

## SELF ASSESSMENT SECTION- Multiple Choice Questions

Dr Beth Newstead, Exeter, UK

Please answer True or False to the following statements

### 1. With regards to fasting (T or F):

- Clear fluids will usually empty from an adult stomach in 3-4 hours
- Solids will usually empty from the stomach in 6 hours
- Milk empties from the stomach at the same rate as other fluids
- ASA guidelines recommend a minimum fast of 4 hours for breast milk
- At least 100mls of gastric fluid needs to be aspirated to cause pulmonary damage

### 2. The following apply to pre-operative steroids:

- 10mg prednisolone is equivalent to 40mg hydrocortisone
- A patient on a maintenance dose of 6mg prednisolone requires additional intra-operative steroids
- It is estimated that adults secrete 75-100mg of cortisol in response to a major surgical procedure
- 10mg prednisolone is equivalent to 2mg dexamethasone
- For a patient who is on 12mg prednisolone daily, a suitable dose of intra-operative hydrocortisone for a hernia repair is 100mg

### 3. With regard to Aortic Stenosis:

- Severe aortic stenosis will always be symptomatic
- A gradient of >80mmHg across the aortic valve is considered to be severe aortic stenosis
- Spinal anaesthesia is safe in patients with aortic stenosis
- With increasing severity of aortic stenosis, the louder the murmur becomes
- If a vasoconstrictor is required in a patient with aortic stenosis, ephedrine is the agent of first choice

### 4. With regards to Trans-urethral resection of the prostate (TURP):

- Most TURP surgery is done under a general anaesthetic
- TUR syndrome is estimated to occur in 1-2% of cases
- Treatment of TUR syndrome is with rapid correction of the hyponatraemia
- Severe blood loss in TURP occurs in <1% of cases
- Most patients will require no routine pre-operative investigations

**5. The following are true of Suxamethonium:**

- a. Suxamethonium is a non-depolarising muscle relaxant
- b. Suxamethonium is metabolised by plasma cholinesterase
- c. Suxamethonium causes a rise in potassium of 1mmol/Litre
- d. Suxamethonium commonly causes tachycardia in children
- e. Approximately 10% of the population have an atypical gene coding for cholinesterase and will therefore have a prolonged neuromuscular block

**6. The following are risk factors for laryngospasm:**

- a. Hypercalcaemia
- b. Thyroid surgery
- c. Gaseous induction
- d. Tonsillectomy
- e. Haemorrhoid surgery

**7. The following are true on the subject of burns:**

- a. The commonest cause of death following a burns injury is smoke inhalation
- b. Full-thickness burns are more painful than partial thickness burns
- c. Prophylactic antibiotics should be given to all patients with >30% burns
- d. The Parkland formula (used to guide fluid replacement in burns patients) is as follows: 10mls fluid per % burn per kg of weight
- e. A patient with signs of airway compromise should be intubated early

**8. The following are contraindications to a Bier's block:**

- a. Raynaud's disease
- b. Hypertension (systolic > 200)
- c. Age > 80
- d. Crush injury to the arm
- e. Ischaemic heart disease

**9. The following apply to blood product transfusion:**

- a. Blood transfusion is not indicated if the Hb >10g/dl
- b. The dose of FFP is 20ml/kg
- c. FFP should be used within 4 hours of thawing
- d. If a patient has been group and saved, it will take 45 minutes for a full cross-match
- e. Cryoprecipitate contains high levels of fibrinogen

**10. The following are true of spinal anaesthesia**

- a. The spinal cord ends at L2-L3
- b. Injection should be at the level of L3-L4
- c. Previous back surgery is an absolute contraindication to spinal anaesthesia
- d. Heavy bupivacaine gives a lower block than plain bupivacaine
- e. The incidence of neurological damage following a spinal is 6-7 per 10,000

**11. With regards to positioning on the operating table:**

- a. In the head-down position, the patient may prove more difficult to ventilate
- b. Patients should be intubated if put in the prone position

