OBJECTIVES

Upon completion of this unit, the student will be able to:

1. Define blood dyscrasia.
2. Identify different types of pathologies in blood disorders and similar problems in nursing management.
3. List normal values for blood constituents.
4. Define terms describing size, shape and color of blood cells.
5. Define hemoglobin and hematocrit and list normal values and interpretations of abnormal values.
6. Define sternal puncture, explain the procedure and diagnosis made from this procedure.
7. List, discuss the nurse’s function and psychological aspects related to sternal puncture.
8. Define capillary fragility test, explain the procedure and diagnosis made from this procedure.
9. List, discuss that lab studies may indicate blood disorders or other illnesses.
10. Discuss the nurse’s role in diagnostic procedure.

PLAN OF LESSON

I. Review of Anatomy

II. Physiologic Functions
   A. Oxygenation
   B. Hemostasis

III. Age Related Changes

IV. Nursing Assessment
   A. Health History
   B. Physical Examination

V. Diagnostic Tests
   A. CBC
       a. RBC
       b. WBC
       c. Platelet
       d. Hemoglobin
       e. Hematocrit
   B. Terminology
       a. Normocytic
       b. Microcytic
       c. Macrocytic
       d. Hypochromic
       e. Hyperchromic
   C. Bone Marrow Biopsy
       a. Nurse’s Function

VI. Therapeutic Measures
   A. Transfusions
       a. Packed Red Blood Cells
       b. Platlets
       c. Fresh Frozen Plasma
       d. Reactions
OBJECTIVES

Upon completion of this unit, the student will be able to:

1. Define anemia and list normal counts, variation.
2. List categories of anemia according to cause.
3. List the symptoms of anemia.
4. List and discuss importance of diet in preventing and treating anemia.
5. Discuss iron supplements and related patient education.
6. List dietary considerations to avoid anemia.
7. Define pernicious anemia and intrinsic factor.
8. Define cyanocobalamin, list sources, patient education and method of administering.
9. Discuss diagnosis of pernicious anemia.
10. Discuss treatment of pernicious anemia.
11. List other considerations and complications of pernicious anemia.
12. Identify reasons for immunosuppression and need for protection.
13. Discuss the need for patient education.
14. List and discuss, identify anemia due to acute or chronic blood loss.
15. List causes, treatment, and management of anemia due to blood loss.
16. List causes, symptoms, occurrence and treatment of hemolytic anemia, sickle-cell anemia, acquired hemolytic anemia, and thalassemia.

PLAN OF LESSON

I. Anemia
   A. Definition
   B. Normal Counts and Variations
   C. Causes of Anemia
      a. Sudden Blood Loss
      b. Chronic Blood Loss
      c. Nutritional
      d. Hemolytic
      e. Inadequate Productions
   D. Symptoms of Anemia
      a. Fatigue
      b. Anorexia
      c. Faintness
      d. Pallor

II. Types of Anemia
   A. Polycythemia Vera
      a. Cause
      b. Signs/Symptoms
      c. Treatment
   B. Aplastic Anemia
      a. Cause
      b. Signs/Symptoms
      c. Treatment
   C. Autoimmune Hemolytic Anemia
      a. Cause
      b. Signs/Symptoms
      c. Treatment
   D. Iron Deficiency Anemia
      a. Cause
      b. Signs/Symptoms
      c. Treatment

E. Pernicious Anemia
   a. Cause
   b. Signs/Symptoms
   c. Treatment

F. Sickle Cell Anemia
   a. Cause
   b. Treatment
   c. Signs/Symptoms

III. Coagulation Disorders
   A. Thrombocytopenia
   B. Disseminated Intravascular Coagulation
   C. Hemophilia
OBJECTIVES

Upon completion of this unit, the student will be able to:

17. Define aplastic anemia.
18. Discuss and list causes, symptoms, treatment, and nursing management of aplastic anemia.
20. List facts and techniques of physical care for the leukemia patient.
21. Discuss nursing management of the final illness.
22. Define and discuss, list symptoms of thrombocytopenia.
23. Discuss assessment and management of leukemia.
24. Define and discuss hereditary factors, symptoms, life expectancy and treatment of hemophilia.
25. Define and discuss symptoms, treatment, and nursing management of polycythemia vera.
26. Define, list symptoms, treatment, and nursing management of agranulocytosis, multiple meloma, lymphosarcoma, Hodgkin’s Disease and infectious mononucleosis.
27. Discuss blood transfusions and transplants listing blood types, blood elements, bone marrow transplants, and nursing responsibilities.

