Exam Corner

September 2011 - Questions

Vikas Khanduja,
MSc, FRCS (Orth)
Consultant Orthopaedic Surgeon,
Addenbrooke's -
Cambridge University Hospital NHS Trust,
Cambridge
CB2 0QQ, UK.
Associate Editor, the
Journal of Bone and
Joint Surgery [Br]
email: vk279@cam.ac.uk

The FRCS (Tr & Orth) examination has
three components: MCQs, Vivas and
Clinical Examination. The Vivas are further
divided into four sections comprising
Basic Science, Adult Pathology, Hands and
Children's Orthopaedics and Trauma. The Clinical
Examination section is divided into upper- and
lower-limb cases. The aim of this section in
the Journal is to focus specifically on the
trainees preparing for the exam and to cater
to all the sections of the exam every month. The
vision is to complete the cycle of all relevant
exam topics (as per the syllabus) in four years.

Advisor:
Mr David Jones
FRCS, FRCSEd (Orth)
Associate Editor, the
Journal of Bone and
Joint Surgery [Br]

© 2011 British Editorial
Society of Bone and Joint
Surgery
doi:10.1302/0301-620X.93B9.28094 $2.00

J Bone Joint Surg [Br]

MCQs – Single Best Answer

1. Arthroscopic debridement of the knee joint in
osteoarthritis is most beneficial in which group of
patients?
   a. Patients with a joint space of ≥ 3 mm
   b. Patients with concomitant crystal arthritis
   c. Patients with Grade IV osteo-arthritis changes
   d. Patients with a flexion deformity
   e. Patients with a valgus deformity

2. Which of the following is the most significant risk
factor for the nonunion of fractures of the middle
third of the clavicle?
   a. Obesity
   b. Communion at the fracture site
   c. Open fractures
   d. Smoking
   e. Shortening of > 2 cm

3. Which of the following injuries is most commonly
associated with a dislocation of the knee joint?
   a. Tibial plateau fracture
   b. Common peroneal nerve injury

4. The Sarmiento functional cast brace cannot be
used for which of the following fractures?
   a. Multifragmentary fractures
   b. Open fractures
   c. Fractures with angular instability
   d. Fractures with axial instability
   e. Fractures with neurological involvement

5. The presence of Hawkings's sign following open
reduction and internal fixation of the fracture of
the talus signifies:
   a. Avascular necrosis of the talus
   b. Inappropriate reduction of the fracture fragments
   c. Revascularisation of the talus
   d. Nonunion of the talus
   e. Concomitant dislocation

Vivas

Adult Pathology

A 78-year-old man, who underwent total hip
replacement of the right hip 18 years previously,
now presents with a history of pain in his right hip
especially on weight bearing. This is his radiograph
(Fig. 1)

1. Describe the abnormal findings on the radiograph
   (Fig. 1).
2. What further information would you like to obtain
   on history?
3. What further investigations would you request if
   any?
4. What is the likely diagnosis?
5. How would you classify this condition at this
   stage?
6. What are the options of treatment at this stage?
7. What treatment would you offer him? Why?

Trauma

A 13-year-old boy fell off his bicycle and sustained an
injury to his right ankle. These are the radiographs
obtained in A & E (Figs 2a and 2b).

1. Describe the abnormality in the radiographs.
2. What is the diagnosis?
3. Would you request any other investigation and if
   yes, why?
4. What is the reason for the unusual pattern of this
   fracture?
5. What are the indications for surgical intervention in these fractures?
6. How would you like to treat this patient?

**Hands**
A 10-year-old girl presented to the outpatients clinic with a progressively worsening deformity of her wrist joint. There was no history of trauma or of recent infection. These are her clinical photographs (Figs 3a and 3b).
1. Describe the clinical photographs.
2. What is the diagnosis?
3. What is the pathophysiology of this condition and what are the classical clinical findings in these patients?
4. These are the radiographs of another patient with the same condition (Figs 3c and 3d). Describe the radiographs.
5. How would you treat her at this stage?
6. What are the goals of surgical management of this condition?

**Children's Orthopaedics**
1. Radiograph of a ten-year-old fit and well child who has a painful right shoulder (Fig. 4). There is no history of injury and movements of the shoulder and elbow are normal.
2. What is the diagnosis?
3. Describe the radiological features.
4. What are the treatment options?
5. This four-year-old boy is standing only because he is leaning against a wall (Fig. 5). Why is this and what is the diagnosis?

**Basic Science**
1. This is a photograph of two types of femoral stem used in a total hip replacement (Fig. 6). What are they called?
2. What are the characteristic features of both the stems?
3. Which material are they composed of and why?
4. What is the engineering principle behind the success of each of these stems? Please describe with an illustration.
5. What are their long-term clinical results?

---

For answers to last month's Exam Corner please visit [http://www.jbjs.org.uk/education/examcorner](http://www.jbjs.org.uk/education/examcorner)