ALL WALES GUIDANCE FOR THE MANAGEMENT OF HYPERKERATOSIS OF THE LOWER LIMB

Guidance development group on behalf of the All Wales Tissue Viability Nurse Forum (AWTVNF):
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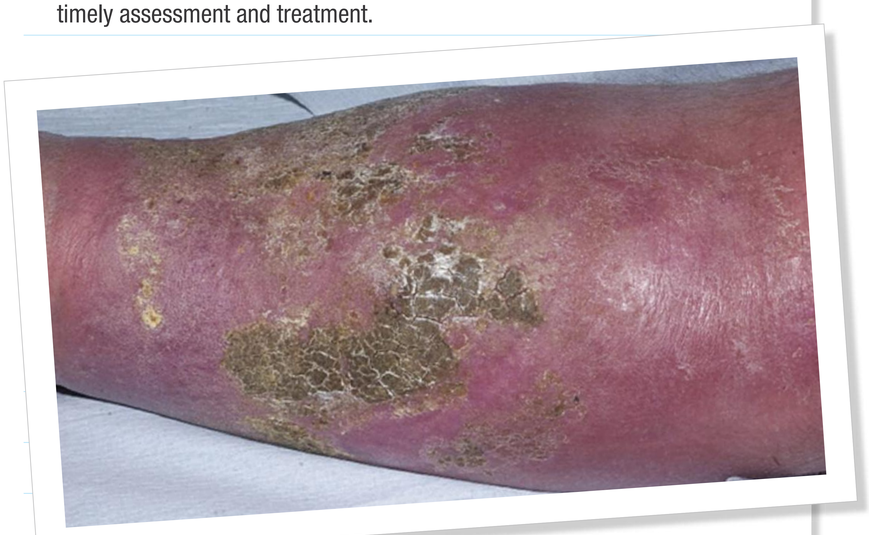
About hyperkeratosis

Hyperkeratosis is an increased thickening of the stratum corneum resulting in thickened, scaly skin and is associated with an over-proliferation of the keratin-producing cells over the surface of the skin (International Lymphoedema Framework [ILF], 2012; European Wound Management Association [EWMA] 2005). Hyperkeratosis can become severe, which can make treatment and adjunctive therapies (e.g. compression) more difficult. However, the condition can be managed effectively given appropriate and timely assessment and treatment.



Clinical presentation

Hyperkeratotic skin may…

- present as red and dry with brown or grey patches that are scaly in appearance (ILF, 2012; Jakeman, 2012)
- cover a small distinct area of the skin or be circumferential and cover all the skin of the lower limb
- be itchy and painful and may cause a general feeling of discomfort and pressure due to the thickening of the skin
- have an accompanying distinct odour caused by the bacterial colonisation within the scaling skin (Day and Hayes, 2008; Jakeman, 2012)
- harbour fungal infections (Day and Hayes, 2008). This can lead to a continuous cycle of colonisation, infection and skin breakdown
- alter an individual's perception of their body due to its unsightly appearance and the shedding of skin scales (Day and Hayes, 2008). The ILF (2012) suggest that the presence of hyperkeratosis is far from the 'body ideal'.

Prior to the development of the guideline:

- There was a distinct lack of evidence-based guidance about hyperkeratosis
- There has been no standardised prevention strategy or guideline on how to manage the condition
- The AWTVNF group decided to survey their members to establish how hyperkeratosis was being managed in Wales
- The results of the survey identified that there was no standardisation of treatment approach across Wales and general comments from the survey reflected a lack of satisfaction with current practice (Young, 2010).
- A sub-group of the AWTVNF were tasked with producing clinical guidance on the subject

The guidance document focuses on four main tenants of prevention and management of the condition

- Holistic assessment
- Implementing a management plan
- Emollient therapy
- Removal of skin scales

- This clinical guidance was designed to give guidance for practice where previously there was none.
- A major limitation of this document has been the lack of published research to guide clinical practice
- Nonetheless it is important that clinicians have access to this guidance for optimal care of patients with hyperkeratosis. It is hoped that this subject may be identified as a key topic for future research.

