



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 MCQ of the College Fellowship exam. The quiz is endorsed by the RACGP Quality Assurance and Continuing Professional Development Program and has been allocated 4 CPD points per issue. Answers to this clinical challenge will be published next month, and are available immediately following successful completion online at www.racgp.org.au/clinicalchallenge. Check clinical challenge online for this month's completion date.

Rachel Lee

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 – Phillip Block

Phillip Block, 19 years of age, is a football player who presents embarrassed about his sweaty, smelly feet.

Question 1

You consider a diagnosis of primary palmoplantar hyperhidrosis. Which of the following statements is a common diagnostic criteria:

- A. asymmetrical presentation – dominant side usually more affected
- B. persistence of sweating even during sleep
- C. persistence of sweating beyond 6 months
- D. onset typically after the age of 25 years
- E. does not impair daily activities.

Question 2

You consider investigation in Phillip's case. Which of the following is true about appropriate investigations:

- A. no investigations are necessary in typical cases
- B. thyroid function tests are required in all cases
- C. full blood count and examination is required in all cases
- D. chest X-ray is required in all cases
- E. B and C are both correct.

Question 3

You also consider a diagnosis of pitted keratolysis. Select the appropriate statement about this condition:

- A. small pits are often present on the nail beds
- B. there is often a characteristic 'cheesy' smell
- C. it is due to a fungal infection of the stratum corneum
- D. it is due to infection with *Mycobacterium sedentarius*
- E. it is unrelated to the diagnosis of palmoplantar hyperhidrosis.

Question 4

Phillip wants to know about the treatment options for palmoplantar hyperhidrosis. You discuss this with him and explain:

- A. antibacterial wash is a first line treatment
- B. antiperspirants are effective in the majority of cases
- C. iontophoresis provides adequate symptom control if performed weekly
- D. botulinum toxin injection is well tolerated
- E. surgical management may be complicated by compensatory hyperhidrosis.

Case 2 – the Babic family

The Babic family come to see you as they all have persistent sore feet.

Question 5

Elena, 11 years of age, has heel pain exacerbated by activity. Select the best statement about her pain:

- A. calcaneal traction apophysitis is likely and should soon resolve with apophysial closure
- B. the possibility of osteochondrosis can be confidently excluded by plain X-ray
- C. an 'accessory navicular' is unlikely as this is typically worse at rest
- D. tarsal coalition results in limited eversion of the ankle
- E. immature posture contributes to pain such as Elena's until after the age of 12 years.

Question 6

Ana, 32 years of age, is a regular cross country runner and has increasing pain in the ball of her foot. You consider bone stress as a diagnosis. Select the most accurate option:

- A. X-ray is often normal and therefore should not be ordered in this case
- B. sesamoiditis can be readily managed with steroid injection
- C. internal fixation is required for most forefoot stress fractures
- D. Jones fractures are prone to delayed healing
- E. bone scan is the first line imaging to delineate the severity of fracture.

Question 7

Ana later develops low tendon pain and you diagnose Achilles tendinopathy. You explain:

- A. X-ray is not indicated for Ana
- B. anti-inflammatory medications are rarely helpful
- C. strengthening is the mainstay of treatment
- D. offloading with a Cam walker or cast is a critical part of treatment
- E. topical glyceryl trinitrate is a first line treatment.

Question 8

Mato, 36 years of age, has plantar heel pain. Which of the following is accurate in regards to the possible diagnosis of plantar fasciitis:

- A. 'tiptoe' bouncing does not induce pain

- B. pain is typically worse at night
- C. palpation is usually clearly diagnostic
- D. 'gel pain' typically occurs with first 'foot to floor'
- E. X-ray demonstrating 'heel spur' is not diagnostically significant.

Case 3 – Olivia Chang

Olivia Chang, 61 years of age, is a typist who you see regularly. She has noticed problematic tremor.

Question 9

Olivia is concerned about the possibility of Parkinson disease. Select the correct statement about parkinsonian tremor:

- A. it is typically a high frequency rest tremor
- B. it does not involve the head or face
- C. there may be a postural tremor after a latent period
- D. there may be a postural tremor immediately after adopting a new posture
- E. the tremor improves with propranolol.

Question 10

You consider Olivia may have essential tremor. Select the correct statement:

- A. essential tremor is usually asymmetrical
- B. essential tremor can be postural or kinetic
- C. essential tremor is exacerbated by alcohol
- D. essential tremor can be caused by propranolol
- E. the incidence of essential tremor reduces with age.

Question 11

You consider the possibility of cerebellar tremor. Select the correct statement:

- A. cerebellar tremor is a pure rest tremor with low frequency
- B. cerebellar tremor is regular in amplitude
- C. cerebellar tremor is typically unilateral
- D. cerebellar tremor is always associated with other cerebellar signs
- E. cerebellar tremor is usually absent at rest.

Question 12

You consider the possibility of drug induced tremor. Select the correct statement:

- A. caffeine typically produces an intention tremor
- B. metoclopramide typically produces a postural tremor
- C. lithium typically produces a tremor at rest
- D. neuroleptics typically produce a rest tremor
- E. thyroid hormones typically produce a rest tremor.

