



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 MCO 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.gplearning.com.au](http://www.gplearning.com.au). Check clinical challenge online for this month's completion date.

Rachel Lee

**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**

**Summer McNabb**

Summer McNabb, 26 years of age, is a post office clerk who has injured her knee playing netball.

**Question 1**

Which of the following acute knee symptoms or signs do NOT require prompt orthopaedic referral:

- A. locking
- B. large or painful effusion
- C. instability
- D. persisting antalgic gait
- E. positive patella apprehension.

**Question 2**

Summer is worried about an anterior cruciate ligament (ACL) rupture. Which of the following clinical features typically suggests an ACL rupture:

- A. injury sustained during a valgus force through a flexed knee
- B. severe pain that commences after several minutes but persists for hours or days
- C. swelling that develops rapidly as a tense haemarthrosis forms
- D. instability walking down stairs or downhill with little other functional impairment
- E. a posterior sag sign.

**Question 3**

From your assessment you feel a medical collateral injury (MCL) is likely. Select the most correct statement about this injury:

- A. MCL injuries are rare and should be referred for prompt orthopaedic review
- B. MCL injuries usually require surgical management – typically 6 weeks postinjury
- C. MCL injuries are divided into grade 1–3 which determine the management approach
- D. grade 3 MCL injuries may be less painful but allow significant laxity (>10 mm)
- E. bracing is inappropriate for MCL injuries after 1–2 days.

**Question 4**

If Summer had sustained an meniscal injury, which of the following would be expected:

- A. a 'shift' sensation is a typical symptom of meniscal injury
- B. joint line tenderness is the key examination finding
- C. an injury to the more mobile lateral meniscus
- D. the need for surgical management
- E. a history of anterior tibial impact.

**Case 2**

**Paul Odinga**

Paul Odinga, 27 years of age, is a teacher who is a keen marathon runner. He presents with 'shin splints' that are impairing his running.

**Question 5**

What is usually the most important causative factor of exercise related shin bone stress:

- A. poor running technique
- B. inappropriate training program design

- C. inappropriate footwear
- D. low bone mineral density
- E. lack of stretching.

**Question 6**

Typically, medial tibial stress fractures:

- A. commence with activity and improve after warm up
- B. are at significant risk of catastrophic fracture
- C. commence with nocturnal ache
- D. are readily identified on plain X-ray as a horizontal cortical fracture
- E. need internal fixation.

**Question 7**

You diagnose recurrent exertional compartment syndrome (RECS). Select the best statement about your management plan:

- A. nonsteroidal anti-inflammatory drugs (NSAIDS) are the mainstay of management
- B. fasciectomy is rarely successful
- C. a period of cross training and rest typically reverses symptoms
- D. a short course of deep tissue massage is usually sufficient
- E. fasciectomy typically facilitates return to full function after 2–3 months.

**Question 8**

Paul re-presents 2 years later with cramping pain in his calf after 20 minutes of running that resolves within a minute of rest. This is most typical of:

- A. tenosynovitis
- B. neurological entrapment of the deep peroneal nerve
- C. recurrent exertional compartment syndrome
- D. vascular entrapment of the popliteal artery
- E. none of the above.

### Case 3

#### Tina Murmer

Tina Murmer, 17 years of age, is a student who presents a day after a head injury sustained playing hockey.

#### Question 9

Which of the following would raise concerns that Tina may have a structural head injury:

- A. nausea and vomiting that gets worse over the day
- B. persistence of concussion symptoms beyond 7 days
- C. brief period of loss of consciousness immediately postinjury
- D. brief convulsion at the time of impact
- E. presence of headache.

#### Question 10

There are four symptoms that are most highly specific to concussion. Which of the following is NOT one of these four:

- A. blurred vision or visual disturbance
- B. loss of consciousness
- C. balance disturbance
- D. confusion or attention deficit
- E. memory disturbance.

#### Question 11

Tina's mother asks about potential complications of sports related concussive injury.

Which of the following is accurate:

- A. there is a 5-fold increase in relative risk for clinical depression
- B. 5–10% of concussed athletes take longer than 10–14 days to recover
- C. 5% of concussed athletes have symptoms for more than 3 months
- D. acute progressive diffuse cerebral oedema is a common complication
- E. growth stunting is a common complication in young athletes.

#### Question 12

You determine a 'return to play' plan for Tina. Select the correct statement about resumption of training and competition after a concussive head injury:

- A. early physical rest is important but cognitive loads do not affect symptoms
- B. 24 hours is a recommended minimum between graduated activity levels

- C. sedation can be useful in the early phases to control symptoms
- D. the gold standard 'concussion in sport' assessment tool should always be used in decision making
- E. following a typical concussive injury players are recommended to return to normal play without a graduated program.

### Case 4

#### Simon Chan

Simon Chan, 37 years of age, is a research scientist who injured his ankle playing soccer yesterday.

