

NICU INK®

CONTINUING EDUCATION COURSE

Neonatal Surgical Procedures: A Guide for Care and Management—Course 1

Test Directions

1. Please fill out the answer form and include all requested information. We are unable to issue a certificate without complete information.
2. All questions and answers are developed from the information provided in the book. Select the *one best answer* and fill in the corresponding circle on the answer form.
3. Mail the answer form to: NICU INK, 2220 Northpoint Parkway, Santa Rosa, CA 95407-7398 with a check for \$75.00 (processing fee) made payable to NICU INK. This fee is non-refundable.
4. Retain the test for your records.
5. You will be notified of your test results within 6–8 weeks.
6. If you pass the test (80%) you will earn 25 contact hours for the course, 5 hours pharmacology credit. Provider, Neonatal Network, approved by the California Board of Registered Nursing, Provider #CEP 6261, for 25 contact hours; Iowa Board of Nursing, Provider #189; and Florida Board of Nursing, Provider #FBN 3218, content code 2505. Neonatal Network, Provider #04-296795-A is an approved provider of continuing nursing education by the Texas Nurses Association, an accredited approver by the American Nurses Credentialing Center's Commission on Accreditation. This activity meets Type I criteria for mandatory continuing education requirements toward relicensure as established by the Board of Nurse Examiners for the State of Texas.
7. An answer key is available upon request with completion of the exam.

Objectives

1. Describe the clinical presentation of cystic hygroma.
2. Discuss treatment of a congenital diaphragmatic hernia if bowel integrity is not a concern.
3. Explain the basis of postoperative care for the neonate with a cardiac anomaly.
4. List factors that can trigger necrotizing enterocolitis.
5. Discuss complications of a Kasai portoenterostomy.
6. Discuss the preoperative care of an infant with classic bladder exstrophy.
7. Explain the care of a ventriculoperitoneal shunt.
8. Describe the clinical presentation of brachael plexus palsy.
9. Elucidate the goal of postoperative fluid administration.
10. List potential options for pain alleviation in the NICU patient.

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1. Arteriovenous malformations (AVM) occur most commonly in the ____ lobe.
 - a. frontal
 - b. occipital
 - c. parietal

2. The most common presenting symptom in infants with an AVM is:
 - a. bulging fontanel
 - b. congestive heart failure
 - c. intraventricular hemorrhage

3. In neonates with cystic hygroma, sudden enlargement can be precipitated by:
 - a. immunization
 - b. introduction of milk feeding
 - c. upper respiratory tract infection

4. In what spinal region does the majority of cystic hygromas occur?
 - a. cervical
 - b. thoracic
 - c. lumbar

5. Which of the following syndromes are associated with cystic hygroma?
 - a. Down
 - b. Sturge-Weber
 - c. Turner

6. Following surgical resection in which fluid-filled cyst remnants remain, what percentage of cystic hygromas will recur?
 - a. 50
 - b. 75
 - c. 100

