Chapter 31

Care of the Child with a Physical and Mental or Cognitive Disorder

Disorders of Cardiovascular Function

- Congenital heart disease
  - Etiology and pathophysiology
    - Several environmental and genetic risk factors have been implicated
    - Types of defects
      - Increased pulmonary blood flow
      - Decreased pulmonary blood flow
      - Obstruction to systemic blood flow
      - Mixed blood flow

Disorders of Cardiovascular Function (Cont.)

- Congenital heart disease
  - Clinical manifestations
    - Cyanosis, pallor
    - Cardiomegaly, pericardial rubs, murmurs, additional heart sounds
    - Discrepancies between apical and radial pulses
    - Tachypnea
    - Dyspnea, grunting, crackles, and wheezes
    - Digital clubbing
    - Hepatomegaly, splenomegaly
Disorders of Cardiovascular Function (Cont.)

- Defects with increased pulmonary flow
  - Patent ductus arteriosus
  - Atrial septal defect
  - Ventricular septal defect

- Defects with decreased pulmonary flow
  - Tetralogy of Fallot

Disorders of Cardiovascular Function (Cont.)

- Mixed defects
  - Transposition of the great vessels

- Defects with obstruction to systemic blood flow
  - Coarctation of the aorta

Disorders of Hematologic Function

- Iron deficiency anemia
  - Etiology and pathophysiology
  - Clinical manifestations
  - Medical management
  - Nursing interventions
Disorders of Hematologic Function
(Cont.)

- Sickle cell anemia
  - Etiology and pathophysiology
  - Clinical manifestations
  - Medical management
  - Nursing interventions

Disorders of Hematologic Function
(Cont.)

- Aplastic anemia
  - Due to failure of the cell-generating capacity of the bone marrow
  - All formed elements of the blood are defective, underdeveloped, or absent, resulting in severe anemia, leukopenia, and thrombocytopenia
  - May be caused by neoplastic disease of the bone marrow or by destruction of the bone marrow through exposure to toxic chemicals, ionizing radiation, or some antibiotics or other medications

Disorders of Hematologic Function
(Cont.)

- Hemophilia
  - Etiology and pathophysiology
  - Clinical manifestations
  - Medical management
  - Nursing interventions and patient teaching
Disorders of Hematologic Function (Cont.)

- Idiopathic thrombocytopenic purpura
  - Etiology and pathophysiology
  - Clinical manifestations
  - Nursing interventions and patient teaching
  - Medical management

Disorders of Hematologic Function (Cont.)

- Leukemia
  - Etiology and pathophysiology
  - Clinical manifestations
  - Medical management
  - Nursing interventions and patient teaching

Disorders of Hematologic Function (Cont.)

- Hodgkin’s disease
  - Malignant lymphoma distinguished by progressive enlargement of lymphoid tissue
  - Believed to occur in one specific site with spread to nearby lymph nodes
  - More common in males and is rare in children under 5 years of age; incidence increases between 15 and 19 years of age
  - Treatment protocols for children follow the same protocols established for adults
Question 1

__________ is defined as a decrease in red blood cell (RBC) volume, a decrease in hemoglobin, or both.
1. Amblyopia
2. Glomerulonephritis
3. Anemia
4. Lichenification

Question 2

What is the survival rate of children with acute lymphoid leukemia?
1. Less than 20%
2. Approximately 50%
3. More than 70%
4. More than 90%

Disorders of Immune Function

- Human immunodeficiency virus (HIV) and acquired immunodeficiency syndrome (AIDS)
  - Etiology and pathophysiology
    - AIDS is a chronic and usually fatal disease due to an acquired dysfunction of the immune system; it is caused by HIV
    - HIV has been found in blood and in varying amounts in body fluids
Disorders of Immune Function (Cont.)

- HIV and AIDS
  - Clinical manifestations
    - Failure to thrive
    - Progressive neurologic disease
    - Frequent viral and bacterial infections
    - Greatest threat to an HIV-infected infant under 1 year of age is *Pneumocystis jiroveci* (formerly carinii)
  - Medical management
    - Antiretroviral drugs; often used in combination

- Nursing interventions
  - Monitor closely for signs of abnormal growth and development
  - Support family involvement
  - Encourage social services and home health and nutritional services

- Patient teaching
  - Educate adolescents on matters such as avoiding casual sex and using condoms

Disorders of Immune Function (Cont.)

- HIV and AIDS
  - Nursing interventions
    - Monitor closely for signs of abnormal growth and development
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    - Educate adolescents on matters such as avoiding casual sex and using condoms

Disorders of Immune Function (Cont.)

