DIAGNOSTIC AND THERAPEUTIC RADIOLOGY

COMPETENCY-BASED KNOWLEDGE OBJECTIVES:

Section One: Background

1. Discuss the four basic densities and their radiologic/ pathologic correlations.

2. Demonstrate an understanding of the fundamental physics and potential hazards of the following imaging techniques:

    a. X-irradiation, including plain radiographic films, mammography, fluoroscopy, angiography, and computed axial tomography (CAT)

    b. Ultrasound

    c. Nuclear medicine

    d. Magnetic resonance imaging (MRI)

    e. Positron emission tomography (PET)

3. Discuss the specific patient preparations for the aforementioned radiological studies, including oral intake restrictions and bowel preparative regimens.

Section Two: Diagnostic Studies

1. Discuss the following typical plain radiographs utilized to evaluate blunt and penetrating trauma, and identify cardinal features of commonly injured organs:

    a. Spine radiographs

    b. Chest radiographs

    c. Kidney-ureter-bladder radiographs

    d. Pelvis radiographs

2. Develop a strong foundation in the interpretation of chest radiographs, particularly involving a consistent, systematic, and reproducible approach to their interpretation.

3. Recognize radiologic findings that may be associated with age-related normal variations and degenerative processes.

4. Identify practical adjustments that may be necessary for the radiographic examination of the geriatric patient, considering:

a. Physical and/or behavioral patient conditions that may limit or modify the procedure

b. Stressful rigors of some radiographic examinations

c. Influence of patient anxiety

d. Patient positioning issues which may lead to suboptimal imaging, such as immobilization devices

5. Summarize the components of an acute abdominal series in the evaluation of a potentially acute surgical abdomen. Be prepared to identify typical radiographic abnormalities and their implications, including pneumoperitoneum and calcification.

6. Select the appropriate preoperative studies utilized to diagnose surgical pathology occurring in the following organ systems:

a. Central nervous system

b. Thorax

c. Cardiovascular system

d. Peripheral vascular system

e. Gastrointestinal system

f. Genitourinary system

g. Retroperitoneum

h. Musculoskeletal system

i. Vascular

j. Breast

7. Recognize the potential applications and limitations of the following common imaging modalities utilized to diagnose surgical lesions:

a. Computed axial tomography

b. Ultrasound

c. Magnetic resonance imaging

d. Nuclear Medicine

8. Given a specific clinical condition, identify the most efficacious imaging stratagem to confirm or dismiss the working diagnosis.

9. Formulate a therapeutic plan based on variable imaging outcomes, being cognizant of:

a. Atypical manifestation of common disease

b. Realistic limitations of the radiologic study

c. Discrepancies in clinical and radiographic findings

10. Analyze the applications and limitations of commonly utilized radioisotopic studies, including:

a. Bleeding scans

b. Thyroid and parathyroid imaging

c. Ventilation/perfusion scans

11. Utilize the radiologist as a consultant to:

a. Review studies

b. Recommend the most appropriate or additional studies

c. Provide diagnostic intervention

d. Provide therapeutic intervention

Section Three: Therapeutic Radiology

1. Discuss the use of radioisotopes in the treatment of appropriate conditions, including:

a. Endocrine disorders

b. Oncologic disorders

2. Assess the potential utility, limitations, and complications of interventional radiological procedures in various clinical settings.

3. Discuss the technical approaches and limitations of fine-needle and needle-core biopsies of masses performed using radiologic guidance.

4. Summarize the indications, limitations, and risks of interventional procedures for peripheral vascular disease, including angioplasty, stents, and thrombolytic therapy.

COMPETENCY-BASED PERFORMANCE OBJECTIVES:

Junior Level: PGY-I, PGY-II

1. Demonstrate a practical knowledge of basic radiographic interpretation

2. Identify appropriate imaging modalities given various clinical situations.

3. Recognize and communicate potential patient-specific conditions, including allergic, which may impact on the safety and efficacy of radiographic evaluation.

