



VASCULAR LIMB SALVAGE (VALS) CLINIC

at

GLENFIELD HOSPITAL

FOLLOW-UP PROTOCOLS

ABBREVIATIONS

ABPI	Ankle Brachial Pressure Index
CNS	Clinical nurse specialist
CTa	Computed Tomography Angiography
DFU	Diabetic foot ulceration
DUS	Duplex Doppler ultrasound
IDSA	Infectious Diseases Society of America
LVI	Leicester Vascular Institute
TBPI	Toe brachial pressure index
UHL	University Hospitals Leicester
VALS	Vascular Limb Salvage
VAR	Vascular administrator registrar
VASQOL	Vascular quality of life questionnaire
VS	Vascular scientist
VSU	Vascular studies unit
WiFi	Wound, ischaemia, foot infection score

1) INTRODUCTION

A) This document outlines the Follow-up protocol for **all** patients referred to the VaLS clinic and identified as having lower limb critical limb ischaemia.

This includes:

- I. All non-diabetic patients assessed/admitted/treated for critical limb ischaemia (CLI) to the Leicester Vascular Institute through the VaLS clinic referral pathway.
- II. All patients assessed/admitted/treated for diabetic foot ulceration with evidence of limb ischaemia through the VaLS clinic referral pathway. This is to include:
 - i. Patients with one (or multiple) occluded or stenosed lower limb artery(s) irrespective of whether or not revascularisation has been performed
 - ii. Patients with Aorto-iliac disease irrespective of whether or not revascularisation has been performed

B) Patients without diabetes referred to the VaLS clinic and subsequently identified as not having lower limb critical limb ischaemia will be followed up by the supervising vascular consultant (on-call consultant on the day of index review) in clinic at the discretion of the VaLS team.

C) Patients with diabetes referred to the VaLS clinic with a diabetic foot ulcer without evidence of underlying PAD will be followed up by the diabetic foot ulcer clinic and/or by the supervising vascular consultant (on-call consultant on the day of index review) at the discretion of the VaLS team.

2) STURCTURE OF VALS FOLLOW-UP PATHWAY

2.1) Timeline

A) Patients fulfilling criteria 1(A) will be offered follow-up clinic review at the following time points in their care pathway:

i. In Supervising Vascular Consultant Clinic

1. 6 weeks post-discharge

ii. In VaLS follow-up clinic review

1. 6 months post discharge

2. 12 months post discharge

3. 24 months & discharge

B) Patients requiring re-intervention during this timeline will reset their VaLS follow-up timeline to 2.1 A(i).

C) Patients for who a conservative initial management plan is instituted but undergo a subsequent revascularisation procedure will reset their VaLS follow-up timeline to 2.1 A(i).

D) Patients in who an ipsilateral major amputation is undertaken during follow-up will be discharged from further VaLS follow-up unless there is:

a. Evidence of contralateral critical limb ischaemia

b. Evidence of non-healing of amputation site due to ischaemia

E) In addition to VaLS follow-up clinic review patients, at the discretion of the VaLS team, may be reviewed in wound review clinics (GGH)

F) All patients with diabetic foot ulceration should also be referred to diabetic foot ulcer clinic (LGH) upon discharge.

2.2) Follow-up clinic assessment

2.2.1) Clinical Nurse Specialist/ Vascular Surgeon

All Patients seen within the VaLS follow-up clinic will be reviewed by a clinical nurse specialist or Vascular Surgeon. The following assessments & investigations will be undertaken and considered standard practice for all patients attending the VaLS assessment clinic:

- A. **VASQOL questionnaire:** All patients attending the VaLS follow-up clinic will be asked to complete a VASQOL questionnaire which will be provided to each patient upon registering at the VaLS clinic reception.
- B. **Clinical review & physical examination:** A history and physical examination will be performed and documented.
- a. **The clinical review will:**
- 1) Assess overall physical status of patient in conjunction with VASQOL questionnaire
 - 2) Assess best medical therapy has been instituted and continued;
BMT is defined as:
 - a. Appropriate anti-platelet medication or anti-coagulation
 - i. All patients with PAD should be started on clopidogrel 75mg ODS unless specifically contraindicated (See BNF) or advised otherwise by a supervising consultant.
 - b. HMG-CoA reductase inhibitors (statins) have been considered
 - c. Blood pressure medication where indicated
 - d. Patient has been offered STOP smoking programme information
- b. **The physical examination will include:**
- 3) Assessment of patient vital signs
 - 4) Clinical assessment of lower limb pulses
 - 5) Clinical assessment of leg/foot ulceration and gangrene as per ulcer/gangrene clinical examination protocol (see appendix 1)
 - 6) Calculation of the SINBAD score (see appendix 2)
 - 7) Clinical Frailty Scale score (see separate sheet)

C. Photographic documentation:

- a. All patients with leg/foot ulcers, gangrene or evidence of infection will have a photograph of the affected leg/foot undertaken to aid multidisciplinary team working and clinical decision making.
- b. Photographs will be stored on the VaLS secure shared drive
- c. Patients will be asked to sign a clinical photography consent form

2.2.2) Vascular Scientist Assessment Protocol

The following imaging assessments will be performed at each timing (2.1 A (i-iv)) for **all** patients attending the VaLS follow-up clinic who have undergone an **angioplasty or bypass revascularisation** procedure:

