Vascular SAQs

1. A 68 year old man is brought in by ambulance following a syncope with acute low back pain. BP 90/65. HR 75/min.

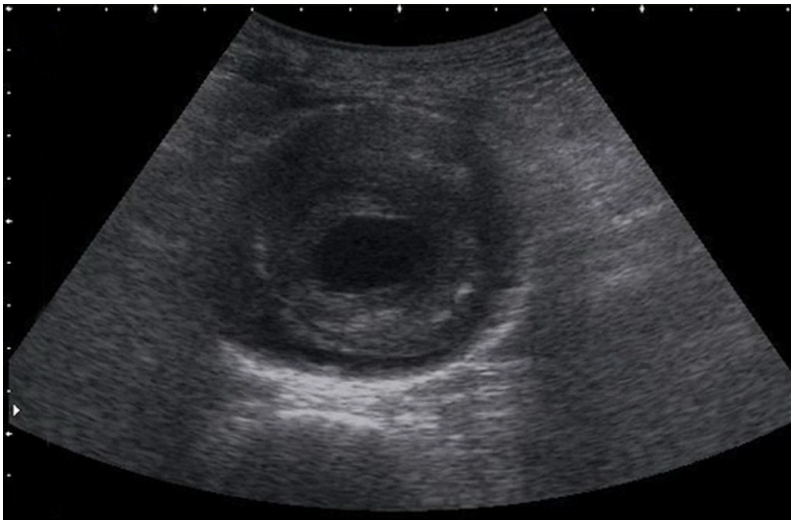
a) List the four most common misdiagnoses given for ruptured abdominal aortic aneurysm (AAA).

Renal Colic
Diverticulitis
Musculoskeletal back pain
Pancreatitis

b) List six risk factors for abdominal aortic aneurysm.

Age >65
Male
Smoker
Atherosclerosis
Hypertension
Family history

You place an ultrasound probe on this man's abdomen and obtain this image.



c) List six principles of your management of this patient

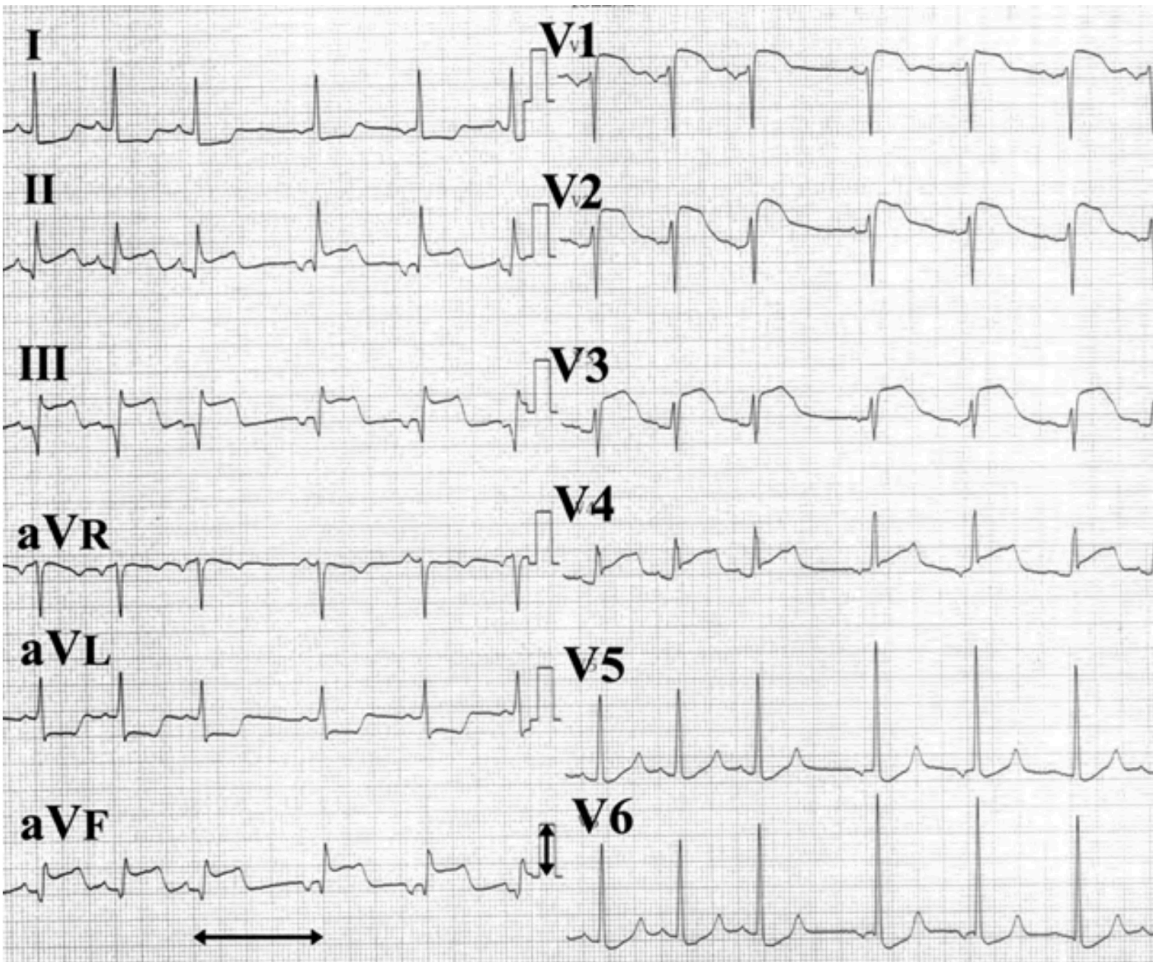
Vascular/ surgery involved urgently
Code crimson – Minimise delays in ED in order to move to OT
Vascular access – Can be done in OT
Massive transfusion protocol commenced with blood warmer
Permissive hypotension – SBP does not need to be more than 90mmHg