PLAN OF LESSON

I. Anemia Due to Blood Loss
   A. Blood Contains Plasma and Cells
      1. Normal Volume 4-6 qts. (L)
      2. Kept Relatively Content
   B. Hypovolemia
      1. Acute
      2. Due to Sudden Severe Bleeding
         a. Trauma
         b. Surgery
         c. Childbirth
   C. Chronic
      1. Gastric or Peptic Ulcer
      2. Tumors in Bowel, Uterus
      3. Hemorrhoids
   D. Treatment
      1. Iron Administration
      2. Transfusions
      3. Observations
   E. Need for Continued Treatment
   F. Symptoms of Fatigue and Weakness
      May Persist After Crisis Passes

II. Thalassemia
   A. Hereditary
   B. Cooley’s anemia
   C. Occur in Person’s of Mediterranean Descent
   D. Symptomatic Treatment
Unit: Medical Surgical Nursing
Insults to Cardiovascular Integrity

Lesson: 2
Title: Hematologic Problems
Time: Theory 2 Hours (Continued)

Implementation: Linton (2016) Chapter 33; Pharmacology Text; Lecture/Class Discussion
Evaluation: Written Test, Class Participation
Integrated: Pharmacology 0.5 Hour and Nutrition 0.5 Hour

PLAN OF LESSON

II. Leukemia
   A. Cause
   B. Signs/Symptoms
   C. Diagnosis
   D. Treatment
   E. Management
      1. Remissions
      2. Exacerbations
      3. Continuance of Life
   F. Nursing Care as it Relates to:
      1. Bleeding
      2. Fever
      3. Skin Care
      4. Mouth Care
      5. Infection
      6. Drug Toxicity
      7. Blood Transfusions
   G. Final Illness
      1. Emotional Support
      2. Spiritual Care

III. Agranulocytosis
   A. Toxic Effects of Drugs
   B. Symptoms
   C. Prognosis
   D. Treatment

IV. Multiple Myeloma
   A. Onset and Symptoms
   B. Treatment and Management

V. Hodgkin’s Disease
   A. Definition
   B. Symptoms
   C. Treatment and Nursing Management

VI. Non-Hodgkin’s Disease
   A. Types
   B. Symptoms
   C. Treatment and Nursing Management

XV. Transfusions and Transplants
   A. Blood Types
   B. Nursing Responsibilities
   C. Blood Elements
   D. Bone Marrow Transplant

Written: 09/90
Reviewed: 09/93, 08/00, 08/02, 08/06; 08/08; 08/14
Revised: 07/95, 08/96, 08/00, 07/04; 3/10; 8/12; 10/15; 1/16
OBJECTIVES

Upon completion of this unit, the student will be able to:

1. Discuss the emotional reactions and fears of the cardiac patient.
2. Discuss incidence of cardiac disease.
3. List and describe cardiac anatomy, cardiac cycle, and electrical system.
4. Discuss, describe diagnostic procedure, complications and nursing management related to cardiac diagnostic procedures.
5. Describe gerontologic changes of the cardiovascular system.

PLAN OF LESSON

I. Introduction
   A. Emotional Reaction
   B. Fears
II. Incidence
III. Anatomy
   A. Four Chambered Organ
      1. Atria (Auricles)
      2. Ventricles
   B. Vessels
      1. Entering vessels
         a. Veins – Vena Cava
         b. Pulmonary Vein
   C. Valves
   D. Layers of Tissue
   E. Electrical System
IV. Age Related Changes
V. Nursing Assessment
   A. Health History
   B. Physical Examination
VI. Diagnostic Studies
   A. Laboratory Tests
   B. Radiologic Tests
   C. Electrocardiogram
   D. Echocardiogram
      1. Transesophageal
   E. X-Rays, Tests, Fluoroscopy
   F. Cardiac Catheterization
   G. Angiograms
   H. Possibility of Allergic Reactions
OBJECTIVES

Upon completion of this unit, the student will be able to:

1. Define, list and discuss facts concerning heart failure and its causes.
2. List, discuss symptoms, diagnosis, and treatment of heart failure.
3. List and discuss assessment and nursing management of the patient with congestive heart failure including history, physical assessment, and nursing measures.
4. Discuss patient education related to congestive heart failure.
5. Discuss and list facts regarding dietary measures for the patient with congestive heart failure.
6. Discuss and list facts regarding drug therapy for congestive heart failure.
7. List and describe symptoms, treatment (including rotating tourniquets) for acute pulmonary edema.