7. Vascularization of the developing retina begins at week ____ of gestation.
 - a. 16
 - b. 20
 - c. 24
8. The presence of tortuous and dilated vessels in the posterior pole of the fundus is referred to as:
 - a. cicatricial changes
 - b. Plus disease
 - c. Stage 4 ROP
9. The first ROP screening examination for premature infants should take place at ____ weeks of postgestational age.
 - a. 30
 - b. 32
 - c. 34
10. For infants with ROP, cryotherapy is preferred over laser surgery when the:
 - a. infant is <1,000 gm
 - b. infant is >42 weeks corrected age
 - c. retina cannot be visualized
11. Failure of the third and fourth branchial pouches to develop results in:
 - a. abnormal development of the thymus
 - b. mandibular hypoplasia
 - c. ocular abnormalities
12. What percentage of children with choanal atresia has other associated anomalies?
 - a. 25
 - b. 50
 - c. 75
13. The drug mitomycin-C is used in the postoperative treatment of choanal atresia to prevent:
 - a. bleeding
 - b. infection
 - c. scar tissue formation
14. In which of the following populations is the incidence of cleft lip and palate highest?
 - a. African-American
 - b. Asian
 - c. Caucasian
15. In neonates with cleft lip and palate, primary closure of the lip is done at ____ months of age.
 - a. 2–3
 - b. 4–5
 - c. 6–7
16. Robin sequence is characterized by micrognathia, glossoptosis, and _____.
 - a. cleft lip
 - b. macroglossia
 - c. soft palate cleft
17. The optimal position for a newborn with Robin sequence is:
 - a. prone
 - b. side-lying
 - c. supine
18. The severe form of laryngomalacia results in:
 - a. cardiomyopathy
 - b. failure to thrive
 - c. reactive airway disease
19. In 80 percent of infants, laryngomalacia is accompanied by:
 - a. apnea
 - b. anomalies of the jaw and neck
 - c. gastroesophageal reflux
20. Seventy-five percent of laryngeal webs occur between the vocal cords or:
 - a. above the glottis
 - b. below the glottis
 - c. at the level of the glottis
21. Characteristics of unilateral vocal cord paralysis include:
 - a. feeding difficulties
 - b. respiratory distress
 - c. stridor
22. Which of the following has been shown to result in secondary craniosynostosis?
 - a. hypothyroidism
 - b. microcephaly
 - c. trisomy 21
23. The area of the lung most commonly affected by congenital lobar emphysema is the:
 - a. left upper lobe
 - b. right middle lobe
 - c. right upper lobe
24. Bronchogenic cyst most commonly results from:
 - a. absent bronchial communication
 - b. duplication of lung tissue
 - c. vascular anomalies
25. Surgical excision of bronchogenic cysts is recommended because of an increased risk of:
 - a. congestive heart failure
 - b. malignancy
 - c. pulmonary hypertension
26. Which type of congenital cystic adenomatoid malformation (CCAM) occurs most commonly?
 - a. I
 - b. II
 - c. III
27. The distribution of CCAM lesions can be described as:
 - a. more common in the left lung
 - b. more common in the right lung
 - c. occurring equally in both lungs
28. Which of the following neonatal conditions is associated with CCAM?
 - a. cleft lip and palate
 - b. hydrocephalus
 - c. large for gestational age
29. Extralobar sequestration is characterized by the presence of:
 - a. normal bronchial connections
 - b. a right-sided lesion
 - c. a separate pleural membrane
30. A hypoplastic lung lobe with an anomalous blood supply is known as a/an:
 - a. acinar dysplasia
 - b. scimitar variant
 - c. Type IV CCAM

