



The Hong Kong College of Anaesthesiologists

Final Fellowship Examination

Paper I

27th March 2009 (Friday)

09:00 – 10:30 hrs

Instructions:

- There are three pre-labelled answer books. Please make sure you answer the respective questions in the appropriate answer book.
 - Write your examination number on the cover of each answer book.
 - Answer **ALL** questions (nine questions). They are worth equal marks and you should spend approximately ten minutes for each question.
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Scenario A

You are asked to see a 30 years old, 34 weeks gravid female who requires emergency caesarian section, but refuses regional anaesthesia. She has a past history of a known medium size secundum atrial septal defect (ASD), and has been asymptomatic since birth. The cardiologists have reviewed her regularly in the outpatient clinic over the past years.

- Describe the pathophysiology of this patient's cardiac condition. What would you look for in preoperative assessment of this patient to indicate the severity of the ASD?
- How would this cardiac condition affect your anaesthetic management of the patient?
- Post-operatively, you are asked to see this patient in the recovery area because her SpO₂ has decreased acutely to 70%. You confirm that her ventilation is not a problem. What are the possible causes and what is your immediate management.

Scenario B

A 65 years old woman, with history of chronic atrial fibrillation and ischaemic stroke, is on long term warfarin. She presents with sudden onset of headache and right sided weakness. Cranial CT showed a left sided intra-cerebral haematoma. Her INR is 4.2.

- Discuss the important issues in emergency evaluation and management of this patient.
- Discuss the treatment options for the reversal of the warfarin anticoagulation in this patient.
- This patient is to undergo emergency craniotomy and evacuation of the intra-cerebral haematoma. Compare and contrast the use of propofol and sevoflurane for maintenance of anaesthesia in this patient.

Scenario C

A 4 years old child who is involved in a household fire from a faulty air-conditioner with minor explosion is scheduled for emergency surgery. He sustains a penetrating injury to his right eye and an open fracture of his right forearm. On examination, he is alert, crying incessantly and obviously in pain. His vital signs include heart rate 160/minutes, respiratory rate 36/minutes, blood pressure 110/54 and SpO2 98%. He has no significant past history and has his meal 3 hours ago.

- 7) What are the priorities in the initial evaluation and management of this child? What further information would you need prior to taking him to theatre?
- 8) How would you determine if he has sustained an inhalational injury? Describe your management of inhalational injury in this patient.
- 9) Thirty minutes into operation, pulse oximeter alarms "pulse search", blood pressure monitor reads "error" and electrocardiogram depicts sinus tachycardia. You cannot feel any pulse. What are your differential diagnoses and how would you manage this situation?

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