PLAN OF LESSON

I. Heart Failure
   A. Compensated
   B. Decompensated
   C. Causes
   D. Arteriosclerosis
   E. Atherosclerosis
   F. Right-Sided and Left-Sided Heart Failures

II. Symptoms of Heart Failure
   A. Fatigue
   B. Dyspnea
   C. Edema

III. Diagnosis

IV. Treatment
   A. Rest
   B. Low-Sodium Diet
   C. Digitalis
   D. Diuretics
   E. Oxygen

V. Assessment and Management of the Patient with Congestive Heart Failure
   A. History
   B. Physical Assessment
   C. Ongoing Assessment
   D. Nursing Management
      1. Positioning
      2. Skin Care
      3. Careful I&O
      4. Note Edema
      5. Drug Therapy

VI. Patient Education
   A. Determine Patient Knowledge
   B. Supplement
   C. Verify Understanding

VII. Diet and Drug Therapy
   A. Sodium restricted
   B. Dietary Potassium
   C. Drug Therapy
   D. Digitalis
   E. Diuretics

VIII. Acute Pulmonary Edema
   A. Symptoms
   B. Treatment
OBJECTIVES

Upon completion of this unit, the student will be able to:

1. Define and discuss rheumatic fever, its cause, treatment, nursing management and prevention.
2. Define and discuss facts concerning Valvular heart disease, its symptoms, treatment and nursing management.
3. Define and discuss facts concerning endocarditis, myocarditis, pericarditis, and chronic constrictive carditis and list symptoms, treatment, and nursing management.

PLAN OF LESSON

I. Rheumatic Fever
   A. Definition
   B. Cause
   C. Treatment and Prevention
   D. Nursing Management

II. Valvular Heart Disease
    A. Endocarditis
    B. Mitral Stenosis
       1. Symptoms
       2. Treatment
    C. Aortic Stenosis
    D. Aortic Insufficiency

III. Bacterial Endocarditis
    A. Incidence
    B. Etiology and Pathology
    C. Signs and Symptoms
    D. Diagnosis
    E. Treatment and Nursing Management
       1. Large Doses of Antibiotics – IV
       2. Supportive Care
       3. Close Observation
       4. Activity
    F. Prevention

IV. Myocarditis
    A. Symptoms
    B. Treatment
    C. Nursing Management

V. Pericarditis
   A. Symptoms
   B. Treatment
   C. Nursing Management

VI. Acute Pericarditis
    A. Symptoms
    B. Treatment
    C. Nursing Management

VII. Chronic Constrictive Pericarditis
    A. Treatment
    B. Nursing Management
    C. Complication
OBJECTIVES

Upon completion of this unit, the student will be able to:

1. Describe pathology of coronary artery disease, define arteriosclerosis and atherosclerosis.
2. Define and discuss collateral circulation.
3. Define and discuss epidemiology and risk factors related to coronary artery disease.
4. Describe, discuss, and list terms related to pathophysiology of coronary artery disease.
5. Describe, list, and discuss facts related to myocardial ischemia including characteristics, treatment, and daily activities.
6. Describe, list, and discuss facts related to hypertension, its categories, symptoms, assessment, and management.
7. Discuss drug therapy for hypertension including drug names, dosages, actions, and nursing actions.
8. Describe facts and considerations concerning rehabilitation and nursing implications with the patient who has hypertension.
9. List the nutritional and pharmacologic considerations.

I. Coronary Artery Disease
   A. Coronary Artery Structure
   B. Coronary Occlusion
      1. Arteriosclerosis
      2. Atherosclerosis
   C. Collateral Circulation
   D. Epidemiology
   E. Risk Factors
   F. Pathophysiology
      1. Myocardial ischemia
      2. Coronary Occlusions
      3. Myocardial Infraction
      4. Coronary Insufficiency

II. Hypertension
   A. Definition
   B. Arterial Blood Pressure
   C. Diastolic Blood Pressure
   D. Pulse Pressure
   E. Physiologic Control Arterial Pressure
      1. Normal Fluctuations

