GUIDE TO NEURO CARE
REVIEW QUESTIONS

INTRODUCTORY TOPICS

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1. The following intracranial hemorrhage is not associated with trauma:
    a. Subdural hemorrhage
    b. Intraventricular hemorrhage
    c. Subarachnoid hemorrhage

2. Intracranial hemorrhage in the term infant is best identified by:
    a. CT or MRI scan
    b. Cranial ultrasound
    c. Presence of red blood cells in CSF

3. The following is true about subgaleal hemorrhage in the newborn:
    a. More common in preterm than term infant
    b. Risk factors include instrumented delivery
    c. Often clinically asymptomatic due to confining of hemorrhage within the skull but outside the brain

4. An appropriate loading dose of intravenous phenobarbital for a term infant weighing 3,500 grams is:
    a. 17.5 mg
    b. 140 mg
    c. 70 mg

5. The brain structure associated with balance and smooth muscle movements is the:
    a. Cerebellum
    b. Cerebral cortex
    c. Brainstem

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1. **Answer: B**. Subdural and subarachnoid hemorrhages are both associated with trauma, including instrumented delivery. (Source: Verklan MT. 2015. Neurologic disorders. In *Core Curriculum for Neonatal Intensive Care Nursing,* 5th ed., Verklan MT and Walden M, eds. St. Louis, Elsevier: 734–766); and Shah NA and Wusthoff CJ. 2016. Intracranial hemorrhage in the neonate. *Neonatal Network* 35(2): 67–72.)

2. **Answer: A**. Cranial ultrasound is more appropriately used in the preterm infant, because the most common types of hemorrhage can be visualized within the ultrasound acoustic window. For the most common intracranial hemorrhages seen in term infants, e.g. subdural hemorrhages, imaging with CT or MRI is highly accurate and therefore more appropriate. (Source: Gomella TZ, Cunningham, MD, and Eyal FG. 2013. *Neonatology: Management, Procedures, On-Call Problems, Diseases, and Drugs,* 7th ed., New York: McGraw-Hill Education; and Shah NA and Wusthoff CJ. 2016. Intracranial hemorrhage in the neonate. *Neonatal Network* 35(2): 67–72.)

3. **Answer: B**. Subgaleal hemorrhages are less common in preterm infants; this is partially attributable to less deforming of the smaller preterm skull during delivery. While not all infants with subgaleal hemorrhages will develop symptoms, all must be carefully monitored due the risk of hypovolemia from extensive blood loss into the subgaleal space. Mechanically assisted delivery strategies such as vacuum or forceps may create external shearing forces on fragile veins, posing a risk for this type of hemorrhage. (Source: Gomella TZ, Cunningham MD, and Eyal FG. 2013. *Neonatology: Management, Procedures, On-Call Problems, Diseases, and Drugs*, 7th ed., New York: McGraw-Hill Education; and Shah NA and Wusthoff CJ. 2016. Intracranial hemorrhage in the neonate. *Neonatal Network* 35(2): 67–72.)

4. **Answer C**. An appropriate loading dose of phenobarbital is 15–20 mg/kg as a single or divided dose. Choice A is the equivalent of 5 mg/kg, insufficient as a loading dose; choice B is equivalent to 40 mg/kg, excessive for the initial loading dose. The most appropriate is choice C, equivalent to 20 mg/kg at this infant's weight. (Source: Gomella TL, Cunningham MD, and Eyal FG. 2013. *Neonatology: Management, Procedures, On-Call Problems, Diseases, and Drugs.* New York, McGraw Hill Education; and Zeller B and Giebe J. 2015. Pharmacologic management of neonatal seizures. *Neonatal Network* 34(4): 239–244.)

5. **Answer: A**. The cerebellum is responsible for integration of muscle function and balance, and supports smooth, purposeful movements. (Source: Verklan MT. 2015. Neurologic disorders. In *Core Curriculum for Neonatal Intensive Care Nursing*, 5th ed., Verklan MT and Walden M, eds. St. Louis, Elsevier: 734–766.)