The guidance is available to download free of charge from the following sites;

http://www.welshwoundnetwork.org/en/news/latest-news/new-hyperkeratosis-document/
http://www.wounds-uk.com/pdf/content_11413.pdf
http://www.activahealthcare.co.uk/casestudies-files/.pdf#search="wales hyperkeratosis"

Acknowledgement

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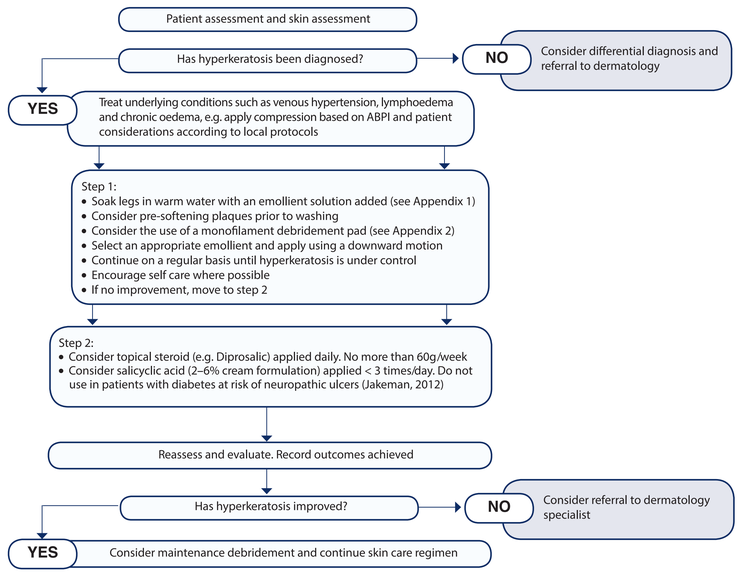
The following table contains the treatment options recommended in the document

Table 1. Common treatment options for hyperkeratosis of the lower limb.

AIM	TREATMENT	TREATMENT GOALS
Prevention of hyperkeratosis	Daily wash with emollients and/or soap substitutes. For some patients in compression therapy this might need to be a weekly occurrence. Follow these steps: 1. Use a soap substitute with water to cleanse the leg using a disposable cloth. Alternatively use a monofilament debridement pad on a weekly basis (NICE, 2014) 2. Dry thoroughly, especially between the skin folds 3. Apply emollients in a downwards motion (Beldon, 2006) to prevent hair follicles becoming blocked	Maintain skin hydration Prevent folliculitis
	Apply compression therapy, if indicated, according to local protocols	Reduce oedema by improving venous return and reducing venous hypertension
Treatment of hyperkeratosis	All of the above, plus: Use of creams that contain urea and glycerine (humectants) Topical preparations of salicylic acid (3% or 6%) can be used to facilitate penetration of emollients to the dermis. These are not suitable for diabetic patients at risk of neuropathic ulcers (Jakeman, 2012) Diprosalic preparations can be applied daily as a thin film. They contain a potent corticosteroid to reduce inflammation. The maximum weekly dose should not exceed 60g	Soften hyperkeratotic areas and facilitate desquamation of stratum corneum (Jakeman, 2012)
	Use of monofilament debridement pad	Mechanically debride hyperkeratosis
	Apply compression therapy, if indicated, according to local protocols	Reduce oedema by improving venous return and reducing venous hypertension

The document contains a flow chart for clinicians to follow when managing hyperkeratotic skin



In addition the guidance contains a visual guide to washing the lower leg and a step by step guide to using a monofilament debridement pad*.

References

Day, J. and Hayes, W. (2008) Body image and leg ulceration. In: Lindsay E, White R, eds. Leg ulcers and problems of the lower limb: A holistic approach. Wounds, Aberdeen
European Wound Management Association (EWMA) (2005) Focus Document: Lymphoedema bandaging in practice. MEP Ltd, London
Jakeman, A. (2012) The effective management of hyperkeratosis. Wound Essentials 1: 65–73
International Lymphoedema Framework (2012) Compression Therapy: a Position Document on Compression Bandaging. International Lymphoedema Framework in association with The World Alliance for Wound and Lymphoedema Care. Available online at: http://www.lympho.org/mod_turbolead/upload//file/Resources/Compression%20bandaging%20-%20final.pdf (accessed 24 August 2012)
Young, T. (2011) EWMA poster. A national survey of the nursing practice of the treatment of hyperkeratosis associated with venous hypertension. EWMA Conference. Bruges. Belgium

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* Debrisoft®, Activa Healthcare