

Will Quality of Life and Patient Comfort Improve with a New 2 Layer Compression Bandaging System?*

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Introduction

- Compression therapy is an essential element for managing edema associated with leg ulcers.¹
- Adequate treatment is effective at improving the quality of life of patients with venous ulcers.²
- An ongoing challenge for clinicians is to **meet patient-centered needs** (comfort, ease of use, non-interference of functional activities) while adequately reducing edema to promote venous leg ulcer healing.
- Limitations of current compression devices negatively impact patient quality of life and treatment protocol adherence. These limitations include patient discomfort, product slippage, and overall dissatisfaction with the compression materials.^{3,4}

About the QoL Tool

Several validated tools⁵ are available to assist clinicians and researchers in understanding how chronic wounds affect patients' everyday lives and their emotional response to these effects.

A quality of life tool, the Cardiff Wound Impact Schedule,⁵ has been developed specifically for patients with leg ulcers and diabetic foot ulcers. It measures Health Related Quality of Life as it relates to physical symptoms and everyday living. 3 scales are used: physical symptoms and everyday life, social life (ability to get out and about), and well-being, including anxieties about their outcome.

This tool was selected to learn how product design and performance attributes affect patients' overall response to their condition and treatment. Use of a QoL tool may assist clinicians in evaluating the effectiveness of a new technology.

*Medical Outcome Short Form – 36 and the Nottingham Health Profile

Case Study 1

Patient History

48-year-old female with a 70-week H/O venous insufficiency and obesity. Seen in outpatient wound clinic for 23 weeks for multiple, full thickness wounds with minimal success in spite of adherence to a variety of compression methods and wound treatment.

Wound Progress during first 4 weeks of 4-layer system**



Slippage during wear – 11.0 cm/wk. Very uncomfortable, and proximal edema was difficult to wrap.



Wound Progress during last 4 weeks with 2-layer system*



Discussion

This patient requested continuation in the 2 layer system after the completion of the 8 week study. She could wear normal shoes and was more comfortable. Overall quality of life scores improved: 5 (baseline), 6 (week 4), and 8 (week 8). Wound healing progress continued. See photos below.



Case Study 2

Patient History

55-year-old male. Wound present for 60 weeks. ABI 1.0. H/O venous insufficiency, morbid obesity, hypertension and lymphedema. Prior to being seen in the wound center, he was treated for 16 weeks by home health care.

Wound progress during first 4 weeks with 2 layer system



Wound progress during last 4 weeks with 4-layer system



Slippage during wear – 6.0 cm/wk. Patient stated it was painful at times and "felt like I had a rubber band around my leg."



Discussion

Overall quality of life scores improved during the 8-week study, with progress in healing: 4 (baseline), 6 (week 4), 9 (week 8)

Case Study 3

Patient History

39-year-old male. Wound present for 19 weeks. ABI 1.04. H/O chronic venous insufficiency, lymphedema and multiple, full thickness venous ulcers. He has received twice weekly visits for management of heavy wound drainage and multiple ulcers for 2 months prior to study initiation. One primary lesion was selected and followed during course of study.

Wound progress during first 4 weeks in 2 layer system.



Slippage during wear – 1.3 cm/wk



Wound progress during last 4 weeks with 4-layer system



Slippage during wear – 6.0 cm/wk



Discussion

This patient progressed over the study duration. He preferred the 2 layer system because it was faster to apply and to remove resulting in shorter clinic visits. Overall quality of life scores improved during the first 4-week period: 4 (baseline), 5 (week 4), and 4 (week 8)

Discussion

These 3 patients are a small subset of 80 subjects enrolled in a randomized, cross-over study comparing 2 compression systems, so the analysis of the Quality of Life differences between the 2 systems cannot be predicted.

Because these subjects were wearing high compression systems during the 8 week study, all experienced wound healing progress.

Several benefits were experienced by all 3 subjects while wearing the new 2 layer system, including:

- Less slippage
- Improved comfort during wear
- Less sleep disturbance
- Less interference with footwear.

All patients noted that their clinic appointment time decreased due to the easier removal and application of the 2 layer system. Two patients also acknowledged that the bandage system was "cooler than the 4 layer wrap and not as itchy".

References

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