Airway management – Preoxygenation, NBM, intubation can precipitate cardiovascular collapse – can be done in OT while surgeons prep the abdomen
Contact next of kin – consider surgical Vs palliative management

You are aware that mortality is high for patients with a ruptured AAA. What six features indicate an even poorer prognosis.

Hypotension
Advanced age >80
Cardiac arrest
Creatinine >110mmol/L
Ischaemic heart disease
Female gender

2. A 63-year-old man is brought in by ambulance acutely confused and agitated. He had been playing tennis when he complained of chest pain and then became further distressed.
   On arrival, he is agitated and unable to give an account of what had happened.
   HR 110/min BP 180/100 Sats 97% RA Afebrile.
   Small aliquots of intravenous sedation are administered to facilitate examination and make the patient more comfortable.
   You are then able to obtain the ECG below.



What five investigations would you want to now do in this patient and why.

CXR	*May show wide mediastinum from dissection*
Formal bedside ECHO	*If RCA occluded from dissection, the dissection could be visible on ECHO, also detects complications of dissection such as aortic regurgitation and cardiac tamponade*
CT brain	*Acute confusion may be from ICH or cardiac emboli but also dissection affecting carotids and causing cerebral ischaemia*
CT angiography	*To delineate dissection*
TOE	*If unable to do CT – patient too unstable*
Coronary angiogram	*If there was no evidence of dissection, PCI for STEMI would be indicated*

3. A 70 year old diabetic presents with painful ulceration of the left foot. A photo of which is shown

a) List 4 positive findings in the photo

- *Paucity of hair seen on visible skin distally*
- *Deep large heterogenous*
- *Necrotic tissue distally*
- *Non-viable 5th toe*
- *Oedematous remaining toes indicative of inflammatory changes/peripheral oedema*
- *Skin atrophy*

b) Complete the following table outlining two thrombotic and two embolic causes of arterial occlusion: (4 marks)

Thrombotic	Embolic
Atherosclerosis	*AF*
IVDU	*Mural thrombus secondary to MI*
Trauma	*Aneursymal thrombus emolising*
Aneurysmal thrombus formation	*Paradoxical embolic event*

This table taken from Tintinalli 9th ed.

c) Buerger's test (3 marks)

- *patient supine*
- *lift both legs high, keep knees straight, more than 30 cm above level of right atrium*
- *any change in colour of feet noted*
- *if no colour change, flex and extend ankles and toes 5 - 6 times*
- *latent colour changes induced by exercise are noted*
- *if arterial supply defective, sole of foot becomes pale, veins on dorsum of foot empty*
- *lower feet, and patient adopts sitting position*

- normal colour should return within 10 seconds veins should fill within 15 seconds

- if a ruddy, cyanotic hue spreads over affected foot within 2-3 minutes, this suggests major lower limb artery occlusion

d) What ankle brachial pressure index would you expect in this patient?

- *< 0.2 = gangrenous specifically*