III. Hypertensive Disease
   A. Hypertensive Heart Disease
   B. Hypertensive Vascular Disease
   C. Hypertensive Cardiovascular Disease
   D. Primary Hypertension
   E. Secondary Hypertension
      1. Pheochromocytoma
      2. Toxemia of Pregnancy
      3. Kidney Disease

IV. Other Causes

V. Assessment and Management of the Patient with Hypertension
   A. Assessment
   B. Management
      1. Drug Therapy
      2. Patient Education

VI. Secondary Hypertension

VII. Rehabilitation of Patients
   A. Exercise
   B. Avoiding Obesity
   C. Minimize Emotional Stress
   D. Employment

VIII. Nursing Implications

IX. General Nutritional Considerations

X. General Pharmacologic Considerations
Unit: Medical Surgical Nursing
Insults to Cardiovascular Integrity

Lesson: 7
Title: The Patient with Vascular Disorder
Time: Theory 1.5 Hours

Implementation: Linton (2016) Chapter 37
Lecture/Class Discussion; Transparencies;
Quizzing; Game
Evaluation: Written Test, Class Participation
Integrated: N/A

OBJECTIVES

Upon completion of this unit, the student will be able to:

1. Define peripheral vascular disease.
2. Discuss, list and define anatomic structures of the vessels.
3. Define, list symptoms and treatments for ischemia.
4. Define arteriosclerosis, atherosclerosis and give symptoms, treatment and nursing management.
5. Define, list symptoms, treatment and nursing management of Raynaud’s disease and Buerger’s disease.
6. Define, list causative factors, symptoms, treatment and nursing management of varicose veins and leg ulcers.
7. Define, list symptoms, treatment, and nursing management of thrombosis and embolism.
8. Define pulmonary embolism, list symptoms, treatment, and nursing management.
9. Define lymphedema, list symptoms, treatment, and nursing management.
10. Define, list symptoms, and treatment of aneurysms.

PLAN OF LESSON

I. Introduction
   A. Definition of Peripheral Vascular Disease
   B. Anatomy Review
      1. Arteries
      2. Veins
      3. Arterioles
      4. Venule
      5. Capillaries

II. Ischemia
   A. Definition
   B. Symptoms
   C. Measures to Increase Blood Supply

III. Arteriosclerosis and Atherosclerosis
   A. Definition
   B. Symptoms
   C. Treatment and Management

IV. Raynaud’s Disease
   A. Definition-Incidents
   B. Symptoms
   C. Treatment and Management

V. Varicose Veins
   A. Definition-Incidence
   B. Causative Factors
   C. Symptoms
   D. Treatment and Management
   E. Leg Ulcers
   F. Treatment of Leg Ulcers

VI. Thrombosis and Embolism
   A. Definitions
   B. Symptoms
   C. Initial Treatment
   D. Surgery
   E. Assessment Nursing and Management

VII. Pulmonary Embolism
   A. Definition
   B. Symptoms
   C. Treatment, Assessment, and Management

VIII. Lymphedema
   A. Definition of Lymphatic and Lymphedema
   B. Symptoms
   C. Treatment and Management

IX. Aneurysms
   A. Definition
   B. Symptoms
   C. Treatment
   1. Surgical Repair
   2. Heart-Lung Repair

Written: 09/90
Reviewed: 09/93, 08/00, 08/02; 08/06; 08/14
Revised: 07/95, 08/96, 08/00, 07/04; 08/08; 03/10; 8/12; 10/15; 1/16
OBJECTIVES

Upon completion of this unit, the student will be able to:

1. List, define, and discuss cardiac rhythmicity.
2. List cardiac arrhythmias and explain normal sinus rhythm.
3. Recognize the designations of a normal EKG tracing.
4. Define and discuss PVC’s.
5. Discuss, list facts about treatment of cardiac arrhythmias.
6. Define, discuss facts concerning temporary and permanent pacemakers and related nursing management.
7. Discuss discharge planning and patient education.
8. Complete CPR training and testing.
9. Be familiar with and be able to list the pharmacologic considerations.

