MATCHING KEY TERMS

Match the term with the correct definition.

1. ______ asphyxia
2. ______ bilirubin encephalopathy
3. ______ neonatal abstinence syndrome
4. ______ persistent pulmonary hypertension
5. ______ transient tachypnea of the newborn

   a. Brain damage resulting from deposits of bilirubin
   b. Vasoconstriction of the infant’s pulmonary vessels after birth
   c. Insufficient oxygen and excess carbon dioxide in the blood
   d. Condition of rapid respirations caused by inadequate absorption of fetal lung fluid
   e. Signs exhibited by the newborn exposed in utero to maternal substance abuse

KEY CONCEPTS

1. What is the difference between primary and secondary apnea? Which is more ominous? Why?

2. Compare these newborn respiratory complications.

<table>
<thead>
<tr>
<th></th>
<th>Transient Tachypnea of the Newborn</th>
<th>Meconium Aspiration Syndrome</th>
<th>Persistent Pulmonary Hypertension</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cause(s)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Manifestations</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Therapeutic</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>management</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Nursing</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>considerations</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
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3. What is the relationship among bilirubin, jaundice, kernicterus, and bilirubin encephalopathy?

4. Why is phototherapy begun at lower bilirubin levels if the infant is preterm rather than full-term?

5. Formulate a simple explanation about phototherapy to give to parents of a jaundiced newborn. Include in your explanation why the treatment is needed, how it works, and what precautions are needed to prevent injury.

6. What is the purpose of an exchange transfusion?

7. Determine which neonatal infection(s) each of these statements refers to (see Table 30-1, Common Infections in the Newborn).
   a. Infection is preventable through immunization.
   b. This is typically manifested by white patches in the mouth that resemble milk curds.
   c. Mental retardation is associated with the infection.
   d. Antibiotics may be given to high-risk mothers in labor or to an infant after birth.
   e. Antibiotic prophylaxis given soon after birth can prevent blindness.
   f. Maternal antiviral treatment during pregnancy can reduce transmission to infant.

8. List factors that make newborns more vulnerable to sepsis neonatorum.

9. Compare early- and late-onset sepsis.
10. How does the newborn manifest infection compared with an older child? Why is it particularly important to identify newborn sepsis early?

11. Why are tests for drug levels often needed for antibiotics?

12. How can diabetes cause both intrauterine growth restriction and large-for-gestational-age infants?

13. Explain these complications that may occur in the infant of a diabetic mother.
   a. Respiratory distress syndrome
   b. Hypoglycemia
   c. Hypocalcemia
   d. Polycythemia

14. Describe the typical appearance of a macrosomic infant of a diabetic mother (IDM).

15. List signs of neonatal hypoglycemia.

16. Why does the IDM with polycythemia require adequate hydration?

17. List infant behaviors that should cause a nurse to suspect prenatal drug exposure.

18. Why are gavage feedings sometimes needed for the drug-exposed infant, even if born at term?
19. Early screening and treatment for phenylketonuria (PKU) are necessary to prevent __________________________.

CRITICAL THINKING EXERCISES

1. Imagine that you are the nurse caring for an infant who requires resuscitation at birth. List the things you would want to have readily available. Write out your actions and what you think the actions of other team members will be from the time the infant is brought to the warmer until he or she is breathing adequately.

2. How might the actions in the previous scenario change if there were thick meconium in the amniotic fluid?

3. Compare an infant of a diabetic mother with other newborns. What similarities and differences do you note? Can any of these be explained by how well the woman’s diabetes was controlled during pregnancy?

4. Observe the reception the mother of an infant exposed to drugs prenatally receives when she visits the nursery. Are the nurses’ reactions positive or negative? If they are not positive, what nursing actions might better benefit the mother?

CASE STUDY

Steven is 12 hours old. He was born vaginally with forceps following a 16-hour labor. He has bilateral cephalhematomas. His mother is Rh negative and Steven is Rh positive. His bilirubin level was 7.5, and his Coombs’ test was positive on a cord blood sample.