Case 4 – Joe Boffa

Joe Boffa, 48 years of age, is a road worker who you treat for carpal tunnel syndrome. His work involves jack-hammering and re-laying asphalt.

Question 13

Select the most correct statement about carpal tunnel syndrome (CTS):

- A. CTS is 4–5 times more common in males
- B. CTS involves the dominant hand

- C. the pain and numbness of CTS will not radiate past the elbow
- D. CTS is most common in the 20–40 years of age group
- E. most cases of CTS are constitutional in origin.

Question 14

You consider if Joe's CTS is occupational. Which of the following is NOT a key risk for work related CTS:

- A. work in hot environments
- B. high range wrist action
- C. use of hand held vibratory equipment
- D. extreme wrist extension
- E. frozen food work.

Question 15

There are several contributing metabolic and endocrine factors for CTS. Which of the following is LEAST LIKELY to be contributing to Joe's symptoms:

- A. iron deficiency
- B. acromegaly
- C. diabetes mellitus
- D. obesity
- E. thyrotoxicosis myxoedema.

Question 16

Joe applies for workers' compensation. Select the correct statement about your role in this process:

- A. for Joe to successfully claim you must confirm his work is responsible for 50% of his impairment
- B. you should not make any comment about the contribution of Joe's work to his symptoms
- C. CTS is a constitutional condition, hence Joe has no claim for workers' compensation
- D. you can make a judgment about whether Joe's work is a substantial contributing factor to his CTS
- E. Joe's hobbies and lifestyle are of no relevance to his work related claim.

ANSWERS TO AUGUST CLINICAL CHALLENGE

Case 1 – Eric Lee**1. Answer E**

Although sub-Saharan countries exhibit the highest global per capita rates of TB and the migration rates from Africa are increasing, individual African countries make up a small proportion of Australia's new TB caseload.

2. Answer C

HIV infection is the greatest single risk factor for TB – increasing the chance of reactivation up to 20-fold. Returned travellers are at low risk but household contacts, residents for more than 3 months and those with potential transmission from migrant communities are all at risk of TB.

3. Answer A

An important GP role in TB management is to avoid diagnostic delay by considering TB in people with symptoms such as persistent cough, loss of >10% body weight or fever for >3 weeks.

4. Answer C

Yield can be increased by arranging 2–3 samples (morning preferred) for AFP examination. QuantiFERON-TB Gold assay is not currently recommended as standard management, although it may be useful in some settings. Tuberculin skin testing (TST) is useful but is separate to sputum examination.

Case 2 – Sharon Ng**5. Answer B**

Okay this was an easy one! Using mosquito repellent, burning mosquito coils, wearing light clothing and taking particular care at dusk and dawn all reduce mosquito borne disease. As can the appropriate use of screens and nets and removing open water containers.

6. Answer E

All the conditions listed are potential causes of Sharon's symptoms. Rheumatoid arthritis and SLE are potential noninfectious causes and infectious mononucleosis is a common illness and potential diagnosis.

7. Answer D

Kangaroos and wallabies are the main hosts, although possums, horses and possibly birds and flying foxes may play a role in urban areas.

8. Answer A

Joint pain is an almost universal feature at around 95% and joint swelling occurs in around 50%, typically symmetrical and peripheral. Fatigue occurs in 90% and risk in 50%.

Case 3 – Astrid Bernhardt**9. Answer E**

HIV itself increases cardiovascular risk. Protease inhibitors and abacavir are also associated with increased risk of

cardiovascular events. Smoking is an important modifiable risk factor, particularly as there is a higher prevalence in HIV positive populations. HIV associated nephropathy is more common in those of African descent, but cardiovascular disease is not.

10. Answer B

Further assessment is required as there are several possible causes. HIV associated dementia and cognitive impairment occur, but Astrid's symptoms are commonly due to depression. Although harmful alcohol and illicit drug use is common in people living with HIV, there is no evidence this is the cause of Astrid's symptoms.

11. Answer A

Annual influenza vaccination and 5 yearly pneumococcal vaccination is recommended for HIV positive people of any age. Although live vaccinations such as oral polio vaccine are not recommended, varicella is considered safe for those with CD4+ counts above 200. Hepatitis B vaccines are recommended, although are less effective than in the HIV negative population.

12. Answer A

Yearly Pap tests are recommended for HIV positive women due to increased risk of cervical cancer. Three monthly viral load, CD4 count, FBE, UEC and LFTs are recommended. Fasting bloods are recommended 6 monthly and STI screening may also be appropriate.

Case 4 – Skye White**13. Answer C**

Soy has a similar 'protein digestibility corrected amino acid score' to meat. Vegetarian diets normally exceed protein requirements although may be lower than meat eaters.

14. Answer A

40g of cheese provides one serve of calcium. The other answers all provide a full serve of calcium.

15. Answer E

Plant foods are an unreliable source of vitamin B12. Dairy products would be a useful source for Skye or fortified soy products. A 2 µg supplement is recommended as bioavailability decreases with increasing intake.

16. Answer B

Nonhaem iron is less well absorbed compared to haem iron. Vitamin C increases the absorption of nonhaem iron and can overcome inhibitors to iron absorption such as phytates and tannins. Iron deficiency is not more common in vegetarians, although iron stores are often lower.