

Case Study of a Painful Arterial Wound

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Arterial ulcers

Arterial (or Ischaemic) leg ulcers are most commonly a consequence of peripheral arterial disease where the arterial system fails to supply sufficient blood to the limb resulting in an oxygen and nutrient deficit. This gives rise to symptoms such as intermittent claudication, rest pain and gangrene, increased pain with the leg elevated and local ulceration (Stranden Slagsvold, 2005). It is a common condition among smokers (Holloway, 1996). There is an increased risk of ulceration in diabetes mellitus, although this is mainly for neuropathic ulcers with a low component of peripheral arterial disease, yet a combination of neuropathy and ischaemia is still quite

common (Stranden and Slagsvold, 2005).

The arterial wound will often be deep and "punched out" in appearance, almost as if an apple corer has removed a section of flesh. The wound will generally be dry (unless infected) and often very pale. Gradually the limb shows evidence of longstanding ischaemia with thin skin and hairless legs. Nails become thickened, limb colour and temperature change become pale and cool with pulses becoming difficult to palpate. An ankle brachial pressure index should be undertaken to determine the extent of the disease and an urgent referral made to a vascular consultant (Hampton and Collins 2003). In severe

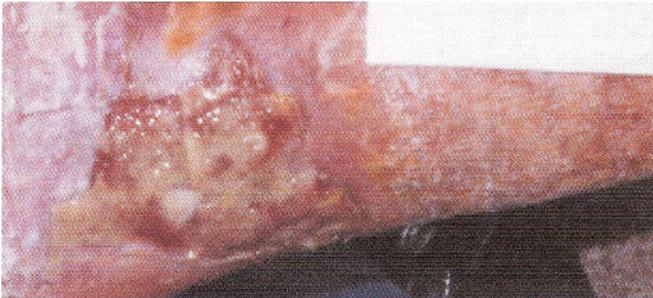


Figure 1
The sloughy and painful ulcer before treatment with ActiFormCool



Figure 2
Wound debridement achieved after 7 days with ActiFormCool



Figure 3
Epithelial islands seen after 3 weeks with ActiFormCool



Figure 4
ActiFormCool absorbs and swells in the presence of exudate

"The soft silicone dressing had not eased the pain but the pain quickly settled when the ActiFormCool® was in place"

Eleanor Wilkinson, Treatment Room Nurse, Broxburn

ischaemia ulcer healing may not be possible and the goal becomes prevention of infection and the delay of potential amputation. Management is complex and best accomplished by an interdisciplinary team approach (Richardson et al, 2001).

The Patient

This case study reviews the care of an extremely bright and well travelled, elderly lady (called Mrs West to maintain confidentiality) who remains independent despite a very painful arterial wound that she has been suffering for many months.

The Ulcer

Mrs West's ulcer was of mixed aetiology tending more toward arterial although the wound was venous in appearance. Her wound was extremely painful, particularly when her legs were elevated. She was being monitored by the Vascular Consultant, but the wound had not improved over a six month period.

Previous Treatment

The Community Nurses had been applying Aquacel™ (Convatec) with Allevyn™ (Smith & Nephew) as a secondary dressing, three times weekly and leakage through the secondary dressing and bandages was always observed. Mrs West assessed pain as 8 on a scale of 0-10 (10 being the worst pain that could be experienced) but claimed that a pain level of 5 would probably be tolerable. It was decided in discussion with Mrs West, that ActiFormCool® may reduce the pain (Hampton, 2004) and help to debride the wound.

The wound was sloughy and very painful (Figure 1). It was anticipated that complete healing would be difficult to achieve due to the arterial component of the wound. The aims of treatment were to promote a healing environment (shown by wound size decrease and epithelialization), to reduce pain from 8 to 4, for the wound to be free from slough and to contain or reduce exudation.

On the first application of ActiFormCool®, the film top cover was removed and it was applied as a full sheet. Within the first week, the wound had desloughed (Figure

2) and by week 3 granulation tissue formation was observed with islands of epithelium (Figure 3). Pain levels were reduced to a level of 5. It was found that, although the dressing absorbed large amounts of exudate, it remained moist and allowed the nurse's visits to be reduced to twice weekly.

During the assessment it was found that the 'corners' of ActiFormCool® became dry within that period and were difficult to remove at the edges. Therefore, a decision was made to leave the outer film in situ and to cut the dressing to the shape of the wound.

Conclusion

ActiFormCool® absorbed and contained fluid very well (Figure 4) and the dressing changes remained twice weekly, even with the film retaining moisture within the dressing. Pain was significantly reduced to a level of 3 by the final week of treatment and the wound desloughed very successfully. Epithelial tissue had increased over the islands and at the wound margins. Therefore, the aims of treatment were achieved to give an excellent result for a previously non-healing wound. Comparison of Figures 1 and 3 demonstrates the healing that occurred over the treatment period. This clearly shows that the epithelial island is increasing in size and the epithelial tissue at the wound margin is contracting toward the centre. The island and wound margin are almost connected and the epithelial tissue at the proximal end of the wound is increasing toward the centre-point.

References

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