Management of Clients with Thyroid and Parathyroid Disorders

Chapters 45, (pp 1191-1216)

Baptist Health School of Nursing
NSG 4037: Adult Nursing III
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Thyroid Disorders

- Euthroidism
- Hyperthyroidism
- Hypothyroidism
- Thyroiditis
- Thyroid Cancer
Two Common Types of Thyroid Disease

- Hyperthyroidism
- Hypothyroidism
Who do you know with thyroid disease?
What Does Your Thyroid Gland Do for You?

- Produces Two Hormones Called
  - Thyroxine (T4)
  - Thyronine (T3)
- Regulates Metabolism so Your Cells Function Properly
- Affects Every Cell in the Body
Thyroid Disease Affects Many Body Systems and Overall Health

Thyroid
- Thyroid Disease Can Have Widespread Effects

Liver
- Increased LDL Cholesterol
- Elevated Triglycerides

Intestines
- Constipation
- Decreased GI Activity

Reproductive System
- Decreased Fertility
- Menstrual Abnormalities
- May Harm Development of Infant

Brain
- Depression
- Decreased Concentration
- General Lack of Interest

Heart
- Decreased Heart Rate
- Increased/Decreased Blood Pressure
- Decreased Cardiac Output

Kidneys
- Decreased Function
- Fluid Retention and Edema
When the Thyroid Doesn’t Work

Hyperthyroidism
- Too Much Thyroid Hormone
- Metabolism Speeds Up

Hypothyroidism
- Too Little Thyroid Hormone
- Metabolism Slows Down
Diagnosing Thyroid Disease

- Family and Medical History
- Physical Examination
- Laboratory Tests (TSH Test and Free T4)
Goiter

Figure 20-9. Three women of the Himalayas with typical endemic goiters.
Goiter

- Hypothyroidism
- Hyperthyroidism
- Endemic Goiter
- Sporadic Goiter
Goiter

- Pathophysiology
- Manifestations
- Medical Management
- Surgery
Hypothyroidism

- Definition
- Etiology and risk factors
- Pathophysiology
Famous People with Hypothyroidism:
Kim Alexis, Tipper Gore, Carl Lewis
**Primary Hypothyroidism Causes**

- Congenital defects (cretinism)
- Defective hormone synthesis
- Iodine deficiency
- Antithyroid drugs
- Surgery or radioactive agents for hyperthyroidism
- Hashimoto’s Disease
Hypothyroidism

- Clinical manifestations
  - Mild hypothyroidism
  - Myxedema
  - Myxedema coma
Hypothyroidism: The “Hidden” Disease

Cardiovascular:
- Slow Heartbeat
- Elevated Cholesterol

Gynecological:
- Irregular Menstruation
- Infertility

Gastrointestinal:
- Constipation
- Weight Gain

Muscular:
- Muscle Weakness
- Stiffness

Aging:
- Dry, Scaly Skin
- Sparse or Coarse Hair

Ear, Nose & Throat:
- Hoarse Voice

Psychiatric:
- Impaired Concentration
- Depression
- Lethargy, Fatigue

Blood:
- Anemia
Signs and Symptoms of Hypothyroidism

- Tiredness
- Forgetfulness/Slower Thinking
- Moodiness/Irritability
- Depression
- Inability to Concentrate
- Thinning Hair or Hair Loss
- Loss of Body Hair
- Dry, Patchy Skin
- Weight Gain
- Cold Intolerance
- Elevated Cholesterol
- Puffy Eyes
- Swelling (Goiter)
- Hoarseness/Deepening of Voice
- Persistent Dry or Sore Throat
- Difficulty Swallowing
- Slower Heartbeat
- Menstrual Irregularities/Heavy Period
- Infertility
- Constipation
- Muscle Weakness or Cramps
Signs and Symptoms of Hypothyroidism

Sleepiness, Fatigue, Lethargy

Loss of Memory, Trouble Concentrating

Unusually Dry, Coarse Skin

Goiter (Enlarged Thyroid)

Gradual Personality Change, Depression

Increase in Weight, Bloating or Puffiness (Edema)

Sensitivity to Cold

Hair Loss, Sparseness of Hair
Diagnosing Hypothyroidism

- **Family and personal medical history**
  - Hypothyroidism may be Hereditary

- **Physical exam**
  - MD Observes the Patient
  - Palpates the thyroid
  - Interviews patient

- **Laboratory Tests**
  - TSH Test
  - Free T4
Hypothyroidism: Diagnostic Assessment

- TRH (thyroid releasing hormone) = Increased
- TSH (thyroid stimulating hormone) = Increased
- Serum T4 = Normal – Low
- Serum T3 = Normal – Low
- Free T4 = Decreased
Hypothyroidism: Medical Management

