Is Mechanical Negative Pressure Wound Therapy Appropriate in the Elderly Patient?
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INTRODUCTION

The goal of this study was to show the role of negative pressure wound therapy alone or in combination with other advanced wound care modalities in the treatment of wounds in elderly patients with whom traditional negative pressure is not a first line option.

MATERIALS & METHODS

Two elderly male patients in their 80s and 90s presented with a left anterior leg traumatic wound secondary to a fall and a right lateral heel decubitus ulceration that developed while in the hospital. Both patients had significant comorbidities including diabetes, congestive heart failure, and peripheral artery disease. Treatment included debridement of necrotic or non-viable tissue at each visit per the standard of care for the associated wound type. NPWT using the SNaP® Wound Care System (Spiracur, Sunnyvale, CA) was applied biweekly either alone or in combination with skin substitutes (Dermagraft®, Shire Pharmaceuticals, Wayne, PA). NPWT duration was determined by the attending physician and was discontinued when adequate healing was noted.

SNaP® WOUND CARE SYSTEM

The SNaP® (Smart Negative Pressure) Wound Care System is an ultraportable NPWT device. This system uses specialized springs to generate continuous negative pressure at the wound bed. It is single-use and available “off-the-shelf” for immediate use.

CASES

CASE 1

90 year-old man with a past medical history significant for hypertension, chronic kidney disease, congestive heart failure and rheumatoid arthritis. Left anterior leg traumatic wound secondary to a fall. Patient was initially treated by an outside physician with primary closure of the wound. Following suture removal, the wound dehisced and had significant tunneling. He was treated for three weeks with standard wound care.

- Week 0: 4.8 cm x 2.3 cm x 2 cm – Initiation of SNaP® therapy with the addition of Dermagraft®
- Week 6: 2.2 cm x 0.4 cm x 0.2 cm – 92% reduction in size
- Week 9: Full closure
- Patient had 8 total Dermagraft® applications.

CASE 2

82 year-old male with a past medical history significant for type II diabetes mellitus, hypertension, hyperlipidemia, peripheral arterial disease, glaucoma and erectile dysfunction.

- Week 5
- Week 12

RESULTS

The left anterior leg traumatic wound reduced in size by 92% after 6 weeks of treatment with SNaP® NPWT and Dermagraft®. Patient attained full wound closure in 9 weeks following initiation of advanced therapy treatment. After nine weeks of standard therapy, SNaP® NPWT was applied to the right lateral heel decubitus ulceration. Following 6 weeks of SNaP® NPWT application, the wound reduced in size 84% and so NPWT treatment was stopped. By week 10, wound had doubled in size prompting re-introduction of SNaP® NPWT for an additional 2 weeks, resulting in a wound size reduction of 96%. Full closure was then noted at weeks 19 from initiation of NPWT.

CONCLUSIONS

These two cases support the utility of the SNaP® NPWT system in elderly patients for whom traditional NPWT may not be an option. It may also suggest that use of this NPWT modality could be applied to the wound until they are closer to closure before stopping.

REFERENCES