

Prevention and Management of skin ulceration in patients with Sickle Cell Disease

1. Purpose of this document

To provide guidelines for nursing staff involved in the care and management of adult patients with Sickle Cell Disease (SCD)

2. Who should use this document?

Nursing staff who are caring patients with SCD; including weekends and out of hours.

3. Further reference

Reference list included in the guideline

Published by

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4. Review group

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Review date:

07/08/2025

Introduction/ Summary:

Skin ulceration is a common health issue secondary to SCD. Sickled blood cells block blood vessels leading to vaso-occlusion and tissue ischemia. This leads to chronic ulceration with a prolonged healing time and can be extremely painful.

Sickle cell leg ulcers are extremely difficult to treat with high reoccurrence rates. Ulcers usually occurs on the lower extremities and bony prominences where blood flow is already reduced- commonly seen in the inner ankle area. Higher rates are seen in males.

Secondary complications include infection. Patients with SCD are immunocompromised putting them at greater risk of developing septicaemia. Patients with SCD may also be on long term Hydroxycarbamide and long term antibiotics which in turn can affect healing times.

Diagnosis/assessment

Early detection and intervention is key for managing skin ulceration.

For any patient who reports a break down in skin should be advised to cover it with a dry dressing until professional review. This reduces the risk of infection. Topical treatment should not be applied as they may not be suitable.

Initial Investigations:

Visual skin examination of the affected area of skin should be performed and skin assessment should be clearly documented.

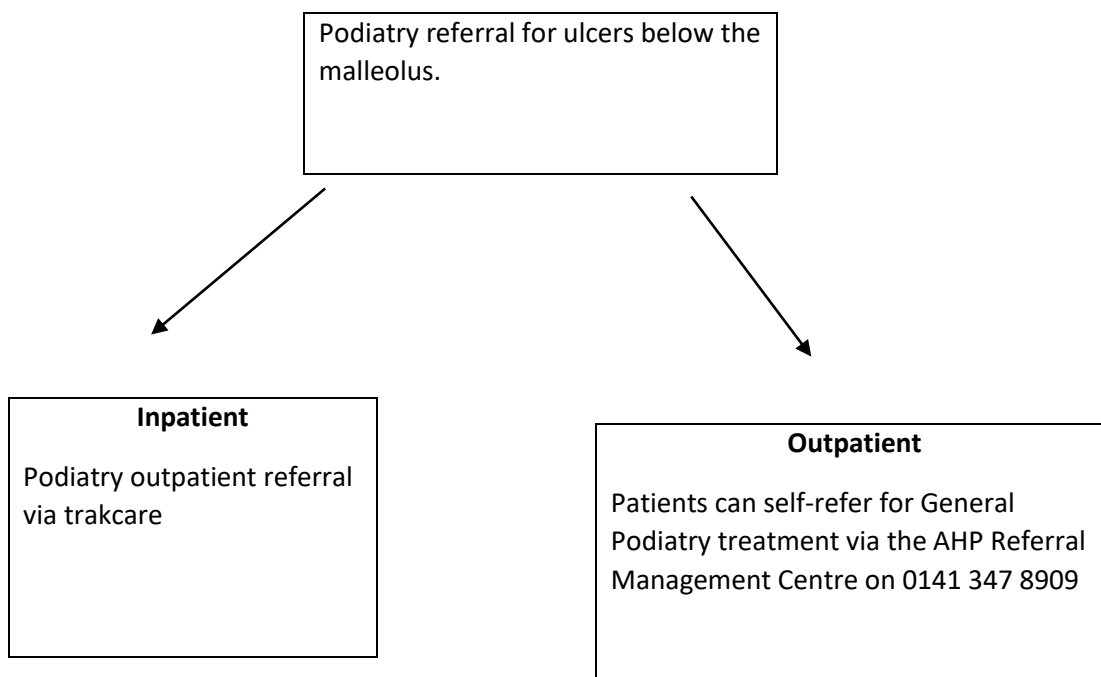
Depending on the wound assessment and patient's needs the Wound dressing (GGC wound formulary) should be used when deciding which dressing would be most appropriate.