1. Which of the information in the previous scenario indicates a pathologic condition?

2. What other assessments should be performed?

Twenty-four hours after birth, Steven’s bilirubin level is 13.5, and his skin is jaundiced.

3. What treatment does Steven require at this time? How does the treatment affect his bilirubin level?

4. Identify the required nursing interventions for Steven once treatment for jaundice has begun.

5. What are the possible side effects of this treatment?
Stevens bilirubin level continues to rise and becomes dangerously high.

6. What complication can occur with dangerously high levels of bilirubin?

7. What treatment should Steven receive at this time to lower his bilirubin levels?

8. What blood type should be used for Steven’s treatment and why?

9. How is an exchange transfusion performed?

10. What are the expected results of the transfusion?

11. What are some possible complications of an exchange transfusion?

12. What is the nurse’s role in an exchange transfusion?

REVIEW QUESTIONS

Choose the correct answer.

1. Naloxone for neonatal use is supplied in 1-mg/ml vials. The correct volume of naloxone for a neonate weighing 5 pounds, 2 ounces is approximately
   a. 0.1 ml.
   b. 0.2 ml.
   c. 0.3 ml.
   d. 0.4 ml.

2. If meconium is present in the amniotic fluid, the infant’s mouth and pharynx should be suctioned after the head is born but before the rest of the body. The primary reason for this action is to
   a. limit transfer of infectious substances to the lower airways.
   b. reduce the likelihood that secondary apnea will occur.
   c. prevent persistence of abnormal cardiac shunts.
   d. avoid drawing meconium into the lower airways with the first breath.
3. Infants receiving phototherapy should be fed every 2 to 3 hours to
   a. promote excretion of bilirubin from the bowel.
   b. prevent development of hypothermia.
   c. increase the life span of fetal erythrocytes in the blood.
   d. increase renal and liver perfusion.

4. The nurse notes that a 24-hour-old infant is lethargic and her temperature is below normal, a change from an earlier assessment that was normal. Her mother states that she did not breastfeed well and that the infant spit up the small amount she had ingested. The nurse’s next action should be to
   a. reassure the mother that infants are often sluggish this soon after birth.
   b. feed the infant formula to determine accurately how much intake she is getting.
   c. determine whether there is jaundice over the thoracic and abdominal areas.
   d. assess for signs of sepsis and report assessments to the physician.

5. A mother who has diabetes is concerned because her 36-hour-old baby is “so yellow.” She tells the nurse that she thought her baby’s problems were over when his blood glucose stabilized even though he was smaller than expected. The best nursing response is that
   a. her baby’s liver is also less mature than expected and cannot handle normal red blood cell breakdown.
   b. her baby lived in a lower-than-normal oxygen environment during pregnancy and must eliminate more red blood cells.
   c. the baby’s high blood glucose levels immediately after birth caused a slight dehydration that increases jaundice.
   d. early feedings slowed elimination of meconium that would have also eliminated excess bilirubin.

6. The nurse notes that a 12-hour-old infant is jittery, but his blood glucose level is normal. The infant seems hungry but takes only ¼ ounce of formula with difficulty. The nurse’s next action should be to
   a. recheck the glucose level 30 minutes after the feeding.
   b. apply a bag to collect the next sample of urine.
   c. limit infant contact with the mother for the next 12 hours.
   d. swaddle the infant tightly and try to feed more formula.

7. Choose the caregiver teaching that is most appropriate for the infant who was exposed to cocaine prenatally.
   a. Breastfeeding is especially important to the infant’s recovery from prenatal drug exposure
   b. Align the infant’s face with yours to allow prolonged eye contact that better facilitates bonding
   c. Do not burp your baby until at least 1 ounce of formula has been taken
   d. Swaddle your baby with arms and legs flexed to reduce startling