

ANSWERS TO MCQS

- 1.**
- F** CPD-A (citrate, phosphate, dextrose, adenine) is used to anti coagulate and preserve donated blood collected into sterile plastic bags.
 - F** SAG M (saline, adenine, glucose and mannitol) gives blood a shelf life of up to 35 days.
 - F** Red blood cells should be stored at 2-6 degrees celsius
 - T** Levels of 2,3 DPG fall rapidly with increasing duration of storage and this contributes to the reduced oxygen carrying capacity of blood when it is transfused
 - T** Red cell lysis causes an increasing potassium level in stored red cells
- 2.**
- F** MAC is the minimum alveolar concentration-(of volatile at equilibrium) at which 50% of subjects do not respond to a standard surgical stimulus (at STP)
 - F** It is inversely proportional to the oil-gas solubility and
 - F** not related to the blood-gas solubility coefficient- this relates to speed of onset
 - F** The MAC of halothane is usually quoted as less than 1.0, often as 0.7-0.8
 - T**
- 3.**
- F** Cricoid pressure was described by Sellick
 - F** The experimentally suggested pressure is around 35 Newtons
 - T** It could result in oesophageal rupture if applied during active vomiting
 - F** It will not prevent tracheal soiling in pharyngeal pouch- the pouch could be emptied prior to induction by the patient or using a nasogastric tube
 - F** It was first described in obstetric anaesthesia
- 4.**
- F** Fibreoptic intubation can be impossible in the presence of bleeding
 - F** It can be useful in upper airway obstruction and subsequent difficult airway
 - T** Many operators use sedation to facilitate awake fibreoptic intubation
 - F** It may be useful in this situation
 - T**
- 5.**
- F** Mapleson A and D (Lack and Bain) circuits are used co-axially, not B
 - F** The Mapleson D is seen in many anaesthetic rooms as its co-axial version as the Bain circuit. The Mapleson C has been used for resuscitation eg in A&E
 - F** Mapleson D circuits are actually more efficient when used for controlled ventilation (require < 1 x minute volume) rather than spontaneous.
 - F** The Ayres T piece requires 2-3 x minute volume
 - T** The Lack is a co-axial Mapleson A.
- 6.**
- F** HELLP syndrome (Hypertension, elevated liver enzymes, low platelets) is associated with pre-eclampsia. The low platelets can be a relative contra-indication to regional anaesthesia/ analgesia, depending on the actual level.
 - F** This is an elevated platelet level. Patients may be on aspirin or other drugs affecting platelet function.
 - T** Clopidogrel should be ceased 7-10 days prior to interventions such as epidurals as it will give a high risk of bleeding and could cause epidural haematoma.
 - F** If HELLP syndrome is not present.
 - F** This is a relative contra-indication, depending on clinical need and condition.
- 7.**
- T** The radial nerve lies behind the axillary artery in the axilla. Transfixion of the artery technique can be more reliable.
 - F** Interscalene blocks, whilst valuable in shoulder surgery, are known to often leave areas of the hand unanesthetised.

T This is probably due to the close relationship of the intercostal vessels to the nerves.

T

T The supine approach (Raj), the anterior (Beck), the posterior (Labat) and the lateral (Ichiangi).

8.

F It is suggested that sciatic nerve blocks are performed without adrenaline, to avoid compromise of the vascular supply of the vulnerable sciatic nerve.

F This is the Labat approach.

T True.

F The femoral nerve should also be blocked.

F Only the posterior approach will reliably block this nerve.

9.

T

F It is 3 compressions to 1 ventilation.

F They are performed just below the inter nipple line with either 2 finger compressions or using the thumbs to compress with the hands encircling the chest.

T A pink baby scores 2, a baby with some peripheral cyanosis 1, a pale or grey baby 0.

T This is true. Good oxygenation and ventilation should normally improve the heart rate in neonates.

10.

T They will not predict all difficult intubations.

T It should be more than 6.5 cm.

F It is usually an overbite that suggests a more difficult intubation.

T

F This is not possible, although many can be predicted with careful clinical examination and use of old notes!

11.

F There is an increase in stroke volume more than heart rate.

T This is true, due to progesterone-related airway dilatation.

F Acidity does not increase.

F Gastric emptying is delayed in labour.

F Total blood volume increases.

12.

F Usually they are Ig M and do not.

T It can also cause fever and anaemia.

F The figure is closer to 70%.

F Rhesus antibodies require exposure from an external source- eg Rhesus immunisation in pregnancy.

T This is true- eg sample labelling, errors in patient label checking.

13.

T

F The formula is age/4 plus 4, so for a 6 year old a size 5.5 tube would be expected.

F It is 10mcg/ kg which is 0.01mg/kg

F In infants it is more often 2mg/ kg.

F Propofol is not recommended as a long-term infusion for children after a number of deaths in intensive care related to accumulation of fatty deposits from lipids used in the propofol formulation.

14.

T This is to maintain cerebral perfusion against an increased intracranial pressure.

F CO₂ is usually maintained at the lower end of the normal range.

T True. The tube is therefore often taped into position.

F The preferred position to try and reduce ICP is to have the patient up to 30 degrees head up, to encourage venous drainage.

F Mannitol is usually reserved for delaying imminent coning rather than first line treatment.

15.

F This is not.

T This is often taken as a reliable clinical sign of adequate reversal.

T TOF ratio should be 0.7.

T This is true.

T Vital capacity has been used.

16.

T Only the desflurane vaporizer can be refilled like this.

F Plenum vaporizers have a high resistance. Drawovers do not.

F It is a drawover.

T This is because the vaporizer must be heated for adequate function.

T The Tec 6 is the desflurane vaporizer.

17.

T

T

T

F This is used to analyse oxygen levels, other gases are diamagnetic.

F

18.

T There is distribution of heat from core to periphery.

T There is also heat loss from evaporation and convection and some conduction.

F Heat will continue to be lost for longer than this.

F A great deal of energy is required for the body to warm and humidify dry cold gases, hence the widespread use of HME filters.

F Thermistors are used, thermocouples are not normally used clinically.

19.

T

F There is an increase in systemic vascular resistance, giving hypertension with intravascular depletion.

T

T

The association with HELLP syndrome and low platelets means that the full blood count should be checked to ensure platelet levels are safe for epidural insertion.

20.

T By carbon monoxide substituting for oxygen in haemoglobin, as it has a much greater affinity. This can occur in heavy smokers.

F 12 hours is the suggested time frame.

T

T Causing sympathetic stimulation, tachycardia etc.

T This is apparently true.

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