



November 2014 • Questions

The FRCS (Tr & Orth) examination has three components: MCQs, Vivas and Clinical Examination. The Vivas are further divided into five sections comprising Basic Science, Adult Pathology, Hands, 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.

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MCQs – Single Best Answer

- When using distraction lengthening of bone of the upper limb what would be the most common complication with a too-rapid rate of distraction?
 - Nonunion
 - Fibrous union
 - Infection
 - Nerve damage
 - Early consolidation
- Steindler's release may be considered for which one of the following?
 - Achilles tightening
 - Pes cavus correction
 - Plantar fasciitis
 - Part of hallux valgus correction
 - Hammer toe
- A 25-year-old fit and healthy male with past history of conservatively treated right calcaneal fracture presents with a burning sensation on the plantar aspect of his right foot with occasional paraesthesia. There is a decrease in two-point discrimination in the affected area. Prolonged standing, walking and running exacerbate the symptoms. 'Mulder's click' is conclusively negative. The most likely diagnosis is
 - Morton's neuroma
 - Charcot-Marie-Tooth disease
 - Tarsal tunnel syndrome
 - Gout
 - Ankle sprain
- In relation to a sternocleidomastoid release for congenital muscular torticollis select the most appropriate response from the list below:
 - Which other structure lies within the superficial (investing) layer of the deep cervical fascia?
 - Which muscle must be divided in the approach for a bipolar release?
 - When performing a z-plasty to the Sternocleidomastoid, which structure maintains its muscular attachment?
Sternothyroid
Clavicle
Platysma
Manubrium
Trapezius
Mastoid
Cranial nerve 7
Cranial nerve 11
Hyoid
Carotid artery
- A 13-year-old girl presents with an osteosarcoma of the distal femur that extends into the soft tissue. Work-up is negative for metastasis, but biopsy reveals a high-grade lesion. What is the stage of this tumour as per the Musculoskeletal Tumour Society (Enneking) system?
 - IA
 - IIA
 - IB
 - IIB
 - III
- A 35-year-old manual worker is admitted after a devastating crush injury to his dominant thumb. The possibility of a free thumb transfer is raised, which of the following statements is correct?
 - After a free toe graft, the patient must be nursed with the recipient limb dependent to promote blood flow.
 - Heparin infusions are not required if the patient is on a standard daily low-molecular weight heparin infusion.
 - The great toe can be grafted in a single stage transfer without serial debridement of the thumb stump
 - To ensure adequate perfusion, two digital arteries and one digital vein must be grafted.
 - Only the whole digit can be transferred.

Vivas

Adult Pathology

A 70-year-old female presents with left shoulder pain and difficulty raising her arm and performing her activities of daily living.

- Describe the x-ray and CT scan (Figs. 1a to 1d). What is the diagnosis?
- How do you classify this?
- Assuming she has failed non-operative management, what surgical option(s) will you offer her?
- What are the absolute contraindications for your operative choice?
- What are the biomechanical principles of your operative choice?



Fig. 1a



Fig. 1b



Fig. 1c



Fig. 1d

Trauma

A 6-year-old has presented after a fall off a swing leading to an injury at the elbow. These are the radiographs done in A & E (Fig. 2).



Fig. 2a



Fig. 2b

1. Describe the radiographs
2. Classify Monteggia fractures in children.
3. What group of injury does this fracture fall into? What are Monteggia equivalent injuries?
4. How would you manage this patient?
5. How would you manage chronic dislocations of radial head in late presenters?

Hands

A 21-year-old medical student presented to a specialist hand clinic three weeks following injury to his left thumb when he fell off whilst skiing in Scotland. He initially had pain and swelling around the thumb but this has improved with the thumb brace he was given in A&E. He now feels pain mainly on the inner side of his thumb when stressing his thumb with activities like gripping or pinching. In addition, he complains that his thumb does not feel right and feels weak

1. Please describe the test being undertaken in the clinical photograph (Figure 3)?



Fig. 3

2. What is the provisional diagnosis if the test is positive?
3. What is a Stener's lesion?
4. What name is given to the chronic variant of this injury and why?
5. How would you differentiate between a complete and an incomplete tear?

Children's orthopaedics

A 12-year-old boy presents with pain in his right arm; three months ago he was treated non-operatively for a fracture of the same humerus sustained after a low energy fall (Fig. 4)



Fig. 4a



Fig. 4b

1. What are the possible diagnoses and what is the most likely diagnosis? Why?
2. How are these lesions believed to develop?
3. How would you differentiate this lesion from an aneurysmal bone cyst?
4. How would you decide whether to treat a simple bone cyst?
5. What are the treatment options for this lesion?

Basic Science

1. What investigation is this (Fig. 5)?
2. How is it done and what is the basis of the images obtained?
3. How is technecium 99m produced?
4. What are the phases in a triple phase scan?
5. What are the pitfalls of this scan?
6. What do you see here?

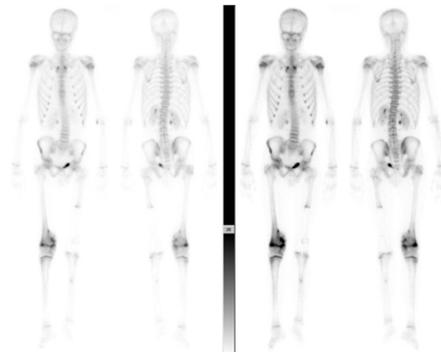


Fig. 5

For answers to previous Exam Corner questions please visit www.boneandjoint.org.uk/site/education/exam_corner

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