

# PolyMem Silver and PolyMem Dressings in the Treatment of Chronic Venous Leg Ulcers

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## INTRODUCTION

This case follows the progress of an 80 year old male with a seven year history of non-healing, venous leg ulceration.

## BACKGROUND

An 80 year old male patient has been attending the Wound Healing Community Outreach Service located at Queensland University of Technology, since 21st May 2008 for assessment and management of chronic, non-healing ulcers located on his left and right medial malleoli.

The ulceration occurred secondary to corticosteroid-induced skin atrophy, a well-known side effect of long-term use of topical corticosteroids which were used in an attempt to relieve the discomfort of venous stasis eczema<sup>1</sup>. Chronic venous stasis eczema is a chronic inflammatory disease of the skin. The main clinical features of chronic venous stasis eczema include a characteristic itch, which results in scratching, prurigo papules, lichenification, and eczematous lesions<sup>2</sup>. Topical



21 May 2008: Ulceration and corticosteroid-induced skin damage at admission.

corticosteroids are frequently prescribed to reduce the symptoms associated with inflammation however they are not curative and do not address the underlying cause of the disease<sup>2</sup>. In this case study, long-term use of a topical corticosteroid has resulted in desquamation of the tissue on both legs and skin atrophy. The potent anti-inflammatory effects of topical corticosteroids impede wound healing because they suppress the inflammatory process which is essential in wound healing.

## MEDICAL AND SOCIAL HISTORY

- Varicose veins
- Chronic venous insufficiency
- CVA 1997
- Moderate alcohol intake (1 glass/night)
- Lives alone
- Single, never married
- Retired book maker
- Good social support network

## MEDICATIONS

- Paracetamol
- Aspirin
- Ramipril
- Atorvastatin

## ALLERGIES

- Penicillin
- Sensitive to all zinc and paraffin-based products – these exacerbate symptoms and cause burning and intense itching

## AIMS

- To reduce bacterial colonisation
- To reduce pain and discomfort
- To control malodour and exudate
- To protect periwound skin
- Dressings to be cost effective
- Dressing needed to be able to be worn with compression bandaging
- Dressing needed to be atraumatic upon removal and acceptable to the client
- Dressings to be easy to use

## CLINICAL PROBLEM

On initial examination the patient presented with non-healing ulcers located on his right medial malleolus measuring 3.7cm in length x 3.9cm in width (area = 9.0cm<sup>2</sup>) and an ulcer on his left medial malleolus measuring 5.4cm in length x 3.3 in width (area = 14.2cm<sup>2</sup>). The ulcers were producing moderate amounts of malodourous serous exudate, the wound beds were comprised of 100% sloughy tissue and the wound edges were sloping. The periwound skin was in poor condition with extensive areas of desquamation, hyperkeratosis and excoriation on both legs. There was mild non-pitting oedema of both limbs concentrated around both ankles and the calf muscle region. The patient reported intermittent pain in his ulcers. At the time of his initial examination he rated his pain as 6/10. The patient reported that pain was at its worst during dressing changes and wound cleansing.



21 May 2008: Left Medial Malleolus wound measuring 5.4cm x 3.3 cm (area = 14.2cm<sup>2</sup>) at admission



21 May 2008: Right Medial Malleolus wound measuring 3.7cm x 3.9cm (area = 9.0cm<sup>2</sup>) at admission

Doppler Ankle Brachial Pressure Index revealed an ABPI of 1.0 for both legs. He was able to detect a 10 gram Semmes-Weinstein monofilament. Based on clinical signs and symptoms, history and results of Doppler ABPI compression therapy was commenced in order to treat the underlying venous aetiology. Evidence recommends that compression therapy should be the first line of treatment for venous leg ulcers<sup>3</sup>. Compression bandaging is helpful in reducing oedema and

enhancing venous return. Short-stretch, inelastic compression bandaging was commenced and PolyMem Silver was applied as the primary dressing. Dressings were changed twice weekly with the assistance of a community nursing service.

PolyMem Silver was successful at reducing bacterial colonisation, controlling malodour and was able to successfully control exudate with twice weekly dressing changes. The patient reported that the dressing was pain-free and reported an improved quality of life. PolyMem Silver as the primary wound dressing and short-stretch bandaging was continued until week 8 with twice weekly dressing changes.



8 July 2008: Left Medial Malleolus progress after 8 weeks



8 July 2008: Right Medial Malleolus progress after 8 weeks

At week 8 the primary wound dressing was changed to PolyMem because symptoms of bacterial colonisation had resolved. Dressings continued to be changed twice weekly.

By week 15 the ulcers continued to improve as evidenced by a reduction in wound size.



26 August 2008: Left Medial Malleolus Week 15.



26 August 2008: Right Medial Malleolus Week 15.

Unfortunately at week 18 the patient presented to the Wound Healing Service with a marked deterioration in his skin condition. This may have been associated with a week of extremely hot, dry weather which tends to exacerbate his eczematous symptoms. At this point short-stretch bandaging was ceased so that the patient could shower daily and apply cotton-seed oil twice daily to rehydrate his skin. His ulceration at this point had not shown any signs of deterioration hence we continued with PolyMem as the primary dressing. A tubular bandage was applied in place of the short-stretch inelastic bandage. Whilst it would have been preferable to use graduated compression hosiery the patient was unable to tolerate the hosiery and he found it extremely difficult to apply and remove the hosiery independently but he could manage to apply both the primary dressing and tubular bandage independently. The patient declined to have community nurses assist with daily dressings.

The patient was reviewed one week later (week 19) and the ulcer on his right medial malleolus had deteriorated significantly as evidenced by an increase in malodour, exudate and oedema. The periwound skin was also excoriated, macerated and erythematous locally. Therefore PolyMem Silver was recommenced as the primary dressing and short-stretch bandaging was reapplied. Dressings were changed twice weekly.

At week 24 the ulcers had significantly improved and PolyMem was applied as the primary wound dressing. We continued with short-stretch inelastic bandaging. Unfortunately due to the extremely challenging skin condition the patient continues to experience episodes of exacerbation and remission and since admission to the Wound Healing Community Outreach Service on the 21st May 2008 he has been awaiting dermatology review. In May 2009 he went to his first dermatology appointment for further investigation. No further suggestions have been forthcoming at this point in time. We look forward to working collaboratively with the dermatologist to

work towards improving outcomes for this gentleman in the long-term. We continue to use PolyMem and PolyMem Silver dependent upon the clinical needs of the ulceration.

The literature indicates that in some situations the goal of treatment for hard-to-heal wounds may change to effective symptom control and ensuring that the patient has the best possible quality of life despite the presence of a wound<sup>4</sup>.

## CONCLUSION

In this case study, PolyMem Silver and PolyMem in combination with compression therapy were found to be effective in improving wound healing outcomes for this very challenging venous leg ulceration.

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PolyMem wound dressings are made by Ferris Mfg. Corp., Burr Ridge, IL. 60527 U.S.A