

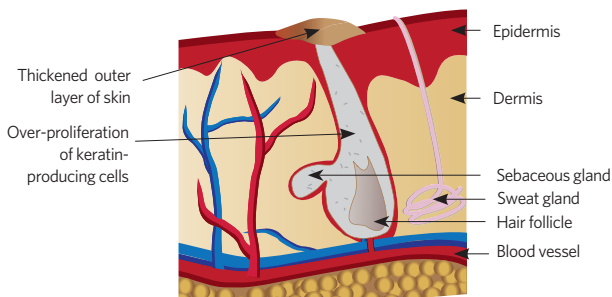
MANAGEMENT OF HYPERKERATOSIS OF THE LOWER LIMB

HYPERKERATOSIS OF THE LOWER LIMB

Hyperkeratosis of the lower limb is an abnormal thickening of the outer layer of skin due to over-proliferation of keratin-producing cells. A number of factors may contribute to its pathogenesis:

- Lymphoedema
- Chronic venous insufficiency
- Neuropathic diabetes
- Chronic recurrent eczema/other skin conditions
- Infrequent skin cleansing
- Poor skin care.

Hyperkeratotic skin may appear red and dry, with brown or grey scales; there may be flaking of the skin or an odour caused by bacterial or fungal colonisation. If left untreated, hyperkeratosis can degenerate into a progressive cycle of colonisation, infection, skin breakdown and, potentially, sepsis. It can cause distress, leading to anxiety, depression and social isolation.



Before management



After management using monofilament fibre debridement pad (Debrisoft®)

STEPPED APPROACH TO MANAGING HYPERKERATOSIS

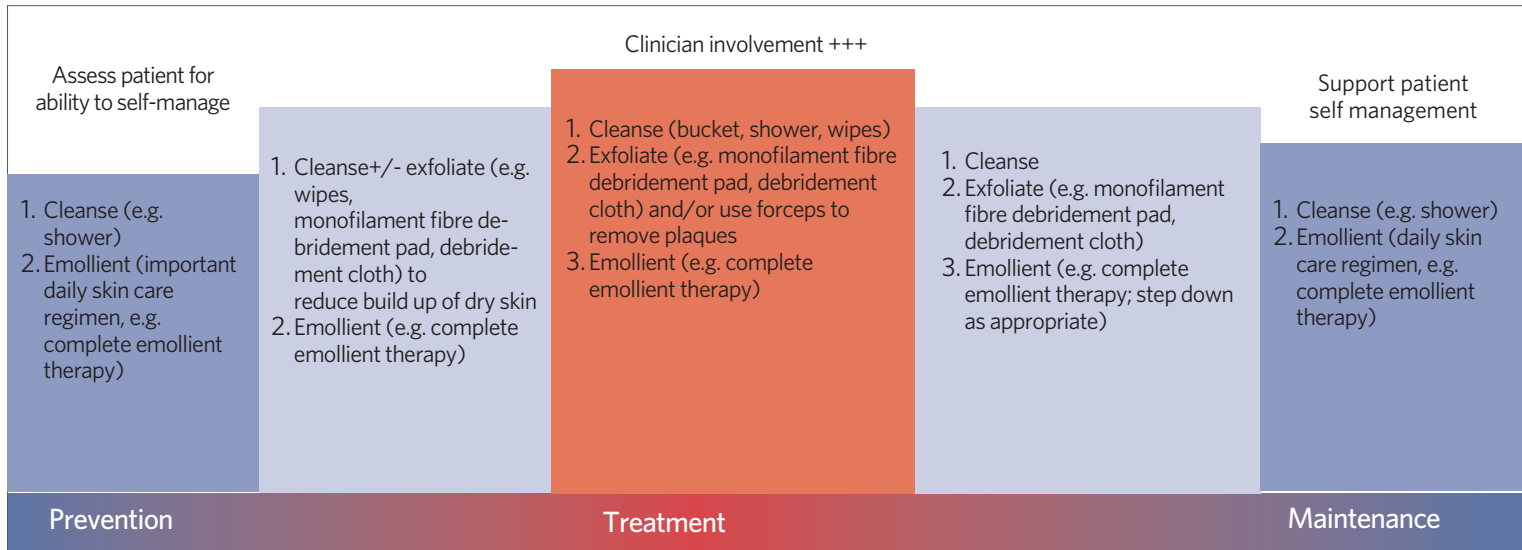
THE THREE PHASES OF MANAGEMENT – PREVENTION , TREATMENT and MAINTENANCE

The aim is to prevent hyperkeratosis in at-risk patients and achieve early control in patients with symptoms. Control is sustained by stepping up and down as appropriate. Within this stepped approach, an effective management strategy consists of:

1. HOLISTIC ASSESSMENT – since hyperkeratosis is a manifestation of other clinical problems, a detailed, holistic assessment should be undertaken. It is important to identify and treat any underlying causes, and where the diagnosis is unclear, the patient should be referred to an appropriate specialist (e.g. vascular surgeon, podiatrist, dermatologist).