PLAN OF LESSON

I. Cardiac Rhythmicity and Its Regulation
   A. Depolarization
   B. Repolarization
   C. Refractory

II. Cardiac Arrhythmias
   A. Monitoring
   B. Arrhythmias Electrocardiography
   C. Normal Sinus Rhythm
   D. Sinus Bradycardia
   E. Sinus Tachycardia
   F. Atrial Fibrillation
   G. Complete Heart Block
   H. Premature Ventricular Contractions (PVC’s)

III. Cardiac Arrest
   A. Airway
   B. Breathing

IV. Pharmacologic Considerations
OBJECTIVES

Upon completion of this unit, the student will be able to:

1. Define and list symptoms and incidence of myocardial infarction.
2. Discuss, list nursing measures of admission, assessment, and general management in the coronary care unit.
3. Discuss and list facts and nursing measures related to diagnosis of myocardial infarction.
4. Discuss objectives of nursing care for the patient following a myocardial infarction.
5. Discuss, list complications of MI and their treatment.
6. Discuss nursing management in transfer of patients from CCU and rehabilitation.
7. Be familiar with and be able to list the general nutritional and pharmacologic considerations.

PLAN OF LESSON

I. Definition of Myocardial Infarction
II. Symptoms of Myocardial Infarction
III. Coronary Care Unit
   A. Admissions
   B. Assessment
   C. Nursing Management
      1. Activity
      2. Oxygen Therapy
      3. Relieving Pain
      4. Assessment
      5. Placing Electrodes
      6. Intravenous Therapy
      7. Diet
      8. Spiritual Care
IV. Diagnosis
   A. Physical Examination
   B. Electrocardiogram
   C. Laboratory Studies
   D. Temperature
V. Pathology
   A. Posterior Wall Infarction
   B. Anterior Wall
   C. Anteroseptal Infarction
VI. Objectives of Care
   A. Rest and Activity
   B. Hazards of Bed Rest
   C. Sedation
   D. Ongoing Assessments
   E. Environmental and Emotional Support
VII. Treatment of Complications
   A. Arrhythmias
B. Venous Thrombosis
C. Pulmonary Embolism
D. Arterial Embolism
E. Congestive Heart Failure
F. Cardiogenic Shock
G. Other Complications
VIII. Preparation for Transfer
IX. Later Management and Rehabilitation
X. General Nutritional Considerations
XI. General Pharmacology Considerations
Unit: Medical Surgical Nursing  
Implementation: Linton Chapter 16, Lecture, Discussion, Demonstration, Handout
Lesson: 1  
Evaluation: Written Test, Class Participation
Title: Crash Cart  
Integrated: Pharmacology 1 Hour

Time: Theory 1 hour

OBJECTIVES

Upon completion of this unit the student will:

1. Describe the structure of the crash cart.
2. Know the location of each emergency medication.
3. Describe the indications of each of the emergency drugs.
4. Explain the side effects of each emergency drug.
5. Understand the use of respiratory and cardiac equipment.
6. Know the location of all I.V. equipment.
7. Identify and state the purpose of each item needed to start an I.V.
8. Locate all miscellaneous items and name all miscellaneous items necessary for use of the crash cart.
9. State clinical site protocol for checking equipment and drugs.

PLAN OF LESSON

I. Structure of Crash Cart
   A. Emergency Meds
   B. Indications for Use
   C. Side Effects
II. Respiratory and Cardiac Equipment
    A. Locations
    B. Purpose and Use
III. I.V. Equipment
    A. Location
    B. Identification
    C. Use of
IV. Miscellaneous
OBJECTIVES

Upon completion of this unit the student will:

1. Describe and demonstrate the proper technique to control bleeding per direct pressure and state rationale for actions.
2. Demonstrate three methods of applying direct pressure.
3. Locate all pressure points.
4. List the symptoms and signs of internal bleeding.
5. Describe the symptoms of internal bleeding in the thoracic cavity.
6. List symptoms of internal bleeding into the abdominal cavity.
7. List the symptoms of internal bleeding into the pelvic cavity.
8. Review the signs and symptoms of hypovolemic shock.
9. Review the physiological changes that occur with hypovolemic shock.

PLAN OF LESSON

I. External Bleeding
   A. Direct Pressure
      1. Hand
      2. Splint
      3. Bandage
   B. Pressure Points

II. Internal Bleeding
   A. Definition
   B. Affects on Vital Signs
   C. Signs and Symptoms
      1. Thorax
         a. Causes
      2. Abdomen
         a. Causes
      3. Pelvis
         a. Causes

III. Hypovolemic Shock
   A. Definition
   B. Signs and Symptoms
   C. Causes
   D. Physiological Changes