Chapter 69

The High-Risk Newborn
Classification of Newborns

- Based on size
  - Appropriate for gestational age (AGA)
  - Small for gestational age (SGA)
  - Large for gestational age (LGA)
  - Low birth weight (LBW)
  - Very low birth weight (VLBW)
  - Immature
Classification of Newborns (cont’d)

- Based on gestational age
  - Preterm
  - Term
  - Postterm
Small-for-Gestational-Age Newborn

• Intrauterine growth restriction (IUGR) is a leading cause of small-for-gestational-age (SGA) newborns.

• Causes
  – Maternal conditions related to pregnancy or multiple gestations
  – Congenital defects or chromosomal abnormalities
  – Poor maternal nutrition, maternal substance abuse, including alcohol or maternal cigarette smoking
  – Placental abnormalities, intrauterine infections or maternal history of chronic problems
Large-for-Gestational-Age Newborn

- Macrosomia
  - The newborn is large for gestational age (LGA).
  - They are born most often to mothers with diabetes.
  - This newborn may develop hypoglycemia, face birth injury, as well as respiratory disorders and brain injuries.
Postterm and Preterm Newborn

- Postterm
  - The fetus remains in the uterus beyond 42 weeks.
  - Respiratory or nutritional problems, may have swallowed meconium, or aspirated it into their lungs.

- Preterm
  - Born before the end of the 37th week of gestation.
  - Breathing is irregular and weak, body temperature is frequently subnormal, and the baby’s cry is weak; immature central nervous system.
Nursing Considerations

• Isolette care: The isolette simulates the uterine environment.

• Feeding: In some instances, small newborns receive no food for 36 hours. In others, they receive milk using a nipple or a nasogastric tube.

• Elimination: Determine accurate output by weighing the diaper before and after the infant urinates.

• Protection against infection: Very small newborns are isolated and attended to by nursery personnel with a thorough knowledge of special aseptic techniques.
Is the following statement true or false?

It is necessary to dress the neonate in a stockinette cap and take temperature often.
Answer

True

Controlling the temperature of the neonate is often difficult, and special care should be taken to keep these babies warm. The stockinette minimizes the amount of heat lost.

Frequent monitoring the neonate’s temperature provides objective evidence of the neonate’s status.
Nursing Observations

- General appearance
- Respirations, pulse, color
- Stools and voiding
- Weight
- Temperature
  - Kangaroo care
- Nutrition
- Medications
Possible Complications

- Meconium or amniotic fluid aspiration
- Cyanosis
- Physiologic jaundice
  - Appears at about the third day of life; jaundice that appears immediately after birth is likely to indicate hemolytic disease.
- Dehydration
- Necrotizing enterocolitis
- Hypoglycemia
Question

Is the following statement true or false?

The nurse should obtain blood glucose level for a newborn experiencing jitteriness if the mother was administered ritodrine.
Answer

True

If the newborn startles easily or has shaky movements, think hypoglycemia and obtain a blood glucose level. This is especially the case if the newborn or mother are in the high-risk category for newborn hypoglycemia, as is the case when the mother received ritodrine or terbutaline to stop preterm labor.
Hemolytic Conditions

- Rh sensitization
  - Erythroblastosis fetalis, can occur when an Rh-negative mother is pregnant with an Rh-positive fetus, resulting in Rh sensitization.

- ABO incompatibility
  - The disease is usually mild, characterized by jaundice and an enlarged spleen.
Birth Injuries

- Fractures: Rarely complicated and usually heal without difficulties
- Intracranial hemorrhage: Results from difficult delivery, precipitate labor and delivery, or prolonged labor
- Brachial plexus injury: Results from trauma during a difficult delivery
- Facial paralysis (Bell’s palsy): Occurs when the newborn’s facial nerves are injured, usually as a result of forceps delivery
**Congenital Disorder**

- A congenital disorder is an abnormality that exists at birth.
  - Genetic: Hereditary in origin, inherited
  - Teratogenic: Acquired during gestation
Musculoskeletal Disorders

- Talipes: Occurs more often in boys
- Congenital dislocated hip
  - Occurs more frequently in girls, result of faulty embryonic development of the hip joint
- Polydactylysm
  - The presence of an extra finger or toe
- Syndactylysm
  - The fusing together of two or more digits
Nervous System Disorders

- Hydrocephalus
- Spina bifida
- Down syndrome or Trisomy 21
- Anencephaly
- Microcephaly
Cardiovascular Disorders

- Patent ductus arteriosus
- Atrial septal defect (ASD) and ventricular septal defect (VSD)
- Tetralogy of Fallot
- Coarctation of the aorta
Respiratory Disorders

- Transient tachypnea of the newborn (TTN)
- Respiratory distress syndrome (RDS)
- Retinopathy of prematurity (ROP)
- Choanal atresia
Gastrointestinal Disorders

- Cleft lip and palate
- Esophageal atresia
- Tracheoesophageal fistula
- Pyloric stenosis
- Imperforate anus
- Phenylketonuria (PKU)
- Galactosemia
Genitourinary Disorders

- Bladder exstrophy
  - Results from abnormal development of the bladder, abdominal wall, and symphysis pubis
- Hypospadias
  - When the urethra opens on the bottom side of the penis
- Epispadias
  - The meatus is located on the upper side of the penis
Question

Is the following statement true or false?

Respiratory distress syndrome and group B streptococcal pneumonia have similar initial findings.
More serious disorders, such as respiratory distress syndrome and group B streptococcal pneumonia, have similar initial findings and may be detected by early nursing observations and data collection.
Infections

- T = Toxoplasmosis
- O = Other (syphilis, hepatitis, herpes zoster)
- R = Rubella
- C = Cytomegalovirus
- H = Herpes simplex virus
STIs and the Newborn

- Infections and STIs acquired by the newborn can be life threatening or have long-term sequelae.
  - Gonorrhea
  - Syphilis
  - Herpes simplex virus
  - HIV and AIDS
Other Infections

- Rubella
- Toxoplasmosis
- Thrush
- Cytomegalovirus
Chemical Dependency

• Nurses are often first to observe signs of drug dependency in newborns.

• The onset of signs and symptoms in newborns experiencing withdrawal varies, depending on the drug the mother used.

• Fetal alcohol syndrome

• Cocaine and crack
End of Presentation