2. A STRUCTURED SKIN CARE REGIMEN – the skin care regimen should cleanse and remove any products or residue, prepare the skin using exfoliation, and replenish the skin barrier with emollients (**see overleaf**).

3. AFTERCARE AND PATIENT INVOLVEMENT – promoting self-care is an important determinant of positive outcomes, while taking into account willingness and competence. The patient should understand that their hyperkeratosis has an underlying cause and how to manage their long-term health condition. Advice and care planning with healthcare professionals can help to maximise patient independence.



STRUCTURED SKIN CARE REGIMEN

A. CLEANSING

The cornerstone of prevention is thorough skin hygiene

- If the patient is self caring, the limb should be washed daily
- If not possible, wash the limb once/twice weekly or as often as possible

OVERVIEW OF CLEANSING METHODS

	Pros	Cons
Shower or bath	Allows whole body cleansing and improved patient wellbeing	Potential contamination, alteration of skin pH, and drying of skin from shampoos, gels, etc. Immobility and high water temperature may be a problem for some patients
Lined bucket	Inexpensive, effective, and engages patient and clinician. Good option for immobile patients, potentially improving wellbeing	Not permissible in some areas due to health and safety concerns. Bucket can be heavy when full, must be lined with a well-fitting disposable bag, and could damage vulnerable skin if caught on bucket
Lined basin	Inexpensive and less heavy than a bucket when full	Impractical for larger patients; may be difficult to reach lower leg
Licensed cleansing wipes	Convenient, easy to use, patients can self-manage, allowing dextrous/mobile patients to maintain independence. Minimal moving and handling concerns, and safe to use over the wound bed	Expensive, with high environmental impact. Excipients (e.g. methylisothiazolinone) may cause contact dermatitis. Potential for cross-contamination if not used appropriately
Pods/sachets/cans of cleansing solution	Convenient to use	Suitable only for wound irrigation, but insufficient for skin cleansing

B. EXFOLIATION

Exfoliation has been described as ‘intensive care for the legs’ and should occur each time the skin care process takes place

- Allows emollients to penetrate
- Relieves pressure and discomfort
- Improves appearance of the skin
- Improves patient wellbeing

Monofilament fibre debridement pad – The pad (Debrisoft®) is recommended by NICE for the management of patients with lower limb hyperkeratosis. It is a fast and effective exfoliation method that is convenient, easy to use and well tolerated.

Forceps/gloved fingers/tongue depressor – Manual removal of hyperkeratotic scales may also be undertaken; this is useful where hyperkeratosis has thickened, but there is potential to cause trauma, so should be undertaken by an experienced clinician.

Salicylic acid – Can be used to exfoliate skin scales, but only with professional input (and not on the surrounding skin) due to the contraindications it carries (e.g. for diabetic patients).

Pre-moistened debridement cloth – There is evidence that a debridement cloth could be used to remove hyperkeratosis, as well as cleansing and hydrating the surrounding skin, but may pose a risk of skin sensitisation.

C. EMOLLIENTS

Emollients form an effective barrier to restrict water loss from the body and prevent infiltration of harmful irritants

- Reduces signs of dryness
- Reduces painful sensations

Simple oil-in-water emollients

e.g. Oilatum, Cetaban, Doublebase diprobase cream

Heavier oil-in-water emollients

e.g. Hydros ointment, Hydromol ointment

Complex emollients with additional ingredients

e.g. Balneum, Aveeno

Hints and tips

For optimal hydration, simple emollients need to be applied two to three times a day, so may not be suitable for lower leg hyperkeratosis – consider a more sophisticated emollient.

Preparations containing an antibiotic should only be considered if infection is present or a frequent complication.

The greasier the emollient, the more effective at reducing transepidermal water loss.

The best emollient is the one the patient uses, so choice of emollient should always be patient-centred.