

# A Novel Compression Device - Improving Patient Quality of Life

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## Introduction

Venous ulcers can have a severe impact on quality of life. They affect mobility, physical and social activities and can make people feel powerless and isolated (Douglas, 2001). Despite pain being an important symptom of leg ulceration, it is an aspect that is badly managed by healthcare professionals (Douglas, 2001). Sleep disruption has also been identified in patients with chronic leg ulcers, with pain perception and anxiety levels being raised as result of poor quality sleep (Upton and Andrews, 2013).



## Method

A single patient case study was carried out to evaluate the treatment of a painful venous leg ulcer with a novel compression device (Juxta CURES™)

### Patient history (Mr C)

- 73 year old man
- 18 month old venous ulcer to medial aspect left leg
- Medical assessment and ABPI indicated he was suitable for compression therapy
- Multi-layer compression bandaging was commenced in September 2011
- Multi-layer compression bandaging was discontinued in October 2012 at the patient's request due to pain and sleep disturbance
- Scoring level 10 at night (where 0=no pain 10=worst pain)



Wound on initial assessment prior to application of novel compression device 31/5/13

## Method (continued)

### Patient Medication

- Requiring strong opiate analgesia
- Antidepressants (Mr C told his wife that due to the pain and lack of sleep *"if I had lived near a railway line I would have thrown myself under a train"*)

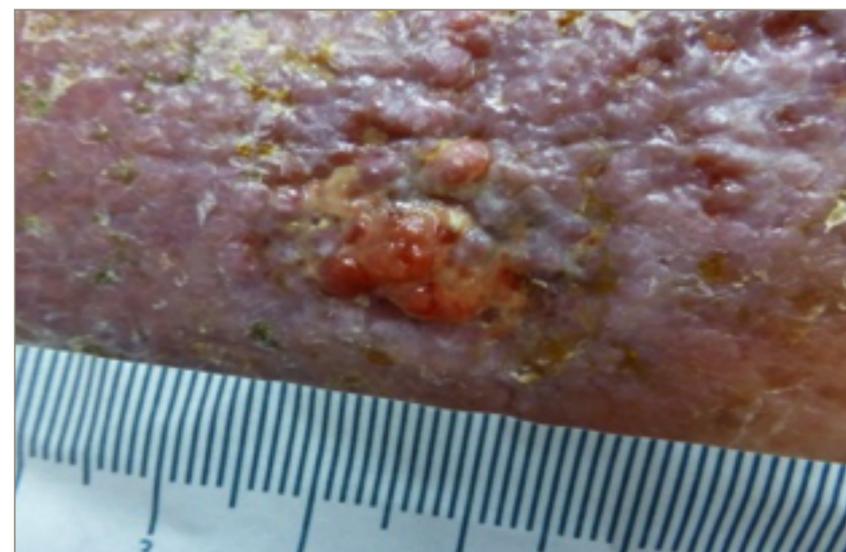
A decision was made to treat this ulcer with this new instantly adjustable inelastic compression device, Juxta CURES™ because:

- it has a built in pressure guide and can be set at the optimum levels but adjusted if this level is not tolerated by the patient
  - the device could be removed at night when the pain was severe
- this compression system features an inelastic material. The device forms a firm structure around the calf muscle. When the muscle contracts the pressure helps the blood in the deep veins to progress towards the heart

## Results

### 1st follow up (4 days after application)

- Mr C reported, *"the device is comfortable allowing me to sleep through the night"*.
- Clinically the wound appeared unchanged
- Oedema had significantly reduced by 9cm at the ankle (34cm-25cm) and 6.5cm at the calf (41.5cm-35cm)



Wound at 2nd follow up 14 days after fitting novel compression device

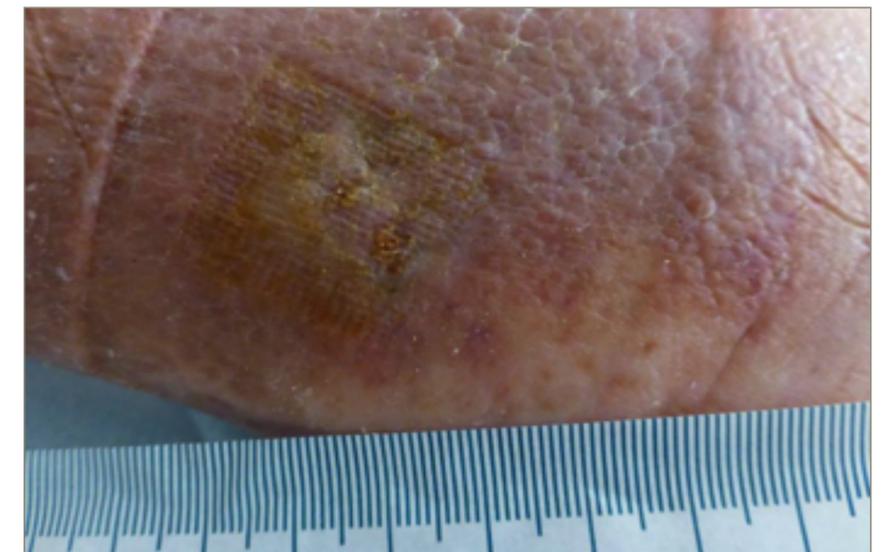
## Results (continued)

### 2nd follow up (14 days after application)

- Mr C stated that this treatment has *"transformed my life"*
- He reported minimal pain levels (score 1-2), and no longer required regular analgesia
- He discontinued his antidepressants
- Mr C was able to maintain reduced pressure throughout the night

### 4th follow up (8 weeks after application)

- **Wound healed**



Wound at 4th follow up 8 weeks after fitting novel compression device

## Discussion

This case study highlights the importance of planning care to address the patient's individual needs. The Tissue Viability Specialist plays an important role in determining the most appropriate treatment available and to ensure best practice is observed when prescribing treatments. In this particular case this simple adjustable self-management compression device maintained the therapeutic levels of compression necessary day and night for the healing of venous leg ulcers thereby improving patient quality of life.

### References

- Bianchi J et al. (2013) A fresh way to treat venous leg ulcers with measured compression. Wound Care (educational supplement of British Journal of Community Nursing) June 2013 s34-s40"  
Upton D & Andrews A (2013) Sleep disruption in patients with chronic leg ulcers. Journal of Wound Care. 22(8):389-394  
Douglas V (2001) Living with a leg ulcer :an insight to patients' experiences and feelings. Journal of wound Care. 10(9):355-360

Acknowledgment to medi UK