31. A prenatal finding that supports the diagnosis of bronchopulmonary sequestration is:
 - a. hydrops fetalis
 - b. oligohydramnios
 - c. reduced fetal movement
32. The proposed cause of pulmonary lymphangiectasia is a/an:
 - a. failure of pulmonary lymphatic regression
 - b. intrauterine viral infection
 - c. vascular accident
33. Perinatal findings associated with congenital diaphragmatic hernia (CDH) include:
 - a. meconium stained amniotic fluid
 - b. pleural effusion
 - c. polyhydramnios
34. In immediate management of an infant with CDH, the optimal position to place the infant is:
 - a. prone
 - b. side-lying
 - c. supine
35. Clinical predictors of a successful outcome in CDH include a preoperative:
 - a. pH ≥ 7.25
 - b. PO₂ >50 mmHg
 - c. use of nitric oxide
36. Complications of CDH include:
 - a. gastroesophageal reflux disease
 - b. intracranial hemorrhage
 - c. renal failure
37. Acquired diaphragmatic eventration results from injury to the:
 - a. brachial plexus
 - b. phrenic nerve
 - c. vagus nerve
38. Syndromes or sequences associated with chylothorax include:
 - a. Potter
 - b. Robin
 - c. Turner
39. Dietary strategies aimed at managing chylothorax include the use of:
 - a. hydrolysed formula
 - b. long-chain polyunsaturated fatty acids
 - c. medium-chain triglycerides
40. The "sail sign" occurs in infants with:
 - a. pneumomediastinum
 - b. pneumopericardium
 - c. pneumothorax
41. The risk of death in low birth weight infants following an air leak is increased by ____ fold.
 - a. one to two
 - b. three to four
 - c. five to six
42. In the fetus, circulation is established by day ____ of gestation.
 - a. 22
 - b. 32
 - c. 42
43. The optimal time to identify congenital heart disease *in utero* using echocardiography is at ____ weeks of gestation.
 - a. 14–18
 - b. 18–24
 - c. 24–28
44. Which of the following alerts the care provider to an increased risk of CHD? The infant:
 - a. has acrocyanosis, grunting, and retractions
 - b. has an increased respiratory rate, but no distress
 - c. is pale with a respiratory rate of 40 breaths per minute
45. A boot-shaped heart on chest x-ray is diagnostic of:
 - a. tetralogy of Fallot
 - b. total anomalous pulmonary venous connection
 - c. transposition of the great vessels
46. Which of the following is used to distinguish between intrapulmonary and intracardiac shunting?
 - a. arterial blood gas
 - b. chest x-ray
 - c. hyperoxia test
47. The recommended initial dose of prostaglandin E₁ (PGE₁) is ____ mcg/kg/minute.
 - a. 0.05–0.1
 - b. 0.15–0.2
 - c. 0.25–0.3
48. In an infant with a PDA, the murmur is best heard at the:
 - a. midaxillary line
 - b. left upper sternal border
 - c. right lower sternal border
49. Indomethacin treatment for a PDA should temporarily be suspended if:
 - a. the cardiac murmur disappears
 - b. hypernatremia develops
 - c. urine output falls below 1 ml/kg/hour
50. Which of the following is found in an infant with tetralogy of Fallot?
 - a. atrial septal defect
 - b. coarctation of the aorta
 - c. right ventricular hypertrophy
51. A drug that may be used to treat a "tet" spell is:
 - a. adenosine
 - b. digoxin
 - c. propranolol
52. Which of the following statements about heart murmurs best describes an infant with D-transposition? The murmur is:
 - a. high-pitched and musical
 - b. holisystolic and harsh
 - c. rarely present
53. The shape of the heart in infants with D-transposition is commonly described as:
 - a. balloon shaped
 - b. egg-on-a-string
 - c. snowman