- Juvenile rheumatoid arthritis
  - Etiology and pathophysiology
    - Chronic inflammatory, autoimmune disease of connective tissue; erosion, destruction, and fibrosis of the articular cartilage
  - Clinical manifestations
    - Daily afternoon temperature spikes; macular rash on trunk and extremities; joint involvement
  - Medical management
    - Nonsteroidal antiinflammatory drugs, antirheumatic drugs, cytotoxic drugs, corticosteroids
Disorders of Respiratory Function

- Respiratory distress syndrome
  - Etiology and pathophysiology
  - Clinical manifestations
  - Medical management
  - Nursing interventions

Disorders of Respiratory Function (Cont.)

- Bronchopulmonary dysplasia
  - Etiology and pathophysiology
  - Clinical manifestations
  - Medical management
  - Nursing interventions and patient teaching

Disorders of Respiratory Function (Cont.)

- Pneumonia
  - Etiology and pathophysiology
  - Clinical manifestations
  - Medical management
  - Nursing interventions and patient teaching
Disorders of Respiratory Function (Cont.)

- Sudden infant death syndrome
  - Etiology and pathophysiology
  - Clinical manifestations
  - Medical management
  - Nursing interventions
  - Prevention

- Acute pharyngitis (sore throat)
  - Etiology and pathophysiology
  - Clinical manifestations
  - Medical management
  - Nursing interventions and patient teaching

- Tonsillitis
  - Etiology and pathophysiology
  - Clinical manifestations
  - Medical management
  - Nursing interventions
    - Preoperative
    - Postoperative
Disorders of Respiratory Function (Cont.)

- Croup
  - Etiology and pathophysiology
  - Clinical manifestations
  - Medical management
  - Nursing interventions and patient teaching

Disorders of Respiratory Function (Cont.)

- Bronchitis (tracheobronchitis)
  - Etiology and pathophysiology
  - Clinical manifestations
  - Medical management
  - Patient teaching

Disorders of Respiratory Function (Cont.)

- Acute bronchiolitis
  - Etiology and pathophysiology
  - Clinical manifestations
  - Medical management
  - Nursing interventions and patient teaching
Disorders of Respiratory Function (Cont.)

- Pulmonary tuberculosis
  - Etiology and pathophysiology
    - Chronic bacterial lung infection caused by the bacillus *Mycobacterium tuberculosis*
  - Clinical manifestations
    - Usually none until the disease has significantly progressed
  - Patient teaching
    - Instruct parents regarding the importance of giving medications as ordered

Disorders of Respiratory Function (Cont.)

- Cystic fibrosis
  - Etiology and pathophysiology
  - Clinical manifestations
  - Medical management
  - Nursing interventions

Disorders of Respiratory Function (Cont.)

- Bronchial asthma
  - Etiology and pathophysiology
  - Clinical manifestations
  - Medical management
  - Nursing interventions
Question 3

Most children with rheumatoid arthritis are diagnosed by what age?
1. 5 years old
2. 8 years old
3. 12 years old
4. 16 years old

Disorders of Gastrointestinal Function

● Cleft lip and cleft palate
  ➢ Etiology and pathophysiology
  ➢ Clinical manifestations
  ➢ Medical management
  ➢ Nursing interventions

Disorders of Gastrointestinal Function (Cont.)

● Dehydration
  ➢ Etiology and pathophysiology
  ➢ Clinical manifestations
  ➢ Medical management
  ➢ Nursing interventions
Disorders of Gastrointestinal Function (Cont.)

- Diarrhea and gastroenteritis
  - Etiology and pathophysiology
  - Clinical manifestations
  - Medical management
  - Nursing interventions

Disorders of Gastrointestinal Function (Cont.)

- Constipation
  - Etiology and pathophysiology
  - Clinical manifestations
  - Medical management
  - Nursing interventions

Disorders of Gastrointestinal Function (Cont.)

- Gastroesophageal reflux
  - Etiology and pathophysiology
  - Clinical manifestations
  - Medical management
  - Nursing interventions
Disorders of Gastrointestinal Function (Cont.)

- Hypertrophic pyloric stenosis
  - Etiology and pathophysiology
  - Clinical manifestations
  - Medical management
  - Nursing interventions and patient teaching

Disorders of Gastrointestinal Function (Cont.)

- Intussusception
  - Etiology and pathophysiology
  - Clinical manifestations
  - Medical management
  - Nursing interventions

Disorders of Gastrointestinal Function (Cont.)

- Hirschsprung’s disease
  - Etiology and pathophysiology
  - Clinical manifestations
  - Medical management
  - Nursing interventions
Hernias
- Protrusion of organs or portions of an organ through a structural defect or weakened muscle wall
- Strangulation: circulation to the protruding organ impaired
- Incarceration: cannot be manually reduced
- Types: diaphragmatic, hiatal, inguinal, and umbilical

Urinary tract infection
- Infection may affect the upper urinary tract or the lower urinary tract, or both
- Primarily caused by bacteria
- Signs and symptoms are fever, weight loss, failure to thrive, feeding difficulties, vomiting, diarrhea, urinary frequency, pain during urination, foul-smelling urine, incontinence, abdominal or flank pain, and hematuria

Nephrotic syndrome (nephrosis)
- Etiology and pathophysiology
- Clinical manifestations
- Medical management
- Nursing interventions and patient teaching
Disorders of Gastrointestinal Function (Cont.)