- c. The head-up position may lead to an increase in blood-pressure
- d. In the supine position: if one arm is abducted the head should be turned in the opposite direction
- e. A potential complication of the lithotomy position is peroneal nerve damage

**12. With regards to Paediatric anaesthesia:**

- a. The formula for calculating a child's weight is (age + 4) multiplied by 4
- b. A size 2 LMA is suitable for a child of 10-20kg
- c. The formula for calculating ET tube length is: age/2 + 8
- d. The dose of Suxamethonium is the same in children as for adults (i.e. 1.5mg/kg)
- e. Laryngospasm is more common in children than adults

**13. The following apply to epidural anaesthesia:**

- a. Opioids are 10 times more potent when administered via the epidural route (compared with intra-venous administration)
- b. An INR > 2.0 is a contraindication to an epidural
- c. It is safe to give a low molecular weight heparin within 12 hours of inserting or removing an epidural
- d. Permanent nerve damage following an epidural can occur within 8 hours of initial symptoms
- e. Skin infection at the site of epidural is a relative contraindication

**14. The following are features of anaphylaxis:**

- a. Hypertension
- b. Bronchospasm
- c. Constipation
- d. Coagulopathy
- e. Vasculitic rash

**15. The following are true of local-anaesthetic toxicity:**

- a. Local anaesthetic toxicity may present with dizziness
- b. Local anaesthetic toxicity may present with numbness of the peripheries
- c. Treatment is based on the A, B, C principle (i.e. successive attention to airway, breathing and circulation)
- d. Seizures should not be treated pharmacologically
- e. The maximum dose of prilocaine is 6mg/ kg

**16. Percutaneous tracheostomy versus surgical tracheostomy:**

- a. Performing a percutaneous tracheostomy is a more simple procedure
- b. A percutaneous tracheostomy requires a general anaesthetic
- c. A surgical tracheostomy gives a better cosmetic result
- d. There is a higher infection rate with percutaneous tracheostomy
- e. There is a reduced risk of bleeding with a percutaneous tracheostomy

**17. The following are true with regards to an older patient's physiology:**

- a. beta-receptors are less reactive in older people

- b. There is an increase in forced expiratory volume in 1 second (FEV1) and vital capacity (VC)
- c. There is a reduction in functional residual capacity (FRC)
- d. The Glomerular filtration rate falls
- e. Autonomic dysfunction is less common in the elderly

**18. The following are true in Paediatric anaesthesia:**

- a. The formula for calculating endotracheal tube diameter is  $\text{age}/4 + 4$
- b. The Ayre's T-piece should be used in children up to a weight of 20 kg
- c. A straight-bladed laryngoscope is recommended in children < 6 months old
- d. Uncuffed tubes are advised in children until the age of 4
- e. In infants the head should be in a neutral position for intubation

**19. The following are true of levobupivacaine**

- a. It is more toxic than bupivacaine
- b. Levobupivacaine is an amide
- c. The pKa of levobupivacaine is 8.1
- d. The recommended maximum dose of levobupivacaine is 5mg/kg
- e. Levobupivacaine is more expensive than bupivacaine

**20. The following apply to trauma situations:**

- a. A patient with a GCS < 9 should be intubated
- b. In-line stabilisation of the neck may make intubation more difficult
- c. Suxamethonium is the muscle-relaxant of choice when intubating trauma patients
- d. A tension pneumothorax should initially be treated with needle decompression. The landmark is the 5th inter-costal space in the mid-clavicular line
- e. The circulatory status should always be assessed first

---

**Clinical Dilemma**

Dr U. Schroeter, University Hospital Nottingham, UK

**The Bleeding Tonsil**

You have been called to see an 8 year old child who had a tonsillectomy six hours previously. The child is bleeding and needs to go back to theatre for haemostasis. When you arrive on the ward the child is agitated, tachycardic, pale and says he feels sick. The postoperative blood-loss is reported to be minimal by the nursing staff.

**Questions**

- 1) What are the specific problems in this case?
  - 2) How would you manage the anaesthetic?
-