54. Which of the following defects is associated with hypoplastic left heart syndrome?
 a. coarctation of the aorta
 b. pulmonary atresia
 c. truncus arteriosus
55. In stabilizing an infant with hypoplastic left heart syndrome, the nurse should anticipate an order for:
 a. digoxin
 b. propranolol
 c. PGE₁
56. In cases of total anomalous pulmonary venous connection, the pulmonary veins empty into the:
 a. coronary sinuses
 b. left atrium
 c. right atrium
57. The H-type tracheoesophageal fistula accounts for what percentage of gastrointestinal tract defects?
 a. 2
 b. 4
 c. 7
58. Which of the following findings is associated with tracheoesophageal fistula?
 a. double-bubble visible on x-ray
 b. meconium-stained liquor
 c. polyhydramnios
59. In infants with esophageal atresia, the presence of which of the following is a predictor of a long gap between the proximal and distal portions of the esophagus?
 a. cardiovascular anomalies
 b. imperforate anus
 c. thirteen pairs of ribs
60. Medical management of gastroesophageal reflux includes administration of:
 a. cimetadine
 b. omeprazole
 c. theophylline
61. Which of the following is a risk factor for the development of gastroschisis?
 a. congenital infection
 b. maternal diabetes
 c. teen pregnancy
62. In an infant with gastroschisis, the infant should be placed:
 a. prone
 b. right side-lying
 c. supine
63. What percentage of infants with omphalocele has associated anomalies?
 a. 30–50
 b. 50–70
 c. 70–90
64. Which of the following infants is at highest risk for pyloric stenosis?
 a. firstborn male
 b. female born to a multiparous mother
 c. second twin
65. Duodenal atresia is thought to develop in week _____ of gestation.
 a. 4
 b. 6
 c. 8
66. The majority of infants with meconium ileus are eventually diagnosed with:
 a. cystic fibrosis
 b. Hirschsprung's disease
 c. myotonic dystrophy
67. The cecum is normally found in the _____ quadrant of the abdomen.
 a. left lower
 b. right lower
 c. right upper
68. The optimal diagnostic test for malrotation is a:
 a. barium enema
 b. lateral decubitus x-ray
 c. upper GI with contrast
69. Infants with Hirschsprung's disease have an increased risk of:
 a. hearing loss
 b. imperforate anus
 c. renal anomalies
70. The presence of which of the following findings confirms the diagnosis of necrotizing enterocolitis?
 a. bilious emesis
 b. fecal occult blood
 c. pneumatosis intestinalis
71. Defects of which system most commonly accompany anorectal anomalies?
 a. cardiac
 b. genitourinary
 c. skeletal
72. Fifty to 60 percent of inguinal hernias are:
 a. bilateral
 b. left-sided
 c. right-sided
73. Bile is produced in the:
 a. gallbladder
 b. liver
 c. pancreas
74. The most common type of biliary atresia is:
 a. complete intrahepatic
 b. complete extrahepatic
 c. extrahepatic hypoplasia
75. Absence of bile in the duodenum results in a deficiency of which of the following vitamins?
 a. B₁₂
 b. C
 c. K
76. One of the theories on the etiology of biliary atresia suggests that it is caused by infection with:
 a. cytomegalovirus
 b. *Neisseria gonorrhoea*
 c. Candida
77. Clinical signs of biliary atresia include:
 a. anemia
 b. bronze-colored skin
 c. tar-colored stools
78. The gold standard for diagnosing biliary atresia is:
 a. endoscopic retrograde cholangiopancreatogram
 b. magnetic resonance imaging
 c. scintigraphy

79. Neuroblastoma is most commonly located in the:
a. abdomen c. thorax
b. pelvis
80. Studies suggest that the risk of neuroblastoma is increased following prenatal exposure to:
a. antidepressants c. phenobarbital
b. narcotics
81. For patients without the autosomal dominant form of neuroblastoma, the mean age of diagnosis is ____ months.
a. 12 c. 32
b. 22
82. Treatment for Stages 1 and 2 neuroblastoma includes:
a. chemotherapy c. radiation
b. excision of the tumor
83. At one week of age, what percentage of cardiac output is received by the kidney?
a. 6 c. 12
b. 9
84. Antidiuretic hormone is secreted by the:
a. adrenal gland c. posterior pituitary
b. hypothalamus
85. Which part of the kidney is responsible for the majority of potassium reabsorption?
a. distal tubule c. collecting duct
b. loop of Henle
86. Perinatal exposure to which of the following drugs is associated with delayed voiding?
a. betamethasone c. terbutaline
b. magnesium sulfate
87. Ninety-five percent of posterior urethral valves are of this type.
a. I c. III
b. II
88. In cases of testicular torsion, it is estimated that spermatogenesis is lost after ____ hours.
a. 4 c. 8
b. 6
89. Urachal cyst infections are most commonly caused by:
a. *Escherichia coli*
b. *Enterobacter cloacae*
c. *Staphylococcus aureus*
90. What percentage of males with bladder exstrophy also has inguinal hernias?
a. 40 c. 80
b. 60
91. Infants with cloacal exstrophy are usually ____ for gestational age.
a. appropriate
b. large
c. small
92. Up to 50 percent of infants with cloacal exstrophy also have:
a. pulmonary hypoplasia
b. short-bowel syndrome
c. truncus arteriosus
93. With which of the following conditions is secondary megaureter associated?
a. hypospadias c. vaginal prolapse
b. neurogenic bladder
94. The mortality rate for infants with prune belly syndrome is ____ percent.
a. 20 c. 60
b. 40
95. Orthopedic anomalies common to prune belly syndrome include:
a. clubfoot c. polydactyly
b. hemivertebrae
96. The most common congenital defect of the urinary tract is:
a. megaureter
b. posterior urethral valves
c. ureteropelvic junction obstruction
97. A common presenting symptom in cases of ureteropelvic junction obstruction is:
a. hypernatremia
b. neurogenic bladder
c. urinary tract infection
98. Which of the following maternal conditions is associated with congenital ovarian cysts?
a. diabetes
b. heart disease
c. systematic lupus erythematosus
99. The neonate produces ____ ml/day of cerebrospinal fluid (CSF).
a. 100 c. 300
b. 200
100. Which of the following structures is responsible for the absorption of CSF?
a. arachnoid villi c. lateral ventricles
b. germinal matrix
101. Which of the following malformations is commonly found with spinal cord defects?
a. aqueductal stenosis
b. Chiari deformity
c. Dandy Walker syndrome
102. The mechanism responsible for postmeningitis hydrocephalus is:
a. development of ventricular cysts
b. narrowing of the aqueduct of Sylvius
c. obliteration of the arachnoid villa
103. Which of the following is a contraindication to the placement of a long-term shunt?
a. blood in the CSF
b. presence of cardiac lesions
c. ventricular obstruction

