

The use of a finger/toe shaped polymeric membrane dressing containing a cleansing agent and moisturiser on patients with systemic sclerosis in an acute rheumatology clinic

Introduction

Systemic sclerosis is an autoimmune disease which affects connective tissue and involves the skin, blood vessels, muscles and internal organs. A build up of collagen results in hardness, stiffness and thickening of the skin of the fingers and toes, loss of tissue pulp and impaired circulation. Tissue quality is also reduced by Raynaud’s phenomenon and tightening of the skin may cause fingers to bend and form contractures. The resulting stretched devitalised skin is prone to areas of necrosis and ischaemic ulceration. Commonly these wounds are too painful to sharp debride, prone to infection and difficult to dress due to altered position of digits.

The integrity of the skin is further compromised by small calcium deposits which lie under the skin’s surface and may lead to further ulceration. All patients receive immunosuppressant therapy for the underlying medical condition, which can also contribute to delayed wound healing. The usual dressing treatment options would depend on tissue type present; Necrotic tissue would require a hydrogel or hydrocolloid plus secondary dressing, sloughy wounds would require honey, iodine or hydrofiber plus secondary dressing.



Method and Results

A clinical evaluation was undertaken involving 4 patients with a total of 5 ulcerated lesions of either fingers or toes. Wounds had been present for at least several weeks before being seen by the specialist team; Patient 1: 3 weeks, Patient 2: 6 weeks, Patient 3: 6 months and was receiving Illoprost infusions every 4-5 weeks to help with vasodilation. This patient had also had vascular by-pass surgery to improve circulation in 2006. Each patient’s wounds were assessed by the specialist nurses and for the dressing related treatment, the patients received a new finger/toe shaped polymeric membrane dressing containing a cleansing agent (F68 Surfactant) and moisturiser (Glycerol). No other dressings were used.

All patients were reviewed on a weekly basis at the Rheumatology Ulcer Clinic by the Podiatrist and Tissue Viability Specialist Nurse. If required patients carried out mid-week dressings themselves, increasing engagement in their own treatment.

Within 1 week of use, 100% of patients reported a reduction in wound pain, the wound bio-burden was visibly reduced and with continued use, granulating wound beds and epithelialisation occurred in these hard to heal wounds.

Reduction in pain levels led to improved daily activity levels in these patients.

The dressings were easy to cut to fit, with dressing changes now taking approximately 2 minutes vs. approximately 10 minutes when using the ‘usual’ dressing methods. For patients with 2 wounds, 1 dressing was enough to dress both wounds by using the excess that was trimmed off, further improving the total cost of treatment.



Discussion

All patients using the polymeric finger/toe dressing expressed an immediate reduction in pain in their wounds. The dressing aided autolytic debridement reducing the need for painful sharp debridement. The continuous cleansing action of the dressing reduced the need for cleansing at each dressing change and reduced the wound bio-burden. The dressing also provided a moist wound environment which encouraged wound healing and no adherence to the wound bed was recorded. The dressings were easily accepted by patients, comfortable and easily applied- even by patients themselves, reducing the dependence on attending clinic for dressing changes. No pain was experienced during application or removal of dressing thus reducing the stress and anxiety often experienced by these patients during dressing changes. The number of different materials required for dressing these wounds was decreased as the finger/toe dressings did not require use of any other dressing materials.

Conclusion

In this group of patients the polymeric finger/toe dressing successfully aided debridement, managed wound bio-burden, supported progression towards healing, streamlined the treatment and led to an improved patient experience. Due to the improvement in clinical outcomes and reduced clinical time to treat, we found the new dressings to be cost effective. Based on these results, use of this dressing could be appropriately extended to benefit other patient groups with finger and toe wounds.