

MULTIPLE CHOICE QUESTIONS

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Please answer True or False to the following statements:

1. Regarding storage of donated blood:

- Blood storage in CPD-A preserves but does not anti coagulate the blood
- SAG M gives blood a shelf life of 14 days
- Red blood cells must be stored at around - 4 degrees Celsius
- Levels of 2,3 DPG can become depleted in stored blood
- Potassium levels increase with duration of storage

2. The following are true of "MAC":

- It is the mean alveolar concentration
- It is proportional to the oil-gas solubility co-efficient
- It is proportional to the blood-gas solubility co-efficient
- The MAC of halothane is 1.0
- The MAC of enflurane is 1.6

3. With regard to cricoid pressure:

- It was first described by Simmons
- The pressure that should be applied is 10 Newtons
- It is contra-indicated in active vomiting
- It is useful in patients with a pharyngeal pouch
- It was first used in paediatric anaesthesia

4. Awake fiberoptic intubation:

- Is indicated in the management of the bleeding airway
- Is indicated in acute upper airway obstruction
- Can be performed using a sedation
- Is contra-indicated in patients with an unstable C spine injury
- Can be performed orally and nasally

5. Breathing circuits:

- A Mapleson B is used as a co-axial circuit
- A Mapleson D is only used for resuscitation
- Mapleson D circuits are more efficient for spontaneous ventilation
- Flows with the Ayres T piece should be 1.5 times the patient's minute volume for spontaneous respiration
- The Lack circuit is more efficient for spontaneous ventilation than controlled ventilation

6. Absolute contra-indications to regional anaesthesia in obstetrics include:

- HELLP syndrome
- Essential thrombocythaemia
- Clopidogrel therapy
- Hypertensive disease of pregnancy
- Systemic infection

7. Regarding nerve blocks:

- With axillary blocks, the nerve most often missed is the radial
- Interscalene blocks are reliable for hand surgery
- Intercostal nerve blocks may produce high systemic levels of local anaesthetic
- Blocks at the elbow can be associated with ulnar nerve compression
- Four approaches to the sciatic nerve have been described

8. Sciatic nerve blocks:

- Should be performed using bupivacaine with adrenaline
- Using the Raj approach require the patient to lie in the left lateral position
- Can be performed using an anterior approach
- Can block the whole lower limb alone
- Always block the posterior cutaneous nerve

9. In neonatal resuscitation:

- Cardiac compressions should be started if the heart rate is less than 60
- Ratio of ventilations to compressions is 3:1
- Cardiac compressions are performed with the heel of the hand
- Apgar scoring looks at the colour of the baby
- The commonest reason for continued bradycardia is failure of lung ventilation

10. In preoperative assessment of the airway:

- Mallampati class III and IV are associated with a higher incidence of difficult laryngoscopy
- The thyromental distance should be less than 6.5cm
- An underbite will make intubation more difficult
- Sternomental distance should be more than 12.5cm
- It is possible to predict all difficult intubations

11. Regarding physiological changes in pregnancy:

- The increase in cardiac output is mainly due to an increase in heart rate
- The anatomical dead space is increased at term
- Gastric acidity increases in the third trimester
- Gastric emptying is delayed in pregnancy
- By the third trimester, total blood volume decreases

12. The following are true of blood groups and transfusions:

- ABO antibodies usually cross the placenta
- Delayed haemolytic transfusion reactions can cause jaundice at 5-7 days post transfusion
- 50% of people secrete ABO group substrates in their bodily fluids
- Rhesus antibodies are formed naturally, without external exposure
- ABO group incompatibility transfusions are most often due to clerical error

13. In paediatric anaesthesia:

- The dose of atropine is 20mcg/ kg
- A size 4.5 tube would be suitable for an average 6 year old
- The dose of adrenaline in an arrest would be 0.1mg/ kg
- Suxamethonium is given at 1.5mg/kg in infants
- Propofol infusions are recommended for long term sedation

14. In the head-injured patient:

- Careful maintenance of the mean arterial pressure is paramount
- The CO₂ should be reduced to below normal range
- Tying the endotracheal tube tightly in place can cause venous congestion
- The patient should be positioned in a 30 degree head down position
- Mannitol 20% should be given as soon as possible

15. Concerning adequate reversal of neuromuscular blockade:

- Measurement of tidal volume is a reliable guide
- A sustained head lift for 5 seconds is sufficient
- A train of four (TOF) ratio of < 0.7 is inadequate
- Hypokalaemia is antagonistic
- A vital capacity of 10ml/ kg can be used as a measure of reversal

16. With regard to vaporizers:

- Plenum vaporizers can usually be refilled whilst in use
- Drawover vaporizers have a high resistance when used in a circuit
- The Goldman is a plenum vaporizer
- The desflurane vaporizer has a back-up battery
- An isoflurane vaporizer could be a Tec 6

17. The following are methods of volatile agent analysis:

- Infrared spectroscopy
- Raman scattering
- Mass spectrometry
- Paramagnetic analyser
- Raleigh spectroscopy

18. Concerning patient temperature control in theatre:

- The greatest core temperature drop occurs in the first hour
- The greatest heat loss is due to radiation
- All heat loss occurs in the first hour
- Warmed and humidified gases have little effect on temperature maintenance
- Thermocouples are commonly used to measure patient temperature.

19. The following statements about pre-eclampsia are true:

- It is hypertension, proteinuria and pathological oedema at greater than 20 weeks gestation
- It causes hypovolaemia and a reduction in systemic vascular resistance
- It increases the risk of airway oedema
- It can be treated with intravenous magnesium
- If the blood clotting test is normal, no other blood tests are required before epidural insertion

20. With regard to cigarette smoking and general anaesthesia:

- Smoking can reduce available oxygen in haemoglobin by up to 25%
- Abstinence from smoking for 6 hours can usefully increase arterial oxygen levels
- 6 weeks of smoking abstinence leads to a reduction in respiratory mucus production
- The cardiovascular effects of smoking are caused by nicotine
- Smokers are less likely to suffer from post-operative