Specialty Induction in Vascular Surgery

There is a recognised need for induction into specialty training, the benefits of which have been clearly described.

This proposed curriculum change would require Vascular Surgery trainees to receive specialty specific induction at the start of their specialty training.

The proposed content of this induction has been piloted on all appointees to Vascular Surgery since 2013.

Aims of Specialty Induction in Vascular Surgery

The general aims are to:

1) prepare trainees in Vascular Surgery to be able to interact with, assess and treat patients with vascular disease in a safe and professional manner

2) prepare trainees in Vascular Surgery to be able to maximise every training opportunity by teaching them the basic, generic skills and capabilities.

The specific aims are to:

1) give a full explanation of the syllabus

2) provide instruction in the use of Workplace Based Assessments

3) provide instruction in the use of the Intercollegiate Surgical Curriculum Programme (ISCP) to build an on line portfolio

4) provide an introduction to and instruction in the important basic clinical capabilities required in Vascular Surgery - generic vascular patient assessment - generic vascular treatment principles - generic vascular ultrasound skills - generic endovascular skills - generic open vascular surgery skills - generic professional capabilities required in vascular surgery to manage ward patients, emergency admissions, out patient clinics and operating lists

5) provide instruction in the use and findings of the National Vascular Registry – the surgical outcomes system used nationally in vascular surgery.

Timing of Specialty Induction in Vascular Surgery

Trainees appointed to Vascular Surgery training programmes at ST3 will be expected to receive this induction early in their specialty training.
**Detailed Learning Outcomes**

1) Training structure and governance

Trainees should understand and be able to describe:

a. An overview of the curriculum and syllabus
b. The use of Workplace Based Assessments, logbook and ISCP web portfolio
c. The National Vascular Registry
d. The principles of Radiation Protection
e. The importance of career planning
f. The place of academic vascular surgery.

A number of teaching methods are available to achieve these outcomes. Pilot work has shown the success of small group discussion.

2) Clinical skills in patient assessment and treatment

Trainees should be able to describe the important aspects of patient assessment in, and treatment for, the following conditions:

a. Ruptured aneurysm
b. Acute ischaemia
c. Vascular trauma
d. Haemorrhage
e. Carotid disease
f. Critical ischaemia
g. Varicose veins
h. Vascular access for haemodialysis.

A number of teaching methods are available to achieve these outcomes. Pilot work has shown the success of small group discussion using simulated patient scenarios.

3) Consent for vascular procedures

Trainees should understand the general principles involved in taking informed consent. Trainees should understand and be able to describe the principles of common vascular interventions along with their risks and benefits. A number of teaching methods are available to achieve these outcomes. Pilot work has shown the success of small group discussion using simulated patient scenarios.

4) Impact of human factors on patient safety

Trainees should understand how human behaviour and factors may impact on patient safety and how to mitigate against these. Trainees should be able to describe the key non-technical skills in surgery and how situational awareness, decision making, communication, teamwork and leadership all interact. A number of teaching methods are available to achieve these outcomes. Pilot work has shown the success of small group discussion.
5) Technical skills in patient assessment and treatment Trainees should be able to describe the key principles of, and have the opportunity to start learning and practicing the skills involved in, the following:

a. Generic Vascular Ultrasound Skills (see Annex 1 for more detail)
   i. B mode ultrasound, spectral Doppler and colour duplex
   ii. aortic ultrasound
   iii. ultrasound guided vascular access.

b. Generic Endovascular Skills (see Annex 1 for more detail)
   i. the safe use of guidewires, sheaths and catheters
   ii. the exchange principle
   iii. available intervention options
   iv. cannulation for access
   v. guidewire manipulation
   vi. angiography
   vii. angioplasty.

c. Generic Open Vascular Surgery Skills
   i. patch angioplasty
   ii. end to side anastomosis
   iii. proximal aortic anastomosis.

A number of teaching methods are available to achieve these outcomes. Pilot work has shown the success of simulation training using a combination of jigs and live models.

Assessment

The intention of specialty induction is to provide an introduction to the key principles involved in the specialty and to prepare trainees for future learning opportunities. As such, there will be no summative assessment directed at the specific learning outcomes. It is anticipated that achievement of the learning outcomes will feed into improved learning which will be assessed through the usual ARCP process.

Formative assessment and structured feedback should be integrated into the teaching methods employed during the induction process. Existing Workplace Based Assessments may be used where appropriate.

Evidence to Support the use of Induction and Simulation in Teaching

There is a significant body of evidence to support the use of simulation in surgical and endovascular training. Induction has been shown to be an effective educational strategy to improve trainees' clinical skills, knowledge and confidence. Cognitive test results in training have been shown to correlate with the American Board of Surgery In-Training examination scores.
Annex 1

Generic Vascular Ultrasound Skills
Ankle Brachial Pressure Indices and waveform interpretation
Able to choose the appropriate ultrasound probe
Able to optimize grey scale imaging
Able to optimize colour flow imaging
Able to optimize pulsed wave settings
Able to perform superficial venous ultrasound studies
Able to screen for AAA and measure the AP diameter
Hand-held Doppler assessment of varicose veins
Percutaneous puncture of saphenous vein under US control
Percutaneous puncture of femoral artery under US control.

Generic Endovascular Skills
Ultrasound guided arterial and venous puncture
Obtains secure vascular access with sheath, flushes catheters and sheaths appropriately
Positions guidewire using fluoroscopy and places non-selective catheter in aorta
Obtain satisfactory intra-operative angiograms
Chooses appropriate equipment e.g. catheter, sheath, guidewire, balloon, stent
Perform selective catheterization
Manipulate catheter and wire across stenosis
Performs balloon angioplasty in various vascular territories
Performs primary stenting in various vascular territories.
References


