

Tips for GP trainees working in vascular surgery

Vascular surgery as a specialty involves the investigation and surgical management of patients suffering disease of their arterial, venous, or lymphatic circulations. While the presentation of a patient with a ruptured abdominal aortic aneurysm (AAA) or acutely ischaemic limb is certainly frightening and stressful, your first actions are always the same — get senior help now! On the other hand, elective vascular patients tend to be older with multiple comorbidities and the elective management of their chronic illness is fraught with difficulties. Experience in vascular surgery can be useful not only in terms of learning to manage emergency presentations and acutely unwell patients, but also to practice the skills of risk-benefit analysis, effective communication, and the multifactorial issues that arise in the management of any chronic disease process.

The following tips hopefully will offer some useful advice, whether you happen to find yourself caught up in the A&E department or scratching your head in clinic.

THE BASICS

1. Vascular patients have multiple comorbidities, and tend to be older. This complicates their management.
2. Risk factors for vascular disease and the disease processes are the same as for coronary artery, renal artery, and cerebrovascular disease; the arteries are just in a different location.
3. Address the risk factors: advise smoking cessation, control blood pressure to 140/90 mmHg, start aspirin/clopidogrel and simvastatin 40mg/day even if cholesterol levels are normal (unless contraindicated).

THE PATIENTS

4. AAA may be common in a vascular clinic, but it is still a scary diagnosis for the patient. This is particularly true when your management plan is 'surveillance'.

Pre-empt their concerns and thoroughly explain the risk/benefit balance to allay their fears.

5. It is easy to become embroiled with the pathology and degree of stenosis as a cut off for treatment. Try to avoid this and focus on patient symptoms and the impact it has on their lifestyle.
6. Vascular patients are all 'high risk'. As debilitated as they are by their disease, any intervention comes with the risk of loss of life or limb. Sometimes, conservative management is the best course of action.
7. Patients with ulcers/ischaemia who need debridement and possible amputation can find this hard to accept, particularly if they are diabetic and don't have any pain. Painting a bleak picture, with the utmost honesty is sometimes the only way to convey the importance of treatment.

PERIPHERAL VASCULAR DISEASE (PVD)

8. Revise the vascular examination and ankle-brachial pressure index (ABPI) procedure and interpretation.
9. Be sure to document colour and appearance of skin (pale, shiny, hairless) and presence of any ulcers or gangrene, warmth, capillary refill time, and pulses. If you cannot palpate a pulse always listen for it with a Doppler. Examine pulses from proximal to distal and compare the sides.
10. Key details in the history of PVD consists of claudication distance, distribution of pain, and presence of rest pain or tissue loss/ulceration.
11. Claudication is a crampy pain sensation usually felt on exertion. It is not a dangerous symptom and can be treated with medical therapy, risk factor modification, and exercise.
12. Claudication can be neurogenic in origin, for example secondary to spinal canal

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stenosis. Generally this pain is slower to resolve on resting and is especially relieved by sitting.

13. Chronic limb ischaemia (claudication ± ulceration) is not an emergency, it needs a potentially urgent clinic referral not an on-call assessment.
14. Critical limb ischaemia on the other hand (rest pain and tissue loss/gangrene) is an emergency and needs referral to the on-call team to prevent deterioration resulting in amputation.
15. Beware of patients with diabetes. They can suffer microvascular disease such that, despite normal large vessels, they may progress through to end-stage PVD with resulting tissue loss and ulceration. Clinical examination can be misleading with elevated ABPI's and palpable pulses despite critical lesions.
16. Don't give patients with peripheral artery disease compression stockings.

ACUTE LIMB ISCHAEMIA

17. Remember that the six Ps (pain, pallor, pulseless, paraesthesia, paralysis, and perishingly cold) equate to acute limb ischaemia. This is an emergency and senior help should be immediately sought; you have only 4–6 hours to save the limb so don't wait for them to finish clinic or their theatre list.
18. If acute ischaemia could be due to embolism (atrial fibrillation, no history of claudication), heparinise. Once the problem is resolved, find the embolic source. This is often the heart so obtain an echocardiogram, but do not forget about AAA.
19. *In situ* thrombus is also a potential aetiology in acute limb ischaemia, and tends to occur on a background of PVD; that is, claudication. Aortic dissection is a rarer cause.

ANEURYSMS AND DISSECTIONS

20. Examine leg pulses in known AAAs: other distal aneurysms (popliteal) or PVD can coexist.
21. Consider a ruptured AAA in patients with sudden onset abdominal pain. Especially when they are over the age of 50 years with a first presentation of 'renal colic'.
22. A patient with a ruptured AAA should be resuscitated to a blood pressure that allows cerebral perfusion (talking); anything higher can exacerbate bleeding and prevent tamponade (permissive hypotension).

23. A post-operative complication after AAA repair is abdomen compartment syndrome. A quick bedside test for this is lifting the catheter above the bed. If urine doesn't flow back then the abdominal pressure may be raised.

24. If patients with a known AAA complain of abdominal or back pain they should be referred for assessment: a symptomatic AAA is at higher risk of rupture.
25. A dissecting aorta can present in many different ways from a pain in the chest (ascending aorta), jaw (aortic arch), and the interscapular area (descending aorta), down to the abdomen and even the groin. A dissection that involves the aortic root may also cause ECG changes, so beware the patient who is suffering an 'MI' who just happens to have an ischaemic limb.

VENOUS DISEASE

26. Varicose veins can only be operated on if the deep veins are competent; a history of DVT or lower limb/pelvic fractures may contraindicate surgery.
27. Skin changes in venous insufficiency follow the sequence of varicose veins, bleeding/phlebitis, haemosiderin deposition, lipodermatosclerosis, and finally, venous ulcers.
28. Patients should always be warned that any varicose vein operation may have a poor aesthetic result: manage their expectations accordingly.
29. Superficial thrombophlebitis is a painful, localised phenomenon which can mimic DVT or cellulitis.

OTHER CONDITIONS

30. Consider acute mesenteric ischaemia in patients with severe abdominal pain, a relatively normal abdominal examination and very high white cell counts. Chronic mesenteric ischaemia often presents vaguely with weight loss and postprandial abdominal pain.
31. Treatment of lymphoedema should focus on leg elevation, skin hygiene, weight loss, and compression garments. Diuretics have no place in the management of lymphoedema.
32. Symptomatic carotid disease (transparent ischaemic attack or stroke affecting the carotid territory on the contralateral side) with a stenosis 50–99% should be considered for a carotid endarterectomy. This should ideally be done within 2 weeks of the symptomatic event.

Provenance

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