ABCDE clinical challenge

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 2011–2013 triennium, therefore the previous months answers are not published.

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Single completion items

CPD 

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

Darren Burrows

Darren, 24 years of age, was elbowed in the head during a football match and is worried by tingling in his right forearm.

Question 1

Which of the following is true regarding cervical spine injury:

A. concurrent cervical spondylosis can be a potential precursor to injury
B. low velocity football injuries are at high risk of cervical spine trauma
C. injury is common: 42% of 282 000 trauma patients were found to have C-spine injury
D. most injuries are subtle because soft tissue disruption is difficult to detect
E. rear-end collisions are a common cause of cervical spine trauma.

Question 2

Which of the following is true regarding the initial evaluation of cervical spine following trauma:

A. absence of neck pain immediately after the traumatic incident is always associated with low rates of cervical spine injuries
B. cervical spine injury can be excluded clinically in patients less than 65 years of age with midline cervical tenderness
C. cervical range of movement can be safely assessed in patients less than 65 years of age
D. NEXUS and Canadian C-spine rules are evidence-based decision aids
E. X-rays remain the first line imaging in suspected cervical spine trauma.

Question 3

On examination, there is midline tenderness at C4 and Darren is unable to actively rotate his neck 45 degrees to the right. He admits to drinking two beers in the last hour. Five-view plain X-rays are reported as normal by the radiologist. Which of the following is true regarding your clinical management:

A. ask Darren to return for a repeat examination tomorrow with a zero blood alcohol content
B. perform a neurological examination: if sensory examination is abnormal, Darren must be transferred to a major trauma service
C. perform a neurological examination: if sensory examination is normal, Darren can be sent home
D. reassure Darren and send him home with instructions to return if symptoms remain tomorrow
E. transfer Darren urgently to a major trauma service for further evaluation and an immediate MRI.

Question 4

Darren returns 9 months later with persisting neck pain and occasional tingling in the right arm. He wears a soft collar several times a week. You determine that he has normal examination and radiological findings. Would you then:

A. continue use of cervical collar for symptomatic relief
B. prescribe 8 weeks of nonsteroidal anti-inflammatory drugs to address soft tissue injury
C. reduce cervical collar use under physiotherapy supervision
D. refer Darren to a chronic pain clinic
E. refer to a neurologist to investigate tingling in the arm.

Case 2

Alice Williams

Alice, 9 years of age, presents with left lower jaw pain after she fell from a tree.

Question 5

Which clinical feature is LEAST suspicious of a fractured mandible in a child:

A. paraesthesia of the lower lip
B. ruptured gingiva at the site of tenderness
C. small laceration at chin point
D. sublingual haematoma
E. teeth well aligned on inspection.

Question 6

You determine that a fractured mandible is clinically probable, and that there is no evidence of other bony injuries. What is the most appropriate next step:

A. immediately commence prophylactic antibiotics such as penicillin or clindamycin
B. order OPG radiographs of the face, with a view to conservative management
C. organise a CT scan for the next day with 3 mm coronal and axial views
D. stabilise the fracture with a soft collar to minimize pain and discomfort
E. all of the above.

Case 3

Sharmila Kumar

Sharmila, a netballer, 43 years of age, is occasionally unable to extend her left

knee since a knee injury a decade ago. She presents today with pain in the medial compartment. You suspect meniscal injury.

Question 7

Which statement regarding meniscal injuries is true:

A. peak injury incidence is greatest in patients over 30 years of age
B. medial meniscal injuries are uncommon
C. menisci heal slowly as only the inner third have a blood supply
D. pain from torn menisci is often present during weight-bearing and rest
E. twisting on a flexed knee may produce bucket-handle tears.

Question 8

Which statement regarding Sharmila's knee assessment is true:

A. an MRI is likely to show a horizontal tear of the medial meniscus
B. a CT scan is comparable to an MRI in diagnosing meniscal tears
C. a Thessaly test is the best clinical test of a meniscal injury
D. a negative Apley test will exclude a meniscal injury
E. an X-ray will demonstrate an intra-articular loose body.