- Acute glomerulonephritis
  - Etiology and pathophysiology
  - Clinical manifestations
  - Medical management
  - Nursing interventions and patient teaching

Disorders of Gastrointestinal Function (Cont.)

- Wilms' tumor (nephroblastoma)
  - Etiology and pathophysiology
  - Clinical manifestations
  - Medical management
  - Nursing interventions and patient teaching

Disorders of Gastrointestinal Function (Cont.)

- Structural defects of the genitourinary tract
  - These have serious implications for the psychological well-being of the child
  - Prompt correction is necessary to avoid a negative psychological impact on the child
  - Nursing interventions and patient teaching
    - Prepare the child and family for surgery
    - Provide the child and parents with emotional support
Disorders of Endocrine Function

- Hypothyroidism
  - Etiology and pathophysiology
  - Clinical manifestations
  - Medical management
  - Nursing interventions and patient teaching

Disorders of Endocrine Function (Cont.)

- Hyperthyroidism
  - Etiology and pathophysiology
  - Clinical manifestations
  - Medical management
  - Nursing interventions and patient teaching

Disorders of Endocrine Function (Cont.)

- Diabetes mellitus
  - Etiology and pathophysiology
  - Medical management
  - Nursing interventions
Disorders of Musculoskeletal Function

- Developmental dysplasia of the hip
  - Etiology and pathophysiology
  - Clinical manifestations
  - Medical management
  - Nursing interventions

Disorders of Musculoskeletal Function (Cont.)

- Legg-Calvé-Perthes Disease
  - Etiology and pathophysiology
  - Clinical manifestations
  - Medical management
  - Nursing interventions and patient teaching

Disorders of Musculoskeletal Function (Cont.)

- Scoliosis
  - Etiology and pathophysiology
  - Clinical manifestations
  - Medical management
  - Nursing interventions and patient teaching
Disorders of Musculoskeletal Function (Cont.)

- Osteomyelitis
  - Infection within the bone
  - In children, the metaphysis of the femur, the tibia, and the humerus are the areas most affected
  - It can occur at any age; the peak incidence in children is between ages 3 and 15 years, and boys are affected twice as often as girls

Disorders of Musculoskeletal Function (Cont.)

- Talipes (clubfoot)
  - Etiology and pathophysiology
  - Clinical manifestations
  - Medical management
  - Nursing interventions and patient teaching

Disorders of Musculoskeletal Function (Cont.)

- Duchenne’s muscular dystrophy
  - Etiology and pathophysiology
  - Clinical manifestations
  - Medical management
  - Nursing interventions and patient teaching
Disorders of Musculoskeletal Function (Cont.)

- Septic arthritis
  - Etiology and pathophysiology
  - Clinical manifestations
  - Medical management
  - Nursing interventions

Disorders of Musculoskeletal Function (Cont.)

- Fractures
  - Most common sites in children are long bones, clavicles, wrists, fingers, and skull
  - A fracture can be complete or incomplete

  - Nursing interventions
    - Assess injury and soft tissue
    - Calm and reassure the child and the parents
    - Assess for pain and point of tenderness, color, sensation, motion, and pulses

Disorders of Neurologic Function

- Meningitis
  - Etiology and pathophysiology
  - Clinical manifestations
  - Medical management
  - Nursing interventions and patient teaching
Disorders of Neurologic Function (Cont.)

- Encephalitis
  - Etiology and pathophysiology
  - Clinical manifestations
  - Medical management
  - Nursing interventions

Disorders of Neurologic Function (Cont.)

- Hydrocephalus
  - Etiology and pathophysiology
  - Clinical manifestations
  - Medical management
  - Nursing interventions

Disorders of Neurologic Function (Cont.)

- Cerebral palsy
  - Etiology and pathophysiology
  - Clinical manifestations
  - Medical management
  - Nursing interventions
Disorders of Neurologic Function (Cont.)

- Seizure disorders
  - Etiology and pathophysiology
  - Medical management
  - Nursing interventions

- Spina bifida (myelomeningocele)
  - Etiology and pathophysiology
  - Clinical manifestations
  - Medical management
  - Nursing interventions and patient teaching

Disorders of Integumentary Function

- Contact dermatitis
  - Etiology and pathophysiology
  - Clinical manifestations
  - Medical management
  - Nursing interventions and patient teaching
Disorders of Integumentary Function (Cont.)

