



Questions for this month's clinical challenge are based on articles in this issue. The clinical challenge is endorsed by the RACGP Quality Improvement and Continuing Professional Development (QI&CPD) program and has been allocated 4 Category 2 points (Activity ID:53549). Answers to this clinical challenge are available immediately following successful completion online at <http://gplearning.racgp.org.au>. Clinical challenge quizzes may be completed at any time throughout the 2014–16 triennium; therefore, the previous months' answers are not published.

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



Clinical challenge

Case 1

Shane, 13 years of age and previously well, is an enthusiastic athlete who plays a number of competitive team sports for his school. Last year he won player of the year in hockey, although rugby is his preferred sport. While on the field earlier today in a rugby game with a neighbouring school, Shane was knocked to the ground during a tackle. He was struck in the head and was somewhat dazed for two minutes but without loss of consciousness (LOC). The coach is worried about possible mild traumatic brain injury (m-TBI).

Question 1

What is the minimum length of time for LOC to diagnose an m-TBI?

- A. 5 minutes
- B. 3 minutes
- C. 2 minutes
- D. 1 minute
- E. LOC not essential for diagnosis

Question 2

Common early symptoms of m-TBI include all of the following except:

- A. confusion
- B. amnesia
- C. tinnitus
- D. nausea
- E. vertigo.

Question 3

Which one of the following is not a key clinical domain for the clinical assessment of concussion?

- A. Somatic
- B. Cognitive
- C. Emotional
- D. Sleep
- E. Learning

Question 4

Shane is keen to return to the field in four days for an important semi-final match. What is the standard symptom-free exclusion period after experiencing an m-TBI in his age group?

- A. 21 days
- B. 14 days
- C. 5–6 days
- D. 2 days
- E. No exclusion

Case 2

Shane's younger sister Rachel, aged 8 years, is also a keen athlete, with a special focus on gymnastics.

Question 5

An important injury to consider in young gymnasts is:

- A. pars inter-articularis fracture
- B. medial condyle avulsion
- C. rib stress fracture
- D. Sever's disease
- E. osteochondrosis of the elbow capitulum.

Question 6

Rachel's parents are unsure how to temper her enthusiasm for sport with injury mitigation, especially in relation to overuse injuries. The most important questions to ask include all of the following except:

- A. volume of training
- B. timing of competition events
- C. sport-specific strength work
- D. cross-training exercises
- E. formal supervision by a coach.

Question 7

Rachel's parents are particularly concerned as Rachel's close friend Greta had to cease athletics because of an overuse injury, with painful tendons around her ankle and foot. Unlike overuse tendon pain in the adult, in childhood the cause is more likely to be:

- A. degenerative
- B. tendinopathy
- C. enthesopathy
- D. chondritis
- E. osteitis.

Question 8

Which one of the following investigations is unhelpful in defining the clinical picture around apophysitis?

- A. Plain X-ray
- B. Ultrasonography
- C. Magnetic resonance imaging
- D. C-reactive protein levels

Question 9

Which one of the following best describes best practice treatment for childhood painful tendons due to athletic overuse?

- A. Orthotics
- B. Rest
- C. Formal physiotherapy
- D. Topical anti-inflammatory medications
- E. Any of the above

Case 3

Rachel and Shane come from a family with a long history of high-level sporting prowess and achievement. Their grandfather Colin was an A-list Australian Rules football player 50 years ago. Colin is winding down after retirement as a plumber but is still keen to participate in veteran sporting competitions. He has enrolled in the upcoming half marathon and seeks your advice.

Question 10

Which one of the following diseases is Colin at a decreased risk for with his activity program?

- A. Hypertension
- B. Dementia
- C. Gout
- D. Hyperlipidemia
- E. Cataracts

Question 11

In assessing Colin as fit for the half marathon, which one of the following is the most important consideration?

- A. Left ventricular ejection fraction of 55%
- B. Exercise-induced sinus arrhythmia
- C. Exercise-induced diastolic hypertension
- D. Exercise-induced ventricular arrhythmias

Question 12

Colin takes a number of regular medications for hypertension and is worried that they will limit his exercise capacity. Which one of the following medications is most likely to limit exercise capacity at high intensity?

- A. Metoprolol
- B. Hydrochlorothiazide
- C. Irbesartan
- D. Perindopril
- E. Indapamide