- Correction of thyroid hormone deficiency
- Reverse manifestations
- Prevent cardiac complications
Nursing Management of Client with Mild Hypothyroidism

- Imbalanced Nutrition (slow metabolism = at risk for weight gain)
- Activity Intolerance (fatigue, weakness due to decreased metabolic rate)
- Constipation (slow metabolism = decreased gastrointestinal motility)
Nursing Management of Client with Myxedema

- Decreased Cardiac Output (susceptible to severe arteriosclerotic heart disease and cardiac abnormalities)
- Hypothermia (low metabolic rate = subnormal body temperature)
- Risk for Injury: Myxedema Coma
Treating Hypothyroidism

- Daily Oral Medication to Replace Missing Hormone
- Individualized Dosing Adjustment to Find the Right Dose for Each Patient
- Annual Monitoring
If You Have Hyperthyroidism, You’re in Good Company

Barbara Bush 1984 Pre-treatment

Barbara Bush 1991 Post-treatment
Thyroid Disorders: Hyperthyroidism

- Etiology and risk factors
  - Graves’ disease
- Pathophysiology
- Complications
  - Exophthalmos, heart disease, and thyroid storm (thyrotoxicosis)
Hyperthyroidism: Clinical Manifestations

- Nervousness
- Irritability
- Difficulty Sleeping
- Bulging Eyes/Unblinking Stare
- Swelling (Goiter)
- Menstrual Irregularities or Light Period
- Frequent Bowel Movements
- Warm, Moist Palms
- Excessive Vomiting in Pregnancy
- Hoarseness or Deepening of Voice
- Persistent Sore or Dry Throat
- Difficulty Swallowing
- Rapid or Irregular Heartbeat
- Infertility
- Weight Loss
- Heat Intolerance
- Increased Sweating
- First-Trimester Miscarriage
- Family History of Thyroid Disease or Diabetes
Hyperthyroidism

- Complications
  - Exophthalmos
  - Heart disease
  - Thyroid storm (Thyrotoxicosis)
Thyrotoxicosis/Thyroid Storm

- Monitor Client for S/S
- High Fever
- Dehydration
- Inhibiting Effects of TH
- Glucocorticoids
- Beta-blockers
Treating Hyperthyroidism

- Stop Thyroid Hormone Production
  - Anti-thyroid Drugs Often Helpful
  - Replacement Therapy Often Needed
- Beta Blockers
- Radioiodine Therapy
- Surgery May be Necessary
Thyroiditis

- Inflammation of Thyroid Gland
- Acute suppurative
- Subacute Thyroiditis
- Hashimoto’s Disease
Thyroiditis

- Etiology and risk factors
- Pathophysiology
- Clinical Manifestations
- Medical Management
Thyroid Cancer

- Etiology and risk factors
- Pathophysiology
- Complications
Parathyroid Glands

- Four glands
- Parathyroid hormone (PTH)
- Regulates the level of circulating calcium and phosphate
- Target organs: bones, intestines, kidneys
Parathyroid Disorders

Hyperparathyroidism

- Often due to benign tumor
- Demineralization of bones (osteitis fibrosa cystica)
- Osteoporosis
Primary Hyperparathyroidism: Clinical Manifestations

- Stones
- Bones
- Abdominal Groans
- Psychic Moans
- Other
Primary Hyperparathyroidism: Diagnostic Tests

- Serum Calcium
- Serum PTH
- Plasma Phosphorus
- 24-hr urine calcium
- Bone DEXA
- ECG
Primary Hyperparathyroidism: Medical/Surgical Management

- Surgery most effective TX
- Forcing Fluids
- Increase Salt intake
- Diet
- Pharmacotherapy
Primary Hyperparathyroidism: Nursing Management

- Impaired Physical Mobility
- Risk for deficient fluid volume
- Risk for Trauma
- Constipation
Parathyroid Disorders

Hypoparathyroidism

- Decreased production of PTH
- Damage or removal of parathyroid gland
- Familial or autoimmune factors
- Iatrogenic Cause
- Idiopathic Cause
Primary Hypoparathyroidism: Clinical Manifestations

- Hypocalcemia
- Cardiorespiratory Signs
- Neuropsychiatric Signs
Primary Hypoparathyroidism: Diagnostic Tests

- Serum Calcium
- Serum PTH
- Skull X-Ray
- Bone DEXA
- ECG
Primary Hypoparathyroidism: Medical/Surgical Management

- Calcium Gluconate IV
- Calcium Supplements
- PTH injections
- Vitamin D
- Sedatives
- Aluminum Hydroxide gels
- Diet
Primary Hypoparathyroidism: Nursing Management

- Risk for Injury: Muscle Tetany
- Interventions:
  - Prevent Respiratory Arrest
  - Monitor and Prevent Tetany