- Diaper dermatitis
  - Etiology and pathophysiology
  - Clinical manifestations
  - Medical management
  - Nursing interventions

Disorders of Integumentary Function (Cont.)

- Atopic dermatitis (eczema)
  - Etiology and pathophysiology
  - Clinical manifestations
  - Medical management
  - Nursing interventions

Disorders of Integumentary Function (Cont.)

- Seborrheic dermatitis
  - Etiology and pathophysiology
  - Clinical manifestations
  - Medical management
  - Nursing interventions
Disorders of Integumentary Function (Cont.)

- Acne vulgaris
- Psoriasis
- Traumatic injuries
- Bacterial infections

Disorders of Integumentary Function (Cont.)

- Herpes simplex virus type I
  - A common infection as evidenced by the presence of HSV-1 antibodies in 30% to 60% of the young population
  - Transmitted by direct contact of infected body fluids with nonintact skin or mucous membranes
- Tinea capitis, corporis, cruris, and pedis
  - Common fungal infections of the skin; classified according to the area of the body involved

Disorders of Integumentary Function (Cont.)

- Candidiasis (thrush)
  - Etiology and pathophysiology
  - Clinical manifestations
  - Medical management
  - Nursing interventions and patient teaching
Disorders of Integumentary Function (Cont.)

- Parasitic infections
  - Scabies and pediculosis
    - Scabies is an infectious parasitic disorder caused by a mite; it burrows under the skin and causes papular rash and intense pruritus
    - Pediculosis capitis (head lice) is a scalp infection that causes intense pruritus; adult louse attaches to the skin and feeds by sucking blood; the mature female louse lays her eggs (nits) on the shaft of the hair

Disorders of Cognitive Function

- Cognitive impairment
  - Formerly referred to as mental retardation
  - The most common developmental disability, affecting up to 3% of the population
  - Defined as significantly subaverage general intellectual functioning existing concurrently with deficits in adaptive behavior and manifested during the developmental period

Disorders of Cognitive Function (Cont.)

- Cognitive impairment
  - Four categories
  - Etiology/pathophysiology
  - Clinical manifestations
Disorders of Cognitive Function (Cont.)

- Cognitive impairment
  - Diagnostic tests
  - Nursing interventions
  - Patient/family teaching
  - Prognosis

Question 4

The Centers for Disease Control and Prevention (CDC) defines lead poisoning as a blood lead level of greater than ____ mg/dL.

1. 5
2. 10
3. 20
4. 30

Disorders of Cognitive Function (Cont.)

- Down syndrome
  - Etiology/pathophysiology
  - Clinical manifestations
  - Diagnostic tests
  - Medical management
  - Nursing interventions
  - Prognosis
Disorders of Cognitive Function (Cont.)

- Autism
  - Etiology/pathophysiology
  - Clinical manifestations and diagnostic tests
  - Nursing interventions
  - Prognosis

Learning Disabilities

- Etiology/pathophysiology
- Clinical manifestations
- Diagnostic tests
- Medical management/nursing interventions
- Prognosis

Attention Deficit/Hyperactivity Disorder

- Etiology/pathophysiology
- Clinical manifestations
- Diagnostic tests
- Medical management
- Nursing interventions
Other Disorders

- Anorexia and bulimia
  - Eating disorders with significant underlying psychologic and emotional issues
  - Primarily affect adolescents, but younger children may be affected

- Substance abuse
  - Substance abuse usually points to significant problems in the child, family, or both, warranting professional counseling
  - In the adolescent, the incentives are usually experimental and recreational

Other Disorders (Cont.)

- Depression
  - Generally defined as a mood disturbance with overall feelings of sadness, despair, worthlessness, or hopelessness
  - Girls are more likely than boys to suffer from depression
  - Etiology/pathophysiology
    - Causes have not been established
    - Risk factors can be genetic or environmental
    - Cognitive theories attribute depression to actual loss or perceived loss

Other Disorders (Cont.)

- Depression
  - Clinical manifestations
  - Diagnostic tests
  - Medical management
  - Nursing interventions
  - Patient/family teaching
  - Prognosis
Other Disorders (Cont.)

- Suicide
  - Etiology/pathophysiology
  - Diagnostic tests
  - Medical management
  - Nursing interventions
  - Prognosis
  - Clinical manifestations

Other Disorders (Cont.)

- Psychogenic abdominal pain (recurrent abdominal pain)
  - Etiology/pathophysiology
  - Clinical manifestations
  - Diagnostic tests
  - Medical management
  - Nursing interventions

Question 5

Which would not encourage healthy behavior in a child with Down syndrome?

1. Encourage stimulating play.
2. Try to avoid giving discipline.
3. Provide nutritionally dense foods.