- a. **Duplex Doppler ultrasound** examination to confirm vessel/bypass patency
- b. **Ankle Brachial Pressure index** assessment unless:
 - i. ABPI assessment will compress an underlying bypass
 - ii. ABPI assessment will compress a crural vessel that has previously undergone angioplasty
 - iii. Calf ulceration prevents ABPI measurement
 - iv. Pain prevents ABPI measurement
 - v. Previous ABPI attempts have been unsuccessful as a result of incompressibility or other.
- c. **Documentation:** Documentation will be recorded on the Vascular Studies VaLS Assessment form in both written and diagrammatic representation

2.3) Follow-up clinic outcomes

- A. All patients meeting any of the following criteria should be discussed with the named responsible consultant **or** the on-call consultant surgeon or nominated deputy e.g. admin. SPR.
 - a. Patients who have undergone bypass:
 - i. Wound dehiscence or infection
 - ii. Seroma or pseudoaneurysm formation
 - iii. Graft or inflow/ouflow stenosis with $\geq 3x$ velocity increase
 - iv. VaLS CNS concerned over patients' progress
 - b. Patients who have undergone angioplasty
 - i. Puncture site pseudoaneurysm formation
 - ii. Vessel or inflow/ouflow stenosis with $\geq 3x$ velocity increase
 - iii. VaLS CNS concerned over patients' progress
 - c. Patients with ulceration or tissue loss
 - i. Evidence of new or deteriorating infection
 - ii. Evidence of new or deteriorating ulceration or tissue loss
 - iii. Evidence of systemic upset
 - iv. VaLS CNS concerned over patients' progress

- B. All patients attending the VaLS follow-up clinic should have a letter dictated regarding the review process that is copied in to the:
 - a. General Practitioner
 - b. Supervising Vascular Consultant
 - c. VaLS administrator
 - d. VaLS UOL research team

APPENDICES

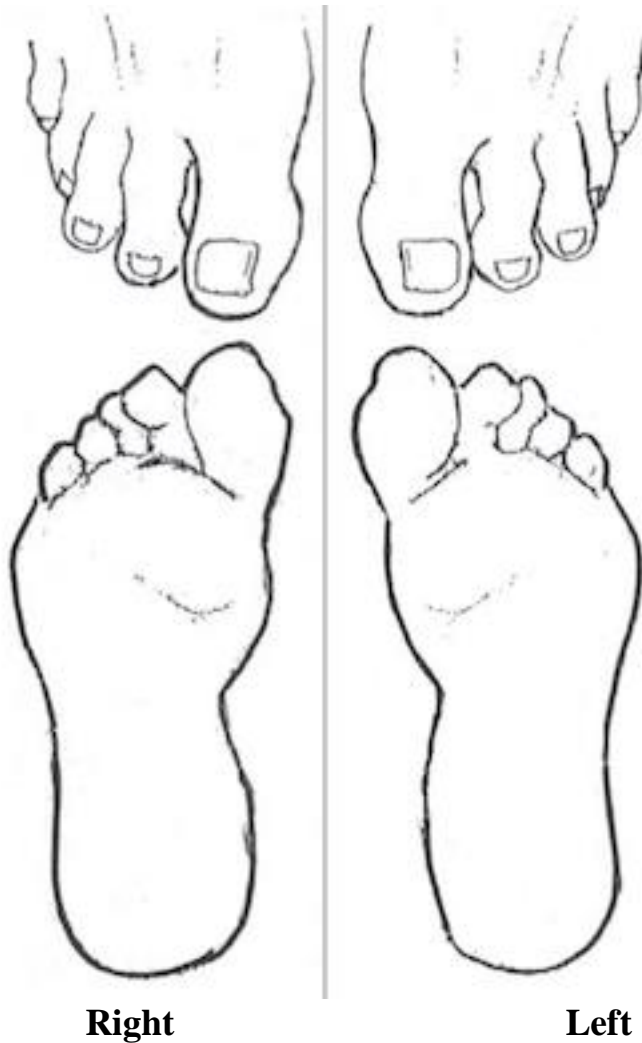
1) ULCER/GANGRENE ASSESSMENT

On the Foot diagram:

- a. Draw location of any ulcer and indicate:
 - i. note size of ulcer in cm
 - ii. note depth of ulcer
 - iii. Indicate if the ulcer is draining pus
 - iv. Does ulcer probe to bone

- b. Draw location of any cellulitis and indicate if spreading less or more than 2cm in length

- c. Draw location of any gangrene



2) SINBAD SCORE

Category	Definition	SINBAD Score
Site	Forefoot	0
	Midfoot and Hindfoot	1
Ischaemia	Pedal blood flow intact: at least one pulse palpable	0
	Clinical evidence of reduced pedal blood flow	1
Neuropath	Protective sensation intact	0
	Protective sensation lost	1
Bacterial Infection	None	0
	Present	1
Area	Ulcer <1cm ²	0
	Ulcer ≥1cm ²	1
Depth	Ulcer confined to skin and subcutaneous tissue	0
	Ulcer reaching muscle, tendon, or deeper	1
Total possible score		6