



Questions for this month's clinical challenge are based on articles in this issue. The style and scope of questions is in keeping with the multiple choice questions of the RACGP Fellowship exam. The quiz is endorsed by the RACGP Quality Improvement and Continuing Professional Development Program and has been allocated 4 Category 2 points per issue. Answers to this clinical challenge are available immediately following successful completion online at www.gplearning.com.au. Clinical challenge quizzes may be completed at any time throughout the 2011–13 triennium, therefore the previous months answers are not published.

Melissa Tan

Single completion items



DIRECTIONS Each of the questions or incomplete statements below is followed by five suggested answers or completions. Select the most appropriate statement as your answer.

Case 1

George Nikolaidis

George, aged 67 years, has an asymptomatic 5.2 cm abdominal aortic aneurysm.

Question 1

Regarding aneurysms, which of the following is **CORRECT**:

- A. AAAs of this size generally expand by an average of 5–6 mm per year
- B. aneurysms are arteries that have enlarged to greater than twice their expected diameter
- C. incidental AAAs are found in 10–12% of patients over the age of 65 years
- D. patients with aneurysms should avoid physical activity due to risk of rupture
- E. screening for aneurysms in men aged over 65 years reduces aneurysm-related mortality.

Question 2

In regards to George, which of the following is **CORRECT**:

- A. CT angiography is the modality of choice for surveillance of large AAA
- B. digital subtraction angiography is important to determine aneurysm morphology
- C. elective endovascular repair is recommended for long term survival benefit
- D. risk of rupture for aneurysms of this size is between 1% and 10% over 12 months
- E. surveillance is recommended every 6 months for aneurysms of this size.

Question 3

Which of the following is **INCORRECT** regarding interventional management of aneurysms:

- A. endovascular aneurysm repair requires lifelong postoperative surveillance every 24 months
- B. endovascular repair has a higher risk of delayed complications as compared to open repair
- C. endovascular repair is associated with less postoperative pain compared to open repair
- D. perioperative mortality associated with open elective AAA repair ranges from 1–8%
- E. the term 'endoleak' refers to flow outside of the stent graft, but within the aneurysm sac.

Question 4

Which of the following is **CORRECT** regarding aneurysms:

- A. aneurysms expanding more than 5 mm per year warrant surgical referral
- B. iliac artery aneurysms should be referred if they exceed 2 cm in diameter
- C. in patients aged <50 years, aneurysms <4 cm require surveillance every 5 years
- D. risk of aneurysm rupture in AAA >7 cm is between 30–50%
- E. the presence of mural thrombus associated with AAA warrants urgent surgical referral.

Case 2

Rachel Salisbury

Rachel, 39 years of age, is a receptionist. She has significantly tortuous varicose veins that are not causing pain. Examination reveals no ankle swelling, eczema or skin pigmentation. Pedal pulses are faint, but weakly present. She has a BMI of 32.

Question 5

Regarding the aetiology of varicose veins, which of the following is **CORRECT**:

- A. evidence has shown that crossing of the legs reduces venous return, causing venous dilation
- B. previous deep vein thrombosis is associated with varicose vein development
- C. the majority of varicose veins are associated with a loss of elasticity in vein walls
- D. there is equivocal evidence regarding the role of genetic inheritance in varicose veins
- E. varicose veins are strongly associated with incompetent sapheno-femoral junctions.

Question 6

Which of the following is the most appropriate management of Rachel's presentation:

- A. compression stockings are recommended in the first instance
- B. endoluminal treatment is reasonable in this setting
- C. public hospital referral is indicated in young patients for early management
- D. reassurance is most appropriate for Rachel's presentation
- E. surgical treatment is recommended in patients with obesity.

Question 7

Regarding minimally invasive varicose vein treatments, which of the following is **CORRECT**:

- A. different minimally invasive treatments have equivalent rates of superficial phlebitis
- B. 1 in 5 patients may develop new varicosities within 1 year of radiofrequency ablation
- C. endoluminal treatments are not recommended for varicose veins >2 cm
- D. endovenous laser therapy is associated with less postoperative pain than sclerotherapy
- E. sclerotherapy is generally more expensive than other minimally invasive treatments.

Question 8

Regarding open surgery for varicose veins, which of the following is **INCORRECT**:

- A. advancements in surgical techniques have resulted in reduced scarring
- B. gentle handling of groin incisions can reduce the recurrence of varicosities
- C. open surgery can be performed under sedation with local anaesthesia
- D. the completeness of surgery can be assessed intra-operatively using duplex ultrasound
- E. the long term outcomes of surgery are equivalent to minimally invasive procedures.

