

**SPARROW HEALTH SYSTEM  
ANESTHESIA SERVICES**

***ANESTHESIA EXAM (four week rotation)***

Circle the best answer

1. During spontaneous breathing, volatile anesthetics
  - A. Increase tidal volume and decrease respiratory rate
  - B. Increase tidal volume and increase respiratory rate
  - C. Decrease tidal volume and decrease respiratory rate
  - D. Decrease tidal volume and increase respiratory rate
  - E. None of the above
  
2. Which of the following volatile anesthetics decrease systemic vascular resistance?
  - A. Halothane, sevoflurane, and isoflurane
  - B. Halothane and sevoflurane
  - C. Desflurane and halothane
  - D. Sevoflurane and isoflurane
  - E. Halothane only
  
3. Which of the following is a side effect of Diprovan (Propofol), an intravenous induction agent?
  - A. A decrease in systemic vascular resistance
  - B. A negative inotropic effect
  - C. Produces dose-dependent depression of ventilation
  - D. A decrease in cerebral blood flow (CBF)
  - E. All of the above
  
4. Which intravenous induction agent would best be chosen for a patient with hypovolemia secondary to trauma?
  - A. Propofol
  - B. Pentathol
  - C. Etomidate
  - D. Lidocaine
  - E. Ketamine
  
5. Potential effects of narcotics include all of the following **EXCEPT**
  - A. Bradycardia
  - B. Shivering
  - C. Respiratory depression
  - D. Biliary spasm
  - E. Emesis

6. All of the following statements about narcotics are correct **EXCEPT**:
- A. Normeperidine, principal metabolite of meperidine, can cause seizures.
  - B. Fentanyl is at least 75 times more potent than morphine.
  - C. Morphine is the standard for opioid potency comparison.
  - D. Opioids can cause sedation, respiratory depression, urinary retention, and nausea and vomiting.
  - E. There is no reversal agent for opioids.
7. Lidocaine can be given intravenously for
- A. Treatment or prevention of cardiac dysrhythmias
  - B. Attenuating heart rate and pressure responses associated with tracheal intubation
  - C. Prevention or treatment of increases in ICP associated with tracheal intubation
  - D. Minimizing coughing on intubation/extubation
  - E. All of the above
8. Bupivacaine can be used as an intravenous replacement for intravenous lidocaine.
- A. True
  - B. False
9. Potential adverse side effects of succinylcholine include all of the following **EXCEPT**?
- A. Cardiac dysrhythmias
  - B. Fasciculations
  - C. Trigger for malignant hyperthermia
  - D. Hyperkalemia
  - E. Hypoglycemia
10. All of the following statements concerning the train of four and its clinical use is true **EXCEPT**?
- A. The TOF ratio is the height of the first evoked twitch response divided by the height of the fourth evoked twitch response of a TOF stimulus
  - B. The TOF ratio reflects how much fade has occurred in neuromuscular blockade
  - C. A TOF ratio of 0.70 or more correlates with adequate recovery from neuromuscular blockade for tracheal extubation
  - D. The TOF ratio correlates with the degree of neuromuscular blockade
11. All of the following considerations influence the choice of anesthetic technique **EXCEPT**
- A. Patient's medical history
  - B. The number of times the patient has had anesthesia in the last month
  - C. Patient's preference
  - D. Site of surgery
  - E. Likelihood of aspiration
12. Patients with poorly controlled hypertension, diabetes mellitus with vascular complications, stable angina pectoris, prior myocardial infarction, or pulmonary disease that limits activity, suggest which physical classification status?
- A. PS-1
  - B. PS-2
  - C. PS-3
  - D. PS-4
  - E. PS-5

13. All the following are part of the airway evaluation **EXCEPT**:
- A. Mallampati classification
  - B. Dentition
  - C. Thyromental distance
  - D. Neck range of motion
  - E. Distance between corner of mouth and angle of mandible
14. All of the following are absolute indications for tracheal intubation during an operation **EXCEPT**
- A. Prevention of aspiration of gastric contents or blood
  - B. Need for frequent suctioning
  - C. Prone positioning
  - D. Patient with obstructive sleep apnea
  - E. Operative site near or involving the upper airway
15. Rapid sequence induction is indicated for all of the following **EXCEPT**:
- A. Recent meal
  - B. Hypothyroidism
  - C. Pregnancy
  - D. Bowel obstruction
  - E. Full stomach
16. The correct sequence for a rapid sequence induction is:
- A. Cricoid pressure, preoxygenate, diprovan, succinylcholine, intubate
  - B. Preoxygenate, cricoid pressure, pavillon, diprovan, intubate
  - C. Preoxygenate, cricoid pressure, diprovan, succinylcholine, intubate
  - D. Preoxygenate, cricoid pressure, diprovan, pavillon, intubate
17. Which spinal anesthetic will last the longest?
- A. Xylocaine
  - B. Marcaine with epinephrine
  - C. Tetracaine
  - D. Tetracaine with epinephrine
  - E. Ropivacaine
18. All of the following are side effects associated with spinal anesthesia **EXCEPT**:
- A. Hypotension
  - B. Total spinal
  - C. Bradycardia
  - D. Tachycardia
  - E. Hypoventilation
19. Whose responsibility is the intraoperative position of the anesthetized patient?
- A. Anesthesiologist
  - B. Surgeon
  - C. Nurses
  - D. All of the above

20. Which of the following peripheral nerves is most likely to become injured in patients who are under general anesthesia?

