well on its way to resolution.

Day 11

The surgical team inserted a new ICD from the right side. The patient was started on Vancomycin 500 mg IV piggyback. Subsequently, the surgeons re-entered the wound on the right side of the chest to repair a lead malfunction and clear a hematoma.

Day 17

Figure 4

- Left chest wound: 3 x 0.5 cm
- Minimal drainage



Day 22

Figure 5A

- Left chest wound: 2 x 0.5 cm
- Minimal drainage

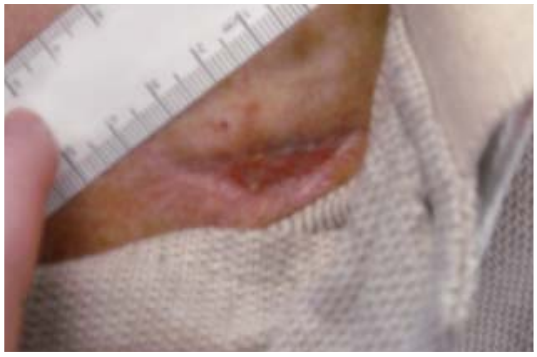


Figure 5B

- Right chest wound, post ICD insertion: 6 cm sutures
- Dry and intact
- Bruising and minimal drainage



The patient was discharged to his home. But within a short time, he exhibited a negative response to this new ICD. The right chest wound began to open.

Day 43

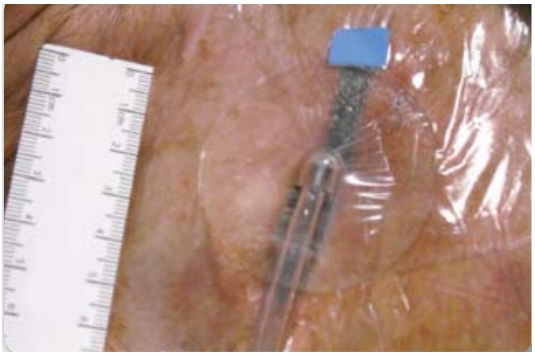
Figure 6A

- Right chest wound: 6 x 0.5 cm
- Red with minimal drainage



Figure 6B

• Right chest wound with Cardinal Health™ Black Foam Dressings.



The patient was re-admitted to the acute care medical center, where his new ICD was removed through the right chest wound. That same day the patient was sent directly to the center's long term acute care facility.

Although the right chest wound showed no infection, as a prophylaxis the wound care team applied the Cardinal Health™ SVED® device. Their goal was to heal the wound as soon as possible, to enable another attempt at ICD insertion.

As of the time of this writing, the patient remained under care.

Conclusion

The patient's wound after ICD removal remained recalcitrant despite a course of negative pressure wound therapy using V.A.C.® Therapy. Charged with preparing the patient for another surgical round, the wound care team employed the Cardinal Health™ SVED® device.

Subsequent healing cleared the patient for ICD reimplantation from a different site. After that ICD also had to be removed, the wound care team applied the Cardinal Health™ SVED® device to the new wound site.

For both treatment courses using the Cardinal Health™ SVED® device, the wound care team set the unit to -120 mmHg and applied the Cardinal Health™ Black Foam Dressing. This dressing helped to promote rapid wound granulation without requiring higher pressures that could lead to capillary closure or damage.



The information presented in this case study is specific to this patient and is not intended to be a substitute for professional medical advice, diagnosis or treatment. Always seek the advice of a licensed physician or other qualified health care professional.

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Please refer to the Cardinal Health™ SVED® User Manual for indications, contraindications, precautions and safety information related to the device. Caution: Federal law restricts this device to sale by or on the order of a physician.

Products mentioned in the case study not sold by Cardinal Health may not be available in Canada.

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