Case 3**Anita Kim**

Anita, 34 years of age, has an incidentally found splanchnic artery aneurysm.

Question 9

Regarding splanchnic artery aneurysms, which of the following is **CORRECT**:

- A. aneurysms >2 cm in diameter should be referred for early surgical repair
- B. lifetime risk of rupture of splanchnic artery aneurysms is typically low
- C. risk factors for splenic artery aneurysms include cyclical vomiting and pregnancy
- D. splanchnic artery aneurysm repair is contraindicated in pregnant women
- E. young patients with small splanchnic aneurysms should have yearly surveillance.

Question 10

Anita has a family history of connective tissue disease. You screen her for other aneurysms and detect a renal artery aneurysm. Which of the following statements regarding renal artery aneurysms is **CORRECT**:

- A. hypertension is poorly associated with renal artery aneurysms
- B. open surgery has superior long term outcomes compared to endovascular repair
- C. renal artery aneurysms are bilateral in the majority of patients
- D. renal artery aneurysm rupture in males has a mortality rate of 55–70%
- E. women of fertile age with renal artery aneurysms should be referred for urgent repair.

Question 11

Anita brings in her father, Sung-Hyun, who has developed a groin mass after an angiogram. Regarding false aneurysms of the femoral artery, which of the following is **CORRECT**:

- A. false aneurysms most commonly present as painless, pulsatile, expanding masses
- B. false aneurysms consist of the intima, media and adventitia arterial wall layers
- C. peripheral circulation should be assessed, as distal ischaemia is a common complication
- D. progressive aneurysm enlargement can cause overlying skin ischaemia and necrosis
- E. rupture is a common occurrence, as false femoral aneurysms can rapidly expand.

Question 12

Which of the following statements is **CORRECT** regarding true aneurysms:

- A. 50% of patients with aortic aneurysms also have a femoropopliteal aneurysm
- B. all patients with arterial aneurysms should be screened for other aneurysms
- C. femoral artery true aneurysms are bilateral in approximately 10% of patients
- D. popliteal aneurysms should be referred early due to their high risk of rupture
- E. the most common true lower limb aneurysm are femoral artery aneurysms.

Case 4**Michelle O'Malley**

Michelle, 55 years of age, is a teacher. She has elevated blood pressure readings. You organise ambulatory blood pressure monitoring.

Question 13

Regarding white coat hypertension, which of the following is **CORRECT**:

- A. patients with white coat hypertension can be reassured that this condition is benign
- B. smokers with borderline hypertension are more likely to have white coat hypertension
- C. there is an increased risk of diabetes associated with white coat hypertension
- D. there is no significant difference in prevalence of white coat hypertension between genders
- E. white coat hypertension should be confirmed with repeat ambulatory monitoring within 12 months.

Question 14

Which of the following does **NOT** meet the Heart Foundation recommendations for ambulatory blood pressure monitoring:

- A. patients with newly discovered hypertension with no evidence of end-organ damage
- B. patients with suspected syncope or orthostatic hypertension
- C. patients with worsening end-organ damage despite adequate office BP readings
- D. pregnant women found to have elevated office BP measurements
- E. young patients with a family history of hypertension with elevated BP readings.

Question 15

Michelle brings in her husband, Paul, who has poorly controlled hypertension, despite taking three medications. Regarding resistant hypertension, which of the following is **CORRECT**:

- A. amiloride at a dose of 25 mg/day has demonstrated efficacy for resistant hypertension
- B. hydrochlorothiazide has superior efficacy to chlorthalidone in managing hypertension
- C. spironolactone is used in resistant hypertension, but efficacy has not been demonstrated
- D. taking at least one antihypertensive at night can improve cardiovascular mortality in diabetics
- E. there is evidence to support the efficacy of liquorice root in resistant hypertension.

Question 16

Paul presents with bilateral calf pain, suggestive of peripheral arterial disease (PAD). Regarding the treatment of PAD, which of the following is **CORRECT**:

- A. aspirin is associated with a reduction in vascular events in all patients with PAD
- B. indications for surgical referral include 3 months of failed medical management
- C. cilostazol is a new medication, available on the PBS, which improves walking distance in patients with PAD
- D. ramipril has not been shown to improve pain-free walking time or walking distances in patients with PAD
- E. supervised exercise programs achieve longer lasting outcomes than endovascular treatment.