THE USE OF MULTI-LAYER COMPRESSION BANDAGES TO IMPROVE CONCORDANCE IN THE MANAGEMENT OF VENOUS LEG ULCERS

**INTRODUCTION**

The purpose of the small evaluation was to establish if a multi-layer compression bandage system (UrgoKTwo) would improve concordance in the management and treatment of patients with venous leg ulcers who had been using either single component compression therapy or reduced compression systems previously (Graph 1). Other outcomes that were taken into consideration were patient comfort, the ability of the individual to be able to wear appropriate foot wear, ease of application, conformity and the ability for the compression system to stay in place.

**METHOD**

All patients selected for the evaluation were over the age of 18 years, with an ulcer history presenting for greater than 2 months and currently being managed using a single component compression therapy system. A Doppler assessment for each patient needed to demonstrate an ABPI (Ankle Brachial Pressure Index) greater than 0.8 for inclusion as stated in local guidelines. Ankle circumferences were measured to ensure the appropriately sized multi-layer compression kit was used to provide the optimum therapeutic pressures in accordance with LaPlace’s Law. All patients were to evaluate the multi-component bandage system (UrgoKTwo) providing reduced compression as a result of the participant being unable to tolerate full compression. This was following a 2 year history of ulceration and using a previous reduced compression therapy system.

Dressing change regimes reduced from twice weekly to weekly for 2 ulcerated limbs following a reduction in levels of exudate and improvements to the wound beds. Exudate levels reduced overall (Graph 2) with only one individual having an increase in level of exudate. This increase was linked to deterioration in general condition and subsequent admission to hospital which resulted in the withdrawal of the individual during week four of the evaluation. A further individual had no change to the level of exudate and this is believed Wound surface area reduction greater than 40% had been observed in 2 further ulcerated limbs one of which had been circumferential prior to commencing the evaluation and was now with a defined wound edge and epithelial margins evident. Patient concordance had been a key outcome with improved concordance reported in 6 of the ulcerated limbs. One individual expressed how comfortable the compression bandages had been and had forgotten they were wearing them. Another individual expressed the reduction in pain and improved comfort had only been observed until the next dressing change rather than removing them to obtain some respite. A further individual was delighted to obtain ulcer healing. For one individual non concordance involved using the previous compression therapy system applied from ankle to knee just to wear their own shoes. When using the multi-layer compression bandage system they were still able to wear their own shoes even when correctly applied from toe to knee as per manufacturing instructions.

DISCUSSION AND CONCLUSION

The evaluation demonstrated improvements in patient comfort and a reduction in pain at dressing changes for a number of those involved. The multi-layer compression system (UrgoKTwo) was found to be easy to apply due to the pressure spot indicator. This ensured that all clinicians applied the bandages using the same technique and tension. For individuals where concordance can be dependent upon the clinician applying the compression therapy, this ensured that all individuals received consistent therapeutic pressures and accurate delivery of care to enhance and support patient concordance with their compression management therapy.

**RESULTS**

8 leg ulcers of venous origin were included in the evaluation. All leg ulcers selected were identified as recurrence ulcers with varying degrees of duration. 50% of leg ulcers were identified in patients assessed as clinically obese. Lower limb oedema was also present in 37% of participating ulcers. 1 venous leg ulcer healed within 18 days of commencing the multi-component bandage system (UrgoKTwo) providing reduced compression as a result of the participant being unable to tolerate full compression. This was following a 2 year history of ulceration and using a previous reduced compression therapy system.