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1. The most common response to a pediatric patient’s increasing metabolic needs is increased:
   a. Temperature
   b. Respirations
c. Blood pressure
d. Heart rate

2. What is the absorption difference between pediatric and adult patients for orally administered drugs?
   a. Adults absorb orally administered drugs more quickly than children
   b. Children and adults dissolve and absorb oral drugs at the same rate
c. Children absorb orally administered drugs more quickly than adults
d. A child’s stomach processes its contents too quickly to absorb oral drugs

3. The blood-brain barrier is designed to prevent:
   a. Red and white blood cells from entering the brain cells
   b. Sugars, toxins and polarized proteins from entering the brain cells
c. Proteins and polarized molecules from entering the brain cells
d. Non-polarized molecules, sugars and proteins from entering the brain cells

4. You are preparing to administer a fluid bolus to a hypotensive 20-kg 6-year-old female with dehydration from fever. How much fluid would you give this patient?
   a. 100 mL
   b. 250 mL
c. 400 mL
d. 500 mL

5. How does a pediatric patient’s blood-brain barrier compare to that of an adult?
   a. The blood-brain barrier is stronger in pediatric brains than adult brains
   b. The blood-brain barrier is stronger in adult brains than pediatric brains
c. The blood-brain barrier is fully developed at birth and doesn’t degrade
d. The blood-brain barrier is weak at birth but fully developed by age 5

6. You are administering to a 4-year-old female with seizures a benzo-diazepine that has side effects of respiratory depression and sedation because of its effects on the brain. In comparison to an adult receiving the equivalent dose, you anticipate that:
   a. There will likely be less respiratory depression and sedation compared to an adult
   b. There will likely be about the same level of respiratory depression and sedation
c. There will likely be no reaction, because children almost never experience drug side effects
d. There will likely be more respiratory depression and sedation compared to an adult

7. Which of the following statements about pediatric pain is true?
   a. Children experience less pain than adults
   b. Children are more likely to admit they have pain
c. Children cannot receive narcotic pain control drugs
d. Children may not admit how much pain they have

8. You are evaluating a 1-year-old 12-kg male whose mom called 9-1-1 after she found him with several pills in his hands and mouth. Medical control has ordered activated charcoal based on estimated body weight, which you are preparing to mix. Which dose is appropriate?
   a. 6 g
   b. 24 g
c. 100 g
d. 12 g

9. Which of the following is a true statement about pediatric drug administration?
   a. Children require larger doses, based on weight, administered less frequently than adults
   b. Children require smaller doses, based on weight, administered more frequently than adults
c. Children require smaller doses, based on weight, administered less frequently than adults
d. Children require larger doses, based on weight, administered more frequently than adults

10. Which of the following patients likely has the fastest rate of drug metabolism?
    a. A neonate born at 32 weeks
    b. A 3-year-old child
    c. A 15-year-old
    d. A 25-year-old

11. When a pediatric patient needs to improve cardiac output, he does so by:
    a. Increasing heart rate
    b. Heart squeezing harder
c. Increasing blood pressure
    d. Releasing more blood with each heartbeat

12. What is the best way to evaluate pain in a patient who is too young to speak to you?
    a. Estimate the pain level based on vital signs
    b. Estimate pain with the Wong-Baker Faces Scale
    c. Estimate pain with the FLACC Pain Scale
    d. Estimate pain with a 0–10 pain scale

13. Which of the following is a non-pharmacologic pain management technique?
    a. Distraction
    b. Oxygen
c. Acetaminophen
d. Morphine

14. A 3-year-old 18-kg male has suffered second and third degree burns after tripping and falling into a campfire. He has been pulled out and is screaming. Your first action to control this patient’s pain is to:
    a. Have a paramedic administer morphine IV
    b. Apply several icepacks to the burning areas
    c. Cool the patient with water to stop the burning
d. Cover the burns with dry roller gauze

15. You are evaluating a 4-year-old female whose father called 9-1-1 because she hasn’t eaten in four days, has had nausea and vomiting, and is not acting right. When you evaluate her, she seems weak, uninterested in her surroundings and lethargic. Which of the following sets of vital signs would you suspect?
    a. Pulse 80, respiratory rate 30, blood pressure 124/70
    b. Pulse 60, respiratory rate 40, blood pressure 100/54
c. Pulse 140, respiratory rate 24, blood pressure 70/50
d. Pulse 140, respiratory rate 34, blood pressure 90/60

ALS QUESTIONS

16. What would the maintenance IV fluid rate be for a 25-kg patient?
    a. 65 mL/hr
d. 90 mL/hr
    b. 45 mL/hr
c. 100 mL/hr

17. When an appropriate weight-based dose of acetaminophen is given to an adult and a child, how does the body fluid reservoir affect dosing?
    a. The acetaminophen is more dilute in the adult because there is more fluid in the body
    b. The acetaminophen is more dilute in the child because they have a greater percent of water
c. Given based on weight, the acetaminophen is equally concentrated in the adult and child
d. The acetaminophen is more concentrated in the adult because they are given a stronger dose

18. A 1- year-old 18-kg male has been ejected from his car seat in a motor vehicle accident and suffered a large laceration on his forehead. When you arrive on scene, you control the bleeding and estimate that there is 200 mL of blood on the ground. This represents roughly what percent of the patient’s blood supply?
    a. 10%  b. 25%
c. 50%  d. 75%

19. In hypovolemia, how does compensation with preload change for a pediatric patient compared to an adult?
    a. A pediatric patient can increase preload more effectively than an adult
    b. An adult patient decreases preload in hypovolemia; kids increase preload
c. A pediatric patient cannot effectively increase preload like an adult
d. Adults increase preload, kids decrease preload to improve blood pressure

20. You are preparing to administer dopamine to a 15-kg 2-year-old male who is in septic shock. Using the rule of 6’s, how much drug should you put in a 100-mL bag, and what drip rate would you use to administer 5 mcg/kg/min?
    a. 15 mg, 5 drips per minute
    b. 15 mg, 15 drips per minute
c. 90 mg, 15 drips per minute
d. 90 mg, 5 drips per minute
Answers to Pediatric Pharmacology CE Review, EMS Magazine, June 2010

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ALS QUESTIONS

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