COGNITIVE IMPAIRMENT AND LOWER LEG WOUNDS? CONSIDER EASY TO DON COMPRESSION AND PATIENT ADHERENCE: A CASE SERIES

Rosemary Hill, BSN, CWOCN, WOCC(C) – Lions Gate Hospital, Vancouver Coastal Health, British Columbia

BACKGROUND

The ability to apply compression is critical in reducing edema for individuals with lower leg wounds. Cognitive impairment impacts the care planning with the patient and significant others. Older adults presenting with lower leg wounds often have multiple comorbidities. Cognitive impairment and their living environment impact the choice of compression therapy to reduce lower leg edema. Compression is recognized as a gold standard in managing lower leg ulcers with sufficient vascular supply to facilitate wound healing.[1] In appropriate use of compression can result in skin damage illustrated.

METHODOLOGY

A case series involving five patients was undertaken at a large teaching hospital in Western Canada. Ages ranged from 62-88 years old with cognitive challenges presenting with lower leg wounds in four cases. A fifth case included a 52-years-of-age male who only tolerated longitudinal compression. Standard of care included a comprehensive assessment addressing underlying etiology, vascular assessment to determine the ability of the wound to heal, and consideration of patient-centred concerns. A longitudinal compression stockinette utilizing fuzzy-wale technology was used to provide low compression due to its ease of application and better patient acceptance.

RESULTS

The five cases are presented in turn. Photographs of suitable quality for a printed poster were not available in all cases.

Case 1 – an 84-year-old female with mild cognitive impairment presenting with a large skin tear to the right lower leg resulting from a fall. The patient has a history of cellulitis to the left leg and lower limb edema. The patient had notable pain with wound cleansing and dressings. A physician addressed lower leg pain.[2] There was ready compliance to wear an easily applied stocking which protected her skin and reduced edema.

Case 2 – a 70-year-old female with a history of anxiety, depression, and adjustment disorder presenting with chronic edema with lower leg ulcers.

Other comorbidities include diabetes, hypertension, and cerebral vascular accident. The health care team convinced the patient to maintain the use of compression using longitudinal compression stockinette. The lower leg wounds went on to close with the patient transferred to an assisted living facility.

Image. a) on presentation, b) after low compression c) on wound closure

Case 3 – an 88-year-old female with dementia, who presented with a traumatic injury to lower leg from a fall. Suturing occurred with dissolvable sutures. Acceptance of longitudinal compression led to improvements in the wound bed and a reduction in wound size, to closure. The patient needed transfer to long term care with a stable wound where compression continued, in a style that care workers could apply easily and check skin daily.

Image. a) on presentation–original injury, b) after low compression, c) less exudate and went onto complete wound closure

Case 4 – a 62-year-old male with mental health issues, including schizoaffective disorder. Other comorbidities include hypertension and diabetes, previously poorly managed. He required a right leg transmetatarsal amputation. Standard of practice care was provided using traditional wound care products. The patient adhered to wearing longitudinal compression stockinette, which he could apply himself to reduce edema.

Image. Right leg transmetatarsal amputation on presentation a) and fourteen days later with application of longitudinal compression b).

Case 5 – a 52-year-old male over 300 pounds presenting with a large lower leg wound. The patient fell from a ladder and had a traumatic lower leg wound requiring surgery in September 2022. Postoperatively the surgical dehisced into a full thickness open wound. The patient declined traditional compression yet was willing to wear and adherent to wearing the longitudinal low compression. With the aid of compression, which the patient was able to apply himself, the lower ankle wound went on to heal.

Image. a) full thickness wound at baseline and b) 16-weeks later

DISCUSSION

Longitudinal compression stockinette helped facilitate a reduction in edema. Coordinated local wound care led to decreases in wound size and wound closure. These patients with cognitive impairments may be discharged to long-term care, assisted living facilities, or care at home by significant others.

RESOURCES

The literature examining cognitive impairment and those with lower leg wounds is sparse, offering limited direction to health care professionals on how to manage compression in this vulnerable population. The British Columbia Provincial Nursing Skin & Wound Care Committee manage the Connecting Learners With Knowledge (CLWK) website which provides an excellent source for clinical information and product summaries. This included products for lower leg compression.[3]

CLWK | CONNECTING LEARNERS WITH KNOWLEDGE

CONCLUSIONS

This longitudinal compression modality may be a viable alternative for patients who decline traditional circumferential higher compression. The ability of the patient or significant other to apply compression is critical to their daily use. The fuzzy-wale longitudinal compression shows favourable patient concordance in our centre and research by Sibbald et al (2020).[2] NSWOCs and wound care practitioners could find the cases presented as a suitable option for managing appropriate patients with lower limb wounds and cognitive issues such as dementia.

REFERENCES

1. Shi C, Dumville JC, Cullum N, Connaughton E, Norman G. Compression bandages or stockings versus no compression for treating venous leg ulcers. Cochrane Database Syst Rev 2021;7 CD013397.
2. Sibbald RG, Elliott J, Coutts P, Persaud-Jaimangal R. Evaluation of longitudinal and tubular compression treatment for lower limb edema. Adv Skin Wound Care. 2020;33:643-9.
3. British Columbia Provincial Nursing Skin & Wound Committee. Skin and Wound Product Information Sheet. EdemaWear (Lower Limb Application). September 2015, revised September 2017. https://www.clwk.ca/get-resource/edemawear/

Vancouver CoastalHealth