104. What percentage of ventriculoperitoneal shunts becomes infected?
a. 0.5–4 c. 13–20
b. 5–12
105. Thirty percent of infants with myelomeningocele have:
a. atrial septal defects
b. clubfoot
c. scoliosis
106. At what level does the spinal cord normally end in the term infant?
a. L1–2 c. L5–6
b. L3–4
107. Which of the following is characteristic of an innocent coccygeal dimple? It:
a. is located at the sacrococcygeal junction
b. is covered with a tuft of hair
c. points in a caudal direction
108. The incidence of encephalocele is 1 in _____ live births.
a. 3,000 c. 7,000
b. 5,000
109. In skull fractures, which of the following is an indication for surgery?
a. CSF leak
b. depressed skull fracture
c. overlying cephalohematoma
110. Which of the following types of hemorrhages is associated with the largest potential blood loss?
a. intraventricular c. subgaleal
b. subarachnoid
111. Which of the following can result in spinal cord injury in a newborn?
a. air embolism
b. congenital hip dysplasia
c. pleural effusion
112. In cases of transection of the spinal cord, which of the following is the best predictor of outcome?
a. breathing movements on day 1
b. presence of diaphragmatic paralysis at one week
c. rate of recovery of sphincter control
113. Webbing between the fingers disappears during week _____ of gestation.
a. 8 c. 12
b. 10
114. Fetal movements become apparent to the mother at _____ weeks of gestation.
a. 14–16 c. 21–24
b. 17–20
115. Which of the following is associated with a lesser risk of limb reduction defects?
a. first pregnancy
b. singleton gestation
c. prenatal use of vitamins
116. Which of the following substances are known to be teratogenic to the limbs?
a. alcohol c. tetracycline
b. phenytoin
117. Limb reductions resulting from amniotic bands most commonly occur at _____ weeks of gestation.
a. 6.6–7.5 c. 8.6–9.5
b. 7.6–8.5
118. Fetal deformities caused by amniotic bands are more common in women who:
a. are diabetic
b. conceive soon after discontinuing oral contraceptives
c. have a previous child with an amniotic band deformity
119. Type I radial dysplasia is characterized by:
a. good thumb support
b. hand deviation toward the radius
c. rigid elbow
120. In the presence of talipes equinovarus the Achilles tendon is:
a. loose c. unaffected
b. shortened
121. Which ethnic group has the lowest incidence of clubfoot?
a. African-American
b. Asian
c. Caucasian
122. Congenital hip dysplasia is more common in infants who are:
a. first born
b. in transverse lie position
c. small-for-gestational age
123. The ratio of females to males with developmental dislocation of the hips is:
a. 1:1 c. 4:1
b. 2:1
124. Erb's palsy (upper plexus palsy) is a result of injury to nerve roots at:
a. C5–C6 c. C8–T1
b. C5–T1
125. Which of the following electrolytes is found predominantly in intracellular water?
a. chloride c. sodium
b. phosphate
126. Aldosterone acts on the renal tubules to increase the reabsorption of:
a. calcium c. sodium
b. potassium
127. The maintenance sodium requirement for a three-day-old neonate is _____ mEq/kg/day.
a. 1–2 c. 4–5
b. 2–4
128. When treating a sodium deficit, the sodium level should be increased by a maximum of _____ mEq/hour.
a. 1 c. 3
b. 2