#### Question 13

Which of the following clinical features would make you most likely to order an X-ray for Simon:

- A. a cracking noise during the injury
- B. a sensation of the ankle having bent double during the injury
- C. inability to weight bear for four steps
- D. tenderness over the calcaneofibular ligament
- E. limited range of movement.

#### Question 14

All of the following suggests Simon may have a syndesmosis injury EXCEPT:

- A. injury occurred by dorsiflexion and eversion
- B. positive external rotation stress test
- C. tenderness along the interosseous membrane
- D. tenderness along the anterior tibiofibular ligament
- E. tenderness along the posterior talofibular ligament.

#### Question 15

Which of the following fractures is NOT a commonly missed fracture in ankle injuries:

- A. proximal fibular
- B. tibial plafond
- C. anterior process of calcaneus
- D. base of fourth metatarsal
- E. talar dome.

#### Question 16

Simon has a moderate lateral ankle ligament sprain. What do you tell him about management:

- A. NSAIDs are useful in the acute setting
- B. immobilisation for several days is vital
- C. proprioceptive exercises reduce the risk of re-injury by up to 80%
- D. taping or bracing is required full time for 6 months
- E. the initial goal of rehabilitation is to manage change of direction.

## Answers to December clinical challenge

### Case 1

Janelle Phillips

#### 1. Answer B

Patients can expect to lose 50-60% of their excess body weight over a 12–24 month period – often around 0.5–1.0 kg/week.

#### 2. Answer E

Reflux, especially at night, epigastric pain, and difficulty eating solids are most likely due to symmetrical pouch dilatation. The other complications cause different symptoms.

#### 3. Answer A

Barium swallow is the best investigation for these symptoms and may show symmetrical dilatation of the pouch above the band, slow progress through the band and intra-oesophageal reflux.

#### 4. Answer C

A Huber tipped (noncoring) needle is preferred, although a 23 gauge normal needle may be used. You enter the skin at 90 degrees or perpendicular to the skin and feel the lower border of the port with the needle. The port may be accessed by appropriately trained staff, particularly in an acute emergency setting.

### Case 2

Vince Chinotto

#### 5. Answer C

Anti-saccharomyces cerevisiae antibody (ASCA) and atypical perinuclear antineutrophil cytoplasmic antibody (p-ANCA) cannot differentiate between UC and CD. Calprotectin and lactoferrin are both neutrophil derived proteins; their presence in the stool indicates inflammation but is not specific to ulcerative colitis (UC) or Crohn disease (CD).

#### 6. Answer B

5-ASA drugs have relatively low compliance rates, although they are well tolerated with a low rate of adverse events. Their use in CD remains controversial and they are more effective rectally than orally for UC proctitis.

#### 7. Answer D

Some patients do not mount a CRP response to intestinal inflammation. Hence, CRP is a useful marker if elevated but must be carefully interpreted if negative. However, CRP does generally correlate to disease activity and persistent elevation correlates to higher relapse rates and higher response to infliximab.

#### 8. Answer E

Infliximab and other biologic therapies bind tumour necrosis factor alpha. Although infliximab has efficacy in UC it is not funded by the PBS for UC. It is used every 8 weeks for maintenance and is given by intravenous infusion.

### Case 3

Angélica García López

#### 9. Answer B

The pathophysiology of IBS is poorly understood but postsurgical changes have not been implicated. The other factors listed have been suggested.

#### 10. Answer A

Different strains of probiotics appear to target different dominant symptoms, which practically means trial and error is required. Probiotic species do not usually persist in the gut longer than a few weeks after administration ceases. There is some evidence for the use of probiotics in pain, bloating, global IBS symptoms and constipation.

#### 11. Answer C

Reflux may occur due to oesophageal sphincter relaxation, but enteric coated preparations minimise this risk. Side effects are uncommon but include perianal burning. Peppermint oil is contraindicated in biliary duct occlusion, gall bladder inflammation and severe liver damage. Its safety is not established in pregnancy.

#### 12. Answer A

There is no evidence that soluble fibre improves IBS related abdominal pain. However, there does appear to be good effect for constipation and global IBS symptoms.

Soluble fibre is fermented in the gut whereas insoluble fibre acts by retaining water.

### Case 4

Joseph Deng

#### 13. Answer C

Fructose is absorbed via a low capacity carrier mediated facilitated diffusion that is enhanced by luminal glucose. Certain individuals are deficient in lactase but do not lack the enzyme completely.

#### 14. Answer A

100 mL of regular milk contains around 4.7 g of lactose. The other foods contain less. Intolerance to these lower lactose foods may relate at least in part to their lipid content.

#### 15. Answer C

Fructans are storage carbohydrates in Gramineae plant species such as wheat and Compositae plant species such as artichokes. Fructans are in very low levels in corn and rice. Sorbitol is widespread in plants, often occurring together with fructose.

#### 16. Answer A

Alternating bowel habit is very common in IBS and is not an alarm symptom. The other symptoms certainly are and require prompt investigation.

correspondence [afp@racgp.org.au](mailto:afp@racgp.org.au)