Appropriate referrals

Podiatry referral for ulcers below the malleolus.

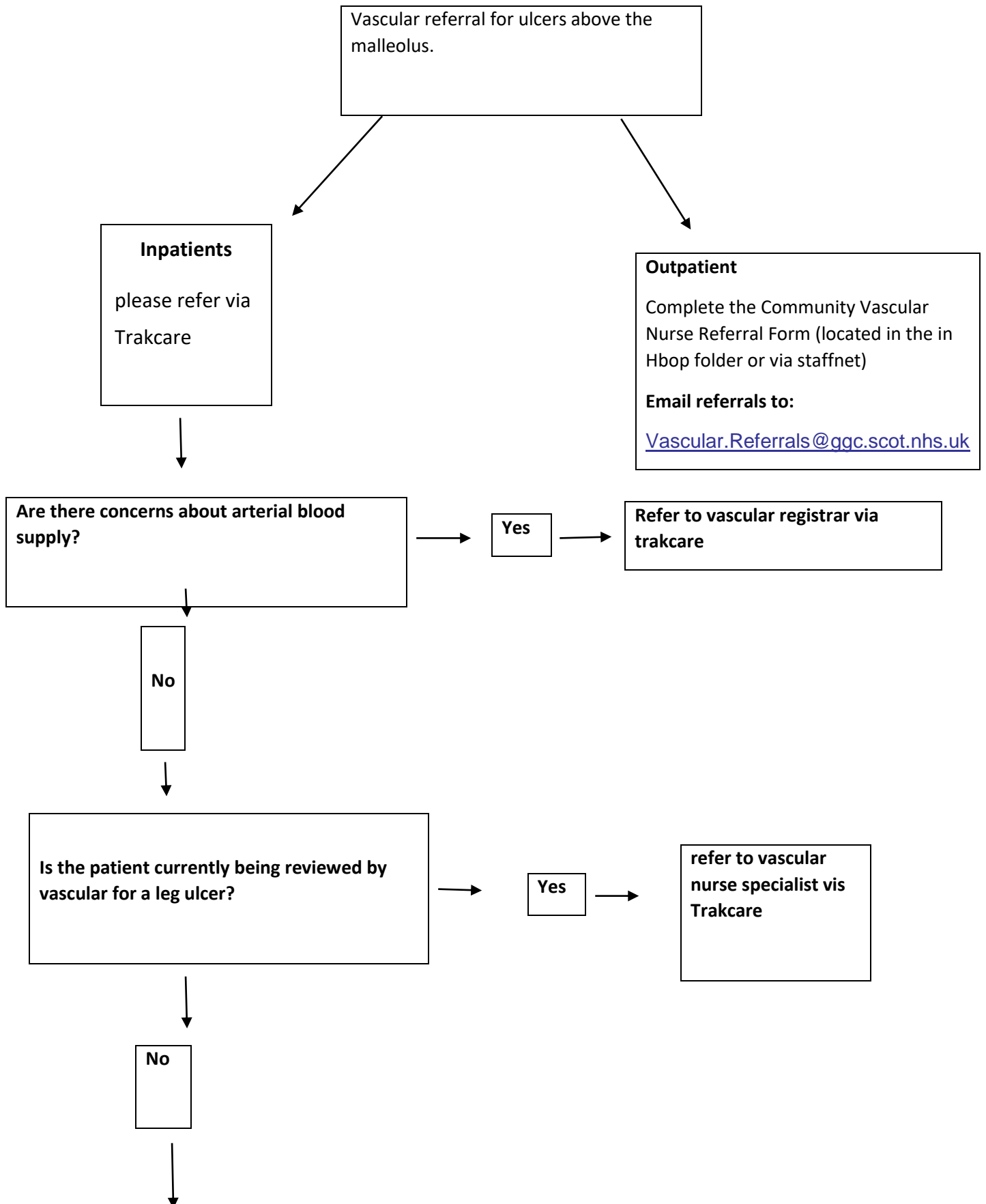
Vascular referral for ulcers above the malleolus.

