

The Development of All Wales Best Practice Statement on the Management of Hyperkeratosis of the Lower Limb

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Introduction

Hyperkeratosis is a thickening of the upper layers of the skin, the stratum corneum and other areas of stratified squamous epithelium (Figure 1). Hyperkeratosis is caused by over-proliferation of the keratin layer (International Lymphoedema Framework) (ILF 2010 a) and there are a number of different types (Table 1).

Hyperkeratosis is a known skin care problem/clinical feature for patients with lymphoedema (ILF 2010 b) (Figure 2). The dry skin can be itchy, painful and produce a generalised feeling of discomfort. Hyperkeratosis can have an accompanying distinct odour, due to the bacterial colonisation within the scaling skin (Day and Hayes 2008, Jakeman 2012). This condition is often associated with chronic leg ulceration. Hyperkeratosis can become severe, making treatment difficult. If not managed appropriately it can have a significant impact on the individual's well-being.

Aim

Within Wales the guidance on practice in the management of lower limb hyperkeratosis was identified as a gap, as there are no specific national guidelines and it is not included in the National Guidance for the prevention and management of venous leg ulcers (Scottish Intercollegiate Guideline Network 2010). The aim, therefore, was to develop an All Wales Best Practice Statement.



Figure 1
Mixed aetiology leg ulcers in combination with Hyperkeratosis



Figure 2
Lymphoedema with Hyperkeratosis

Table 1 - Types of Hyperkeratosis

Follicular - excessive development of keratin in the hair follicles
Plantar - hyperkeratosis of the sole of the foot
Hyperkeratosis of the nipple and areola
Idermolytic hyperkeratosis - clumping of keratin filaments
Corns and calluses
Warts
Lichen Planus
Actinic keratosis
Seborrheic keratosis
Note: Laboratory investigations including skin biopsy may be required to diagnose the exact type of hyperkeratosis.

Methods

A survey by a National Group of Tissue Viability Nurses was undertaken to identify current practice in the management of patients with hyperkeratosis relating to venous hypertension and the lower limb (Young 2011).

Results

The survey identified a wide variation in practice e.g. length of time for treatment varied enormously, ranging from 10-30mins. General comments from the survey reflected a lack of satisfaction with current practice and concluded there was no standardisation across the country.

Consequently the group produced a Best Practice Statement to provide appropriate knowledge in order to prevent the development of hyperkeratosis and to facilitate appropriate treatment, resulting in standardisation of clinical practice across the country (Table 2). This is due to be published across Wales and the rest of the UK in June 2013.

Conclusions

A gap was identified in standardised best practice which has now been filled. The guidance provided by this document is based on expert consensus which, along with audit, has been suggested as a positive method of directing care.

References

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- International Lymphoedema Framework 2010 a. Compression Therapy: a position document on compression bandaging (pdf). International Lymphoedema Framework in association with The World Alliance for Wound and Lymphoedema Care.
- International Lymphoedema Framework 2010 b. Care of children with lymphoedema. International Lymphoedema Framework.

Table 2 - Best Practice Statement

AIM	TREATMENT	OUTCOME
Prevention of hyperkeratosis and treatment of mild hyperkeratosis	<ul style="list-style-type: none"> Skin cleansing with emollients and soap substitutes twice a day. Mix emollient with water whilst applying to the skin using a disposable cloth. Dry thoroughly - Especially in between skin folds Use of monofilament debridement pad* Apply emollients in a downwards motion Compression therapy as per Ankle Brachial Pressure Index (ABPI) and per local policy 	Maintenance of skin hydration <ul style="list-style-type: none"> To encourage the loosening of dead hyperkeratotic skin. Prevent infection To debride hyperkeratosis To prevent folliculitis To reduce oedema
Moderate to severe hyperkeratosis	<ul style="list-style-type: none"> Use of urea and glycerine containing creams salicylic acid 3% or 6% - not suitable for diabetic patients at risk of neuropathic ulcers (Jakeman 2012) Use of monofilament debridement pad* Compression therapy as per ABPI 	<ul style="list-style-type: none"> Hydrates and facilitates desquamation of stratum corneum leading to softening of hyperkeratotic areas As a result of its descaling action, the salicylic acid allows rapid access of emollient to the dermis To mechanically debride hyperkeratosis To reduce oedema
Other treatment	<ul style="list-style-type: none"> Hydrocolloids and paste bandages - They are used in some areas of practice, however evidence to support their effectiveness is lacking. 	<ul style="list-style-type: none"> Consensus is that this would not be a first line treatment option. However, it might act as a precursor to soften plaques.