129. Findings in the syndrome of inappropriate antidiuretic hormone (SIADH) include:
- hyperkalemia
 - increased plasma osmolarity
 - urine sodium loss
130. Treatment of SIADH includes:
- administration of isotonic saline
 - discontinuing diuretics
 - fluid restriction
131. In neonates, increased potassium requirements can be anticipated with:
- acidosis
 - cellular repair
 - renal failure
132. Electrocardiogram changes associated with hyperkalemia include the presence of:
- peaked T waves
 - premature atrial contractions
 - U waves
133. Complications of hyperglycemia include:
- apnea
 - intraventricular hemorrhage
 - jaundice
134. Restriction of fluid intake should be considered in infants with:
- hypoxic brain injury
 - persistent pulmonary hypertension
 - sepsis
135. Which of the following electrolyte imbalances is expected in infants with a patent ductus arteriosus?
- hypokalemia
 - hypocalcemia
 - hyponatremia
136. Which of the following occurs as a result of anesthetic administration?
- decreased systemic vascular resistance
 - increased myocardial contractility
 - pulmonary hypertension
137. In which of the following body fluids is the highest concentration of chloride found?
- bile
 - diarrheal stool
 - gastric
138. Metabolic alkalosis is seen in patients with _____ losses.
- CSF
 - gastric
 - urinary
139. Enteral feedings should be discontinued _____ hours prior to elective surgery.
- 1–2
 - 2–4
 - 4–6
140. In correcting postoperative hypovolemia, fluid boluses are given at a dose of _____ ml/kg.
- 10–20
 - 20–30
 - 30–40
141. In replacing third-space fluid losses, it is recommended that maintenance fluids be increased by _____ times.
- 1.5–2
 - 2–2.5
 - 2.5–3
142. The recommended initial post-operative glucose delivery rate is _____ mg/kg/minute, to match basal glucose utilization rates.
- 1–3
 - 4–6
 - 7–9
143. Which of the following has been found to be the most specific indicator of acute procedural pain?
- crying
 - facial activity
 - heart rate and O₂ saturation
144. Use of which of the following was found to be most effective in reducing the pain response to heelstick?
- EMLA cream
 - manual lancets
 - spring-loaded lancets
145. Based on the results of the meta-analysis of sucrose trials, it is recommended that oral sucrose be given at what time interval prior to a painful procedure?
- immediately
 - two minutes
 - 15 minutes
146. Compared to older children, the opioid dosing interval in neonates should be:
- longer
 - shorter
 - the same
147. The recommended IV dose for intermittent morphine is _____ mg/kg/dose.
- 0.02–0.04
 - 0.05–0.1
 - 0.15–0.2
148. Adverse effects of fentanyl citrate include:
- hyperbilirubinemia
 - hypoglycemia
 - muscle rigidity
149. Signs of opioid withdrawal include:
- fever
 - lethargy
 - vomiting
150. How many minutes after administration is the peak analgesic effect of acetaminophen usually seen?
- 30–45
 - 60–120
 - 130–190
151. Adverse effects of chloral hydrate include:
- hypothermia
 - paradoxical excitation
 - urinary retention
152. EMLA cream has been approved for use in infants >_____ weeks of age.
- 32
 - 37
 - 40