Question 9

Sharmila requests an MRI, and after discussion, you arrange one. She returns a month later still in pain. The MRI indicates a tear in the red-white zone. Which of the following will produce the best outcome:

A. early meniscetomy to prevent long term osteoarthritis
B. either surgery or nonoperative therapies: both have similar functional outcomes
C. RICE and physiotherapy for 6 weeks
D. meniscectomy with allografting in a specialist centre
E. surgical repair to maximise the chance of becoming pain-free.

Case 4

Bob Watson

Bob, 84 years of age, complains of 2 months of right shoulder pain on overhead movements and occasionally at night.

Question 10

Which statement is true regarding the general approach to the painful shoulder:

A. bilateral shoulder pain and weakness increase the risk of temporal arteritis
B. isolation of each rotator cuff muscle is important during examination
C. measuring range of movement with a goniometer has good inter-rater reliability
D. movement limited by pain suggests tendinopathy, impingement and instability
E. pain from cervical spine tends not to refer to the shoulder.

Question 11

You rule out neck and clavicle pathology. Does Bob need a referral to an orthopaedic surgeon:

A. no, Bob is most likely suffering from sub-acromial impingement syndrome
B. no, due to Bob's age, functional improvement is unlikely
C. yes, Bob's chronic shoulder pain will respond well to decompression
D. yes, Bob is most likely suffering from intra-articular instability
E. yes, early arthroscopic intervention in cases like Bob's show improved pain scores over a 2 year period.

Question 12

An old ultrasound report shows a partial tear in Bob's left supraspinatus dated 4 months ago. What is the most likely finding on examination:

A. near-normal shoulder function
B. a positive anterior release test
C. point tenderness over the AC joint
D. a positive Hawkins test
E. a positive O'Brien's test.

Case 5

Shane Fletcher

Shane, 37 years of age, 'jammed back' his left forefinger at football training today. On examination, there is swelling of tht PIP joint and pain on movement.

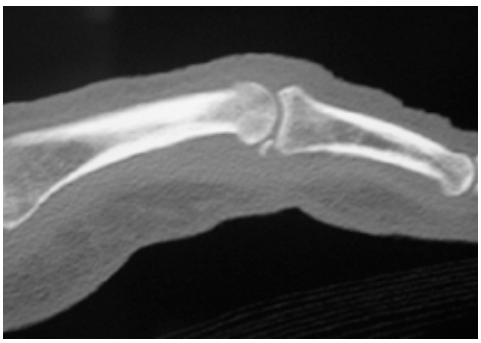
Question 13

Which statement about hand injuries is correct:

A. buddy taping of the phalanges is useful for immediate immobilisation
B. follow up X-rays are recommended 1 week after most hand injuries
C. hand fractures are seldom prone to displacement
D. X-ray evidence of intra-articular involvement is always an indication for referral
E. rotational deformities are best assessed radiologically.

Question 14

This X-ray of Shane's finger shows:



A. intra-articular fragment
B. sesamoid bone
C. volar plate avulsion fracture
D. calcified tendinopathy
E. mallet fracture at the PIP joint.

Question 15

Shane has significant swelling and pain, which eased on immobilisation. What would you do next:

A. assess for dislocation with active movements, referral for repair may be required
B. assess for rotational deformity, early mobilisation may be required
C. buddy tape the finger till pain-free
D. immobilise of the hand in the 'safe position' for 1–3 weeks
E. splint in slight flexion for 1 week and repeat X-ray.

Question 16

Which statement regarding tendon injuries is correct:

A. complete rupture of the extensor digitorum will result in the Boutonniére deformity
B. injury to the extensor tendon at the PIP requires immediate referral to a hand surgeon
C. splinting of the tendon injury must cease at 6 weeks so that active rehabilitation can begin
D. suspicion of flexor tendon injury should initiate X-rays and immediate referral to a hand surgeon
E. tendon lacerations are suggested by limitation of movement despite local anaesthetic infiltration.