



The Hong Kong College of Anaesthesiologists

Final Fellowship Examination

Paper I

13th March 2015 (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 have a 36 year-old lady on your obstetric list tomorrow. She is now in her 36th week of gestation. Her antenatal record shows she has moderate mitral stenosis before pregnancy. She requests an elective caesarean delivery.

- Briefly discuss your preoperative assessment.
- What are the haemodynamic goals that you would like to achieve in this patient? (30%)
Justify your choice of anaesthetic technique for this patient. (70%)
- The patient is monitored in the high dependency unit after delivery. She is haemodynamically stable and her pain is controlled by an epidural infusion of 0.125% bupivacaine at 8 ml per hour. She complains of inadequate pain relief. You are the anaesthetist on call. Describe how you would manage her pain.

Scenario B

You see a 68 year-old man on the morning of surgery. He is listed for an elective laparotomy for resection of a sigmoid carcinoma, and has long standing chronic obstructive pulmonary disease with a body mass index of 36. He is normally breathless after walking 50 metres and for the last 3 days has been expectorating green sputum. His heart rate is 110/min, blood pressure 155/87 mmHg and SaO₂ 91%. He has expiratory wheeze and basal crepitation on examination. He takes a bronchodilator and a steroid inhaler. Blood gases show pH 7.32, PO₂ 7.7kPa, PCO₂ 6.8kPa, BE -1.2, standard bicarbonate 28mmol/L.

- During preoperative assessment, how would you assess his breathlessness? (60%) How would you optimize him before the operation? (40%)
- Assuming his condition is optimized 2 weeks later, how would you anaesthetize him for this procedure?
- 40 minutes after successful surgery of 5 hours, the nurses call you to the post anaesthesia care room as his heart rate is 129/min and blood pressure 75/49mmHg. How would you manage this problem?

Scenario C

A 30 year-old man presents for an awake craniotomy for recurrent brain tumour. A previous craniotomy under general anaesthesia resulted in residual motor deficits. He has no other medical history and his vital signs are as follows: BP 110/70mmHg, heart rate 80/min, respiratory rate 12/min SpO₂ 98% in room air, body weight 65 kg.

7. How would you determine if this patient is suitable for an awake craniotomy? (30%) Briefly describe your anaesthetic plan. (70%)
8. Describe the sensory innervation of the scalp and how you can provide adequate local anaesthesia for this awake craniotomy.
9. After completion of the scalp block, patient was sedated. Supplemental oxygen was administered via a face mask at 6L/min and surgery was started. On activation of the diathermy, a massive fire broke out. Outline your management of this situation, including prevention of similar events in future.

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