Case Study

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Cardinal Health™ Negative Pressure Wound Therapy

Healing A Post-Amputation Wound

The Cardinal Health™ SVED® Device Provided Negative Pressure Wound Therapy with Simultaneous Irrigation™ Technology, Yielding Notable Improvement in Recovery

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Description

An 87 year old Caucasian male was admitted to an acute care medical center. His podiatrist had been treating him for a non-healing gangrenous wound of the left foot. The patient presented with several co-morbidities: coronary artery disease, peripheral vascular disease, diabetes,hypertension and atrial fibrillation. A consulting orthopedist recommended an above-knee amputation.

The amputation was performed nine days later. The wound was closed with staples, with no immediate complications.

Day 1

The patient was transferred to a long term acute care facility, located within the acute care medical center, for further wound care —including continued antibiotic and antifungal medication. Although the patient remained alert, he demonstrated decreased appetite and nutrition.

Day 12

Upon removal of staples, the wound was measured as 28 x 0.5 cm incisional. The wound care team noted the inner area presented black eschar on the incision line. They supported the inner area with 3M™ Steri-Strip™ Adhesive Skin Closures[1] and continued antibiotic and antifungal treatment.

Day 26

Figure 1

- 6 x 2 cm, tunneling 2.5 to 3 cm to the inner stump
- Moderate drainage: purulent, serosanguinous

Examination found wound dehiscence. Two weeks later the wound care team debrided the wound, cutting off slough on the lower edge and packing the wound with iodoform gauze.



Day 26

Figure 2A

- 6 x 5.5 x 3.5 cm
- Moderate drainage: cloudy, serosanguinous



Figure 2B

- Cardinal Health™ SVED® device applying negative pressure wound therapy with simultaneous irrigation



Despite ongoing antibiotic and antifungal treatment, the wound was not exhibiting signs of improvement. Indeed, it was now slightly deeper than its post-debridement measurement. An additional level of care was needed.

The wound care specialist prescribed the Cardinal Health™ SVED® device, providing negative pressure wound therapy with Simultaneous Irrigation™ Technology. The Cardinal Health™ SVED® device was set to -120 mmHg intermittent negative pressure. Irrigation delivered a continuous 25 mL/hr drip of 1000 mL normal saline with 120 mg gentamicin.

A few days later, the wound care team again debrided sloughed tissue and sutured a bleeding vessel with 3.0 vicryl. After a 24 hour halt to accommodate vessel healing, they resumed negative pressure wound therapy with irrigation, using the Cardinal Health™ SVED® device.

Day 68

Figure 3

- 3.5 x 3.5 x 2.5 cm
- No drainage except irrigation



His wound now healing, the patient was discharged to his home at an assisted living facility. Discharge orders prescribed further negative pressure wound therapy with the Cardinal Health™ SVED® device and discontinued continuous irrigation. The Cardinal Health™ SVED® device easily accommodates transitions from institution to home care.

Day 145

Figure 4

- Wound successfully healed



The patient was readmitted for treatment of new wounds on his right knee. The post-amputation wound on his left leg had entirely healed.

Conclusion

A seemingly intractable post-amputation wound responded well to the Cardinal Health™ SVED® device's ability to provide dual-modality treatment: negative pressure wound therapy with simultaneous irrigation. The Cardinal Health™ SVED® device was applied for two months after initial hospitalization, and within a month the wound had healed sufficiently to allow discharge for home care. In the home setting, the Cardinal Health™ SVED® device continued delivering negative pressure wound therapy (now without simultaneous irrigation). Subsequently, the wound entirely healed.

The Cardinal Health™ SVED® device's ability to switch seamlessly between one or both modalities supported treatment at all stages of recovery. Throughout hospitalization, with the assistance of physical therapists, the patient easily transferred between bed and wheelchair while maintaining negative pressure wound therapy with simultaneous irrigation. Upon discharge to home care, the patient and his caregivers continued negative pressure without the inconvenience or possible confusion of adapting to a new device providing negative pressure wound therapy only.



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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