153. Epidural anesthesia is contraindicated in infants with:
- chronic lung disease
 - a history of central line infection
 - increased intracranial pressure
154. In addition to wound cleaning, macrophages are responsible for:
- activating fibroblasts
 - breaking down fibrin
 - secreting cytokines
155. Medications that can impair wound healing include:
- antihypertensives
 - corticosteroids
 - diuretics
156. Which of the following solutions is recommended for cleansing wounds during dressing changes?
- alcohol
 - normal saline
 - povidone iodine
157. Moist gauze dressings can be left in place _____ hours.
- 8
 - 12
 - 24
158. Alginates are recommended for wounds that:
- are granulating
 - have minimal exudate
 - have heavy exudate
159. Which of the following products is a good choice for an infected wound?
- foam
 - hydrocolloid
 - hydrogel
160. An advantage of a hydrocolloid dressing is that it:
- allows the wound to be visualized
 - facilitates autolytic debridement
 - is atraumatic to remove
161. Nonwater-soluble skin products used to protect skin in the diaper area should be removed with:
- mineral oil
 - normal saline
 - pH neutral soap
162. An intravenous vasopressor extravasation can be treated with:
- hyaluronidase
 - lidocaine
 - Nitropaste
163. Maceration of periwound skin can be prevented by the use of:
- an alcohol-free sealant
 - barrier paste
 - a foam dressing
164. Symptoms of motion sickness in neonates include:
- bradycardia
 - diarrhea
 - hypotension
165. Effects of noise exposure in neonates include:
- apnea
 - fluctuation in blood pressure
 - seizure activity
166. Adverse effects of excessive vibration in neonates during transport are thought to include:
- cardiac arrhythmia
 - emesis
 - pulmonary edema
167. In the transport of an infant with cardiac disease, a management strategy aimed at reducing the effects of gravitational force is to position the infant:
- head to the front of the vehicle
 - head to the rear of the vehicle
 - sideways across the vehicle
168. In the presence of signs of hypovolemic shock, the neonate being transported should receive a fluid bolus at a dose of _____ ml/kg.
- 10
 - 15
 - 20
169. In neonates with findings of a ductal-dependent cardiac lesion PGE₁ should be administered at a dose of _____ mcg/kg/minute.
- 0.025
 - 0.05
 - 0.1
170. For which of the following lesions is PGE₁ indicated?
- tetralogy of Fallot
 - total anomalous pulmonary venous connection
 - tricuspid atresia
171. The loading dose of phenobarbital for neonatal seizures is _____ mg/kg.
- 5
 - 10
 - 20
172. Neonates with increased intracranial pressure should be positioned for transport as follows:
- head to the front of the vehicle
 - head to the rear of the vehicle
 - sideways across the vehicle
173. A three-day-old neonate normally has a sodium requirement of _____ mEq/kg/day.
- 0.5–1.5
 - 2–4
 - 5–7
174. The suggested starting rate for a glucose infusion in a newborn being transported is _____ mg/kg/minute.
- 4
 - 6
 - 8
175. The recommended dose of fentanyl for a maintenance infusion is _____ mcg/kg/hour.
- 0.5–4
 - 4.5–6
 - 6.5–8