- A. Ulnar nerve
- B. Median nerve
- C. Radial nerve
- D. Common peroneal nerve
- E. Brachial plexus

21. All of the following are complications of central venous catheter placement **EXCEPT**:

- A. Arterial puncture
- B. Nerve injury
- C. Pneumothorax
- D. Cardiac dysrhythmias
- E. All of the above can occur

22. Factors that influence accuracy of pulse oximetry include all of the following **EXCEPT**:

- A. Hypotension
- B. History of COPD
- C. Hypothermia
- D. Ambient light
- E. A shivering patient

23. A 62 year old 100 kg male has pancreatic cancer and is undergoing a Whipple procedure. Fluid related factors for this patient include

- Has been undergoing anesthesia for 3 hours with a very large abdominal incision
- There have been 1500 mL of blood loss so far

How much crystalloid should theoretically have been administered to the patient so far to maintain euvolemia? (Of course in real life, UOP and central venous pressure would help guide your therapy)

- A. 12 L
- B. 8 L
- C. 5 L
- D. 2 L

24. Risks of receiving blood contaminated with Hepatitis C is:

- A. 1/1,000,000 to 2,000,000
- B. 1/30,000 to 1/150,000
- C. 1/500,000 to 1/1,000,000
- D. 1/5,000 to 1/10,000

25. If a patient under general anesthesia displays EKG changes consistent with myocardial ischemia, important measures to minimize ischemia would include (Best Answer)

- A. Slow heart rate, high blood pressure, high cardiac filling pressures (high CVP)
- B. Normal heart rate, high blood pressure, minimal cardiac filling pressures (low CVP)
- C. Fast heart rate, normal blood pressure, high cardiac filling pressures (high CVP)
- D. Slow heart rate, normal blood pressure, minimal cardiac filling pressures (low CVP)
- E. Normal heart rate, low blood pressure, high cardiac filling pressures (high CVP)

26. A 52 year old man with aortic stenosis is undergoing an elective cholecystectomy under general anesthesia. Immediately after induction with thiopental, 5 mg/kg IV, the arterial blood pressure decreases from 140/82 to 70/40 mmHg, and the heart rate increases from 82 to 130. Along with increasing IV fluids, what would be the most appropriate drug for treatment of hypotension in this patient?

- A. Ephedrine
- B. Isoproterenol
- C. Dopamine
- D. Phenylephrine
- E. Epinephrine

27. All of the following are evidence of increased intracranial pressure **EXCEPT**:

- A. Nausea and vomiting
- B. Tachycardia
- C. Hypertension
- D. Seizures
- E. Personality change

28. Airway management in the parturient can be complicated for all of the following reasons **EXCEPT**

- A. Edema of the upper airway tissues makes it susceptible to trauma and bleeding
- B. Insertion of the laryngoscope may be difficult due to the parturient's large breasts
- C. Quick desaturation due to reduced functional residual capacity
- D. Increased risk of aspiration
- E. All of the above are true

29. A 23 year old parturient becomes hypotensive and nauseous after a spinal anesthetic was performed. After instituting rapid infusion of IV fluids and confirmation of left uterine displacement, the best agent to raise to raise her blood pressure is

- A. Phenylephrine
- B. 15-methyl PGF<sub>2</sub>alpha
- C. Ephedrine
- D. Pitocin

30. All of the following are true concerning the pediatric airway compared with the adult airway **EXCEPT**

- A. The cricoid cartilage is located at C4 rather than C6 as in adults
- B. The tongue is relatively larger
- C. The larynx and glottic opening are more anterior and cephalad
- D. The narrowest part of the of the airway is at the vocal cords

31. One of the most important physiologic differences between neonates/infants and adults is oxygen consumption.

- A. True
- B. False

32. Most patients with epidurals receive a combination of local anesthesia and dilute narcotic for postoperative pain management. All of the following are risk factors for respiratory depression from neuraxial narcotics **EXCEPT**

- A. Elderly patients
- B. Patients not tolerant to opioids
- C. Patients receiving concomitant systemic opioids
- D. The use of neuraxial morphine
- E. All of the above are risk factors

33. All of the following are advantages of patient controlled analgesia **EXCEPT**

- A. High patient acceptance
- B. Improved titration of drug to patient needs
- C. No risk of respiratory depression
- D. Less total drug administered
- E. Less patient sedation

34. Have you returned the book that was checked out to you at the beginning of the rotation?

- A. No, I do not want credit for this rotation
- B. No, but I will AS SOON AS POSSIBLE
- C. Yes

## ROTATION EVALUATION

We are committed to providing the best learning experience possible with the Department of Anesthesia at Sparrow Hospital. Your input is appreciated and critical to our continued efforts.

1. What specialty(ies) are you considering?

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2. What aspects of the rotation did you find most useful?

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3. What aspects of the rotation did you most enjoy?

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4. Do you have any suggestions for improving the rotation?

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5. Is there anyone in particular you felt was instrumental to your learning on the rotation, or was a particularly gifted teacher?

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6. Have you returned the one book you checked out at the beginning of the rotation?

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