



ROYAL AUSTRALASIAN COLLEGE OF SURGEONS

PART 2 EXAMINATION FOR FELLOWSHIP

NEUROSURGERY

FIRST PAPER - 2 Hours

Wednesday, 28 April, 2004

All Questions must be answered. Questions 1 and 2 are of equal value

Question 1:

A 34 year right-handed male is brought to the emergency room with a gunshot wound to the head . Clinically he has spontaneous right eye opening but no verbal response. The left pupil is dilated and non reactive, the right pupil is reactive to light and he has a right hemiparesis. The left upper and lower limbs move spontaneously. There is an entry wound in the anterior left temporal region and an exit wound in the posterior right temporal region. Brain and cerebrospinal fluid exit from both wounds. His respiratory rate is 12, blood pressure 100/60 and pulse rate 100.

- (a) Discuss the neuropathological differences between high and low velocity gunshot wounds to the head.
- (b) Outline all aspects of the initial management of this patient in the emergency room.
- (c) Outline selection criteria for surgical management of cranial gunshot wounds and your surgical objectives and surgical technique for this patient.
- (d) Discuss the place of cerebral angiography in such an injury

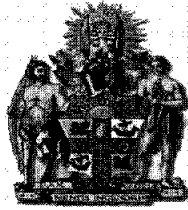
Question 2:

Write short notes on the following topics:

- (a) The risks of percutaneous rhizotomy for trigeminal neuralgia (by glycerol, radiofrequency and balloon).
- (b) Endovascular treatment of intracranial aneurysms.
- (c) Ulnar nerve entrapment
- (d) Far lateral lumbar disc prolapse
- (e) Chiari malformation

Question 3:

Neurosurgery MCQ Paper - (30 questions - 30 minutes). Please follow instructions as detailed on accompanying MCQ Papers



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SECOND PAPER - 2 Hours

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Question 4:

A 45 year old man presents with episodic disequilibrium, tinnitus and a 20 db PTA (pure tone average) hearing loss in the left ear. Imaging discloses an enhancing C-P angle mass extending into the internal meatus. The intracranial component measures 1.5 cm in maximum dimension. The caloric response is impaired on the left side but not the right.

- (a) What is the most likely diagnosis? What is the differential diagnosis?
- (b) He is concerned about losing further hearing and asks what treatment is available. How would you advise him?
- (c) He has heard about the "Gamma Knife". He is keen to avoid an operation if possible. How would you advise him?
- (d) The patient ultimately requests surgical management with attempted hearing preservation. What approach would you use?
- (e) Assuming that the tumour is an acoustic neuroma and extends to the end of the internal meatus, advise him regarding risks of surgery using your approach.

Question 5:

A seven year old girl presents with a short history of urinary incontinence. Examination shows a midline lumbosacral fatty mass, a mild unilateral foot weakness and an absent ankle reflex.

- (a) Give the most likely diagnosis. Discuss the pathophysiology underlying this patient's symptoms and signs.
- (b) What evaluation and investigations should be performed?
- (c) What treatment would you advise?
- (d) Describe the risks and expectations of the treatment.
- (e) What is the long-term management and prognosis for this patient?

Question 6:

Write short notes on the following topics:

- (a) Benign intracranial hypertension
- (b) The physiology of clotting and the investigations of abnormal coagulation
- (c) Germinomas
- (d) Spinal meningioma
- (e) Growth hormone secreting pituitary adenoma