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176. The most appropriate interpreter for a non-English speaking family would be one who:
- emigrated around the same time
 - is known to the family
 - is from the same social class
177. In working with a mother from another culture, it is always important to:
- ask open-ended questions to check what has been understood
 - make eye contact
 - touch the mother's hand
178. In scheduling a care conference for a non-English speaking family, the following people should be involved.
- parents and interpreter
 - parents, grandparents, and interpreter
 - parents, family decision maker, and interpreter
179. Following the death of a newborn, the parents should be told that:
- it will take several weeks to get over the initial feelings of shock and anger
 - they can expect the need to revisit their loss periodically
 - they will need grief counseling to fully resolve their loss
180. The severity of CDH can be predicted by the:
- amount of liver in the chest
 - presence of spleen in the chest
 - size of the defect
181. Fetal surgery for CDH is not normally done after _____ weeks of gestation.
- 24
 - 26
 - 28
182. The CCAM that is primarily solid is Type:
- I
 - II
 - III
183. The sole indication for CCAM fetal surgery is the presence of:
- hydrops fetalis
 - polyhydramnios
 - pulmonary hypoplasia
184. The sacrococcygeal teratoma (SCT) that is most likely to go unrecognized at birth is Type:
- II
 - III
 - IV
185. Which of the following is a marker for SCT?
- decreased fundal height
 - increased α -fetoprotein
 - oligohydramnios
186. In the NICHD study of fetal surgery for myelomeningocele, cesarean delivery is scheduled at _____ weeks of gestation.
- 34
 - 36
 - 38
187. One advantage of an EXIT procedure is that it:
- bypasses maternal circulation
 - prevents the need for general anesthesia for the mother
 - utilizes the placenta for fetal oxygenation
188. Complete bladder outlet obstruction results in:
- external genital anomalies
 - polyhydramnios
 - pulmonary insufficiency
189. Urine becomes the primary component of amniotic fluid by _____ weeks of gestation.
- 10–12
 - 13–14
 - 15–16
190. Contraindications for a tracheostomy include:
- advanced epiglottitis
 - cystic hygroma of the neck
 - laryngeal pathology
191. Complications of a tracheostomy include:
- creation of a false passage
 - phrenic nerve paralysis
 - torticollis
192. The most common cause of an obstructed tracheostomy tube is:
- aspirated stomach contents
 - hemorrhage
 - inspissated mucus
193. A tracheoinnominate fistula can result from:
- infection of the skin around the tracheostomy site
 - a low tracheostomy site
 - traction on the stay sutures

ANSWER FORM:
Neonatal Surgical Procedures:
A Guide for Care and Management—Course 1

Please completely fill in the circle of the **one best answer** using a dark pen.

Complete name/address information on the next page.

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Print clearly

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Address _____

Nursing License # _____

City _____

State(s) of License _____

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■ Please turn the page and complete the evaluation form on the other side. ■

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Evaluation Directions

Thank you for taking the time to assist us in evaluating the effectiveness of this course. Using the scale below, darken the circles corresponding to your responses. If an item is not applicable, leave it blank.

①	②	③	④	⑤
Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree

Objectives:

I am able to:

1. Describe the clinical presentation of cystic hygroma. ① ② ③ ④ ⑤
2. Discuss treatment of a congenital diaphragmatic hernia if bowel integrity is not a concern. ① ② ③ ④ ⑤
3. Explain the basis of postoperative care for the neonate with a cardiac anomaly. ① ② ③ ④ ⑤
4. List factors that can trigger necrotizing enterocolitis. ① ② ③ ④ ⑤
5. Discuss complications of a Kasai portoenterostomy. ① ② ③ ④ ⑤
6. Discuss the preoperative care of an infant with classic bladder exstrophy. ① ② ③ ④ ⑤
7. Explain the care of a ventriculoperitoneal shunt. ① ② ③ ④ ⑤
8. Describe the clinical presentation of brachial plexus palsy. ① ② ③ ④ ⑤
9. Elucidate the goal of postoperative fluid administration. ① ② ③ ④ ⑤
10. List potential options for pain alleviation in the NICU patient. ① ② ③ ④ ⑤

Presentation

1. The material presented is relevant to my practice. ① ② ③ ④ ⑤
2. The questions on the test reflected the content of the book. ① ② ③ ④ ⑤
3. The book content was comprehensive. ① ② ③ ④ ⑤
4. The test directions were clear. ① ② ③ ④ ⑤
5. I perceive the education level of this course to be: ① ② ③
1 = Basic; 2 = Intermediate; 3 = Advanced
6. How long did it take you to complete the course? ___ hours ___ minutes
7. In what level unit do you practice? I ___ II ___ III ___

I am a staff nurse NNP nurse manager _____ other (please state)

What subjects would you like to see offered for CE courses? _____

Additional comments: _____

Iowa participants may submit the evaluation directly to the Iowa Board of Nursing, 400-SW 8th St., Ste. B, Des Moines, IA 50309-4685.