

Critical Conditions and Key Topics – Vascular Surgery

Vascular Surgery manages a large number of individual conditions as described in the syllabus. Assessment of a trainee's ability to manage these is through the supervision level decisions made when assessing the shared CiPs. Vascular Surgery also has a list of critical conditions and key topics which are felt to be of significant importance for patient safety and to demonstrate a safe breadth of practice. These critical conditions will be assessed individually by means of the Case Based Assessment (CBD) and Clinical Evaluation Exercise (CEX) which will both provide formative feedback to the trainee and feed into the summative assessment of the AES.

To ensure that trainees have the necessary skills in the critical conditions, by certification (the end of phase 3) there should be documented evidence in the portfolio of performance at the level of a day-one consultant by means of the CBD or CEX as appropriate (at level 4: *Appropriate for certification*. See CBD/CEX forms for the full list of levels).

The critical conditions are:

- 1) Acute Limb Ischaemia
- 2) Abdominal Aortic Aneurysms
- 3) Fulminant Diabetic Foot Sepsis

The key topics are:

- Assessment, resuscitation and management of patients with acutely ischaemic legs.
- Recognition of critical ischaemia and claudication in patients with peripheral vascular disease and knowledge of treatment option including angioplasty, stent and bypass techniques.
- Diagnosis and treatment of patients with acute upper limb ischaemia.
- Recognise and know the principles of treatment of patients with ruptured abdominal aortic aneurysms.
- Diagnosis and management, including operative management of abdominal and peripheral aortic aneurysms. Have knowledge of both open and endovascular repair of aortic aneurysms.
- Ability to diagnose and manage patients with femoral false aneurysms, and the application of this to plan management of all false aneurysms.
- Recognition and management of severe vascular infections, involving native vessels and synthetic grafts
- Recognition and management of patients presenting with diabetic foot tissue loss/ Infection and sepsis.
- Safely assess the multiply injured patient (ATLS course or equivalent)
- Identify and manage traumatic and iatrogenic vascular injuries
- Diagnosis and management of carotid artery disease including knowledge of when to use endovascular techniques.
- A basic knowledge of vascular access techniques and the treatment of arterio-venous malformations.

- Have knowledge of the techniques involved in renovascular surgical intervention.
- Recognition and management of patients with vasospastic and arteritic conditions of their upper and lower limbs.
- Have knowledge of both open and endovenous treatments for varicose veins and treat patients with varicose veins from start to finish
- Diagnosis and treatment of patients with lymphoedema.
- Have knowledge of the diagnosis and management of thoracic outlet syndrome.
- Know how to manage patients with hyperhidrosis
- Ability to assess published evidence in relational to clinical practice and ability to teach others

Index Procedures – Vascular Surgery

Vascular Surgery requires technical skills to be undertaken across a wide range of operative procedures as described in the syllabus. These are generally groups of procedures which are common and/or are seen as representing important areas of technical expertise. The assessment of a trainee's ability to carry out this full range of procedures is covered by the supervision level decisions made when assessing the CiPs. These assess not only the necessary technical skills but the totality of capabilities required to carry them out. Vascular Surgery also has a list of index procedures, which are felt to be of significant importance for patient safety and to demonstrate a safe breadth of practice.

The index procedures will be assessed individually by means of the PBA which will both provide formative feedback to the trainee and feed into the summative assessment of the AES and ARCP. The competency in these procedures should be developed through both Phase 2 and 3 of training.

By certification (the end of phase 3) there should be documented evidence of performance at the level of a day-one consultant for the index procedures to competence level 4 in the PBA.

PBA Level 4:

a: Procedure performed fluently without guidance or intervention

b: As 4a and was able to anticipate, avoid and/or deal with common problems/complications (see PBA form for the full list of levels).

The PBA numbers are an indicative guide for both trainees and trainers as to the case numbers that give an indication of competence as trainees would not normally be expected to have achieved sufficient experience to be able to manage the range of pathology they encounter unless these numbers were met. It is recognised that competence could be achieved with fewer cases, if supported by evidence from other assessments. Meeting the numbers does not, in itself, imply competence.

The index procedures and indicative numbers are:

Aortic aneurysm

- Open Aortic Procedures – 10 PBAs that show progression to competence. To include four at level 4 by at least two trainers

(To include Open repair of Elective AAA at level 4 and Ruptured AAA at level 3)

- Collaborative Endovascular Aortic Procedures -10 PBAs that show progression to competence. To include four at level 4 by at least two trainers

(To include Endovascular repair of Elective AAA at level 4 and Ruptured AAA at level 3)

Carotid endarterectomy – 10 PBAs that show progression to competence. To include four at level 4 by at least two trainers

Common Femoral Arterial Surgery - 10 PBAs that show progression to competence. To include four at level 4 by at least two trainers

Inclusive of:

- Common Femoral artery exposure, endarterectomy and patch / graft anastomosis –to level 4
- Redo – Groin Surgery
- Combined Open with Endovascular Revascularisation (COWER)- to level 4 as part of Collaborative delivery

Infra Inguinal bypass surgery – 10 PBAs that show progression to competence. To include four at level 4 by at least two trainers

Inclusive of:

- Above Knee popliteal exposure and anastomosis
- Below knee popliteal exposure and anastomosis
- Calf vessel run exposure and anastomosis
- Pedal vessel exposure and anastomosis
- Popliteal artery exclusion bypass

Endovascular – 10 PBAs that show progression to competence. To include four at level 4 by at least two trainers

Inclusive of:

- Perioperative Endovascular (DSA) imaging interpretation and management
- Angioplasty / Stenting of a luminal SFA/ Iliac stenosis.
- Over the wire balloon thrombectomy cases

Emergency Vascular Surgery – 10 PBAs that show progression to competence. To include four at level 4 by at least two trainers

Inclusive of:

- Femoral and Brachial Embolectomy
- 4 compartment fasciotomy
- Control and repair false femoral artery aneurysm

Amputation and Debridement 10 PBAs that show progression to competence. To include four at level 4 by at least two trainers

Inclusive of:

- Digital amputation and or – Drainage of Diabetic Foot Sepsis at level 4
- Major amputation (Inclusive of Above/ Through and Below Knee) at level 4

Varicose vein surgery- 10 PBAs that show progression to competence. To include four at level 4 by at least two trainers

Inclusive of:

- Sapheno-femoral and sapheno-popliteal ligation.
- Endovenous LSV and SSV ablation
- Foam injection sclerotherapy

Vascular access – 10 PBAs that show progression to competence. To include four at level 4 by at least two trainers

Inclusive of:

- Primary AV fistula at wrist/upper arm
- Revision of failed AV fistula

General Surgery– 10 PBAs that show progression to competence. To include four at level 4 by at least two trainers

Inclusive of:

- Open and Close Laparotomy – at level 4
- Emergency Control (packing) of intra-abdominal haemorrhage
- Division of Adhesions
- Colonic mobilisation to allow Vascular Control