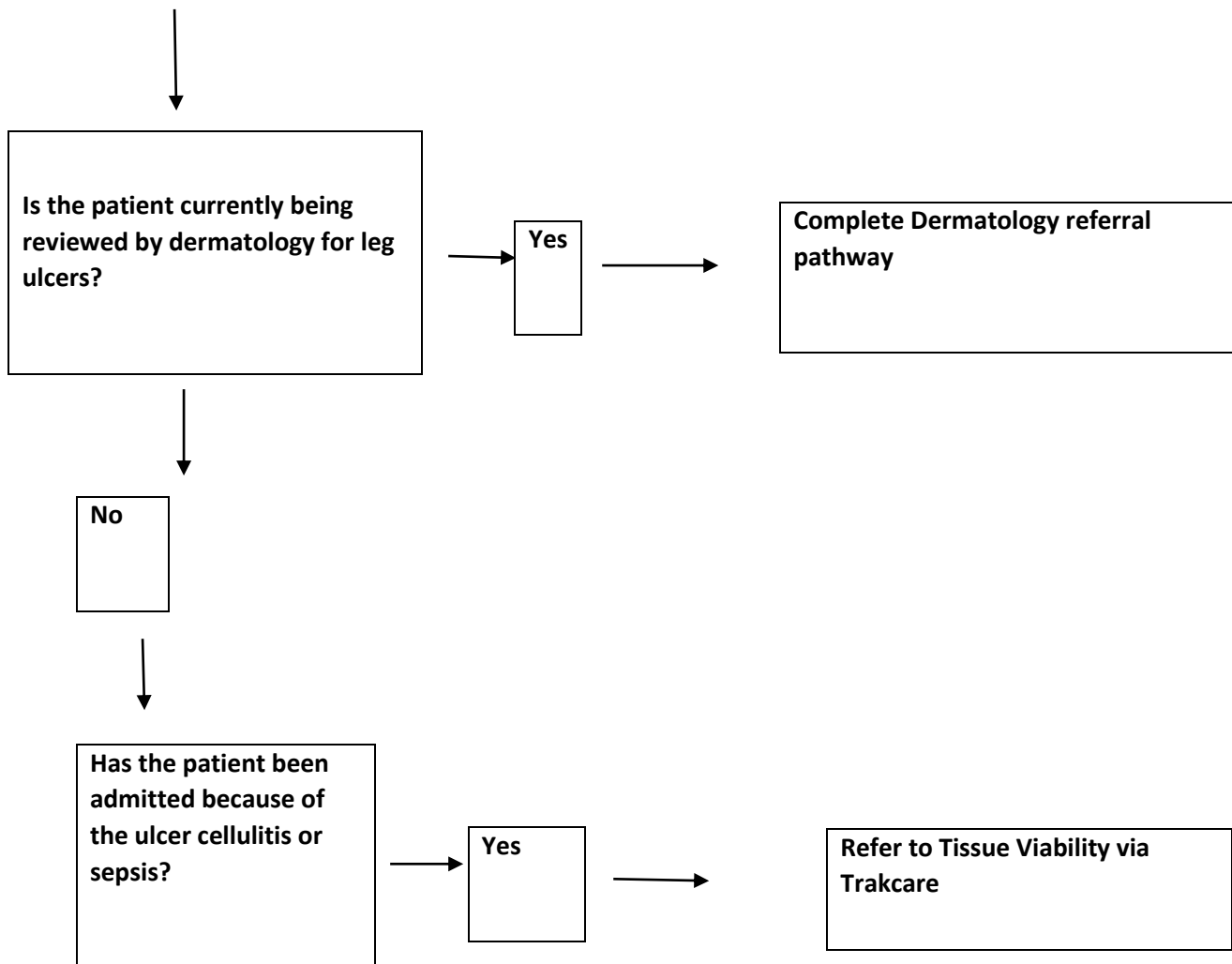
Podiatry referral process



Podiatry aims to review patient within two days of referral. The Podiatry team will liaise with district nurses regarding dressing changes and the patient's GP regarding pain management.

Vascular referral process





Acute vascular CNS are:

Alison Duncan - Alison.duncan2@ggc.scot.nhs.uk, based at QEUH. Tel 0141 451 5938

Drew Davidson - Drew.davidson@ggc.scot.nhs.uk Working from, IRH, QEUH and RAH. Tel 01475 504420

Laura Harmon - Laura.harmon@ggc.scot.nhs.uk based at QEUH Tel 0141 451 6018

Generic Vascular Nurse Email - ggc.vascularnursingacute@ggc.scot.nhs.uk

The Vascular team are able to do assess the wound and treat with compression therapy if appropriate.

Compression therapy

Compression therapy can help treat and prevent ulceration. Compression therapy may come in the form of bandages, socks or wraps.

The vascular team can assess the suitability of compression stocking which can then be followed up by district nurses in the community.

Further Considerations:

Osteomyelitis:

Consider X-raying the affected area to rule out bone involvement. An MRI scan may be needed to eliminate osteomyelitis. Signs of osteomyelitis include bone pain, fevers and increased pain.

Infection:

If there are any clinical signs of infection, the wound should be swabbed for culture and sensitivity. Results from the wound swab should be discussed with the Haematologist consultant and appropriate antibiotics commenced.

The patient's CRP and temperature should be monitored. If the patient has a high temperature over 38 degrees they should be admitted into hospital for intravenous anti-biotics and monitoring.

Pain management

Paracetamol, ibuprofen and co-codamol can be administered via ward one. Regular analgesia should be sourced via the patient's GP.

The medication management of Neuropathic pain should also be considered.

If the pain from the ulcer is severe or triggers sickle pain which is not responding to treatment at home the patient should be admitted to hospital for adequate analgesia and monitoring.

On-going management

The Haemoglobinopathy team should be contacted for the following:

- Concern of Osteomyelitis
- Wound bed deterioration including infection
- Increased pain or development of sickle pain

Hydroxycarbamide is used to treat sickle cell anaemia and may be stopped or reduced to aid healing time.

Zinc levels will be checked at Haemoglobinopathy clinic and supplementation suggested if levels are low.

Haemoglobinopathy contact numbers:

Haemoglobinopathy clinical nurse specialist

Bernadette Watters/ Corinna Wright (interim CNS for HBOP)

0141 201 6615 (ext 66615)

07896275458

Bernadette.watters@ggc.scot.nhs.uk / Corinna.wright@ggc.scot.nhs.uk

Prevention

It is important for patients with SCD to attend their Haemoglobinopathy clinic appointments were they will be reviewed by a Haematologist consultant to ensure their sickle cell disease is managed as well as it can be.

Footwear

Appropriate footwear is essential to prevent skin break down and aid healing. An orthotics referral may be appropriate.

Patient education is key prevention skin ulceration. Patients with SCD should be educated about good skin and foot care.

- Wear compression stockings
- Good skin care
- Elevation
- Diet & Exercise
- Avoid smoking

Skin assessment/daily examination – Patients should visually inspect their skin daily for any signs of skin breakdown. A mirror can be used to see the soles of your feet.

Skin on previously healed ulcers will be more fragile and may need extra protection to prevent further skin breakdown.

[Personal Footcare - The Knowledge Network: Scotland's source of knowledge for health and care](#)

Reference list:

Khatib, A. & Hayek, S. (2018) "Leg ulcers in sickle cell patients: management challenges" (Accessed: 22nd February 2023).

Staffnet (2023) Vascular and Leg Ulcer Services. Available at: [Vascular and Leg Ulcer Services \(scot.nhs.uk\)](https://www.scot.nhs.uk/vascular-and-leg-ulcer-services/)

NHS Education for Scotland (2023) Personal Foot care. Available at: [Personal Footcare - The Knowledge Network: Scotland's source of knowledge for health and care](https://www.nhs.uk/learning-and-development/education-for-scotland/personal-foot-care/)