4. Obtain appropriate preparatory studies for selected radiographic procedures.

Senior Level: PGY-III, PGY-IV, PGY-V

1. Supervise and/or request pertinent radiographic investigations in diagnostic evaluation.

2. Teach junior-level residents radiologic principles and pitfalls.

3. Identify the utility of adjunct imaging modalities to better define surgical conditions.

4. Recognize interventional radiological procedures that may provide definitive or complementary treatment of surgical conditions.

5. Initiate radiologic consultation on complex cases to avoid potential delay in diagnosis.

PHARMACOTHERAPEUTICS

COMPETENCY-BASED KNOWLEDGE OBJECTIVES:

Junior Level: PGY-I, PGY-II

1. Describe general pharmacokinetic principles, including:
    a. Absorption
    b. Distribution
    c. Metabolism
    d. Elimination
2. Describe how aging affects the following pharmacokinetic parameters:
    a. Absorption
    b. Distribution
    c. Metabolism
    d. Elimination
3. Define pharmacodynamics, and explain its place in therapeutics.
4. Identify clinically significant drug interactions, including:
    a. Drug-drug interactions
    b. Drug-nutrient interactions
5. Identify which medications are pharmacodynamically altered in elderly people.
6. Identify adverse reactions to medications from clinical and laboratory observations.
7. Describe the various pharmacological effects of giving medications via different routes of administration, including:
    a. Oral
    b. Parenteral
    c. Topical
    d. Intrathecal
    e Rectal
    f. Inhalation
    g. Sublingual
8. Discuss the association between increasing age and the occurrence of adverse medication reactions.

9. Identify five medication classes which are common causes of adverse medication reactions in elderly people.

10. Describe the essential components of an inpatient drug order and an outpatient prescription, including:

a. Date/time
b. Drug name
c. Strength
d. Schedule
e. Route of administration
f. Refills or duration of therapy

11. List three reasons for reduced medication compliance in elderly people.

12. Identify the following medications for which an antidote exists, and describe how the antidote should be administered:

a. Narcotic analgesics
b. Benzodiazepines
c. Heparin
d. Digoxin
e. Warfarin

13. Relate the key components of a drug and allergy patient history.

14. Explain the pharmacologic profile and clinical use of the following core groups of medications:

a. Analgesics and anesthetics
b. Antibiotics
c. Cancer chemotherapeutic agents
d. Cardiovascular drugs
e. Modulators of the immune response
f. Hormones
g. Modulators of coagulation
h. Modulators of wound healing
i. Neuropsychiatric medications

j. Gastrointestinal drugs

k. Anti-inflammatory medications

l. Respiratory agents

m. Skeletal muscle relaxants

n. Blood derivatives

15. Analyze the methods for effective medication monitoring.

16. Become familiar with and utilize a variety of terms with older patients that may be used synonymously with pain, such as:

a. Burning
b. Discomfort
c. Aching
d. Soreness
e. Heaviness
f. Tightness

17. Discuss the potential side effects associated with the medication groups listed in #14 above, and identify treatment choices for these complications.

18. Identify indications for use of the following classes of medications in emergency or critical care:

a. Inotropes
b. Pressors
c. Diuretics
d. Antiarrhythmics
e. Antihypertensives
f. Volume expanders
g. Neuromuscular blocking agents
h. Analgesics

19. Explain the principles of perioperative drug use, including antimicrobial agents.

20. Summarize the management of pain through the use of appropriate pharmacologic analgesia.

21. Summarize the prophylactic and therapeutic use of anticoagulants in the surgical patient.

Senior Level: PGY-III, PGY-IV, PGY-V

1. Formulate pharmacotherapeutic-dosing strategies in patients with altered pharmacokinetics such as:

a. Hepatic dysfunction
b. Kidney dysfunction
c. Cardiovascular dysfunction
d. Ascites
e. Short bowel
f. Advanced age

2. Utilize serum concentration monitoring to modify dosage regimens of medications with narrow therapeutic indices such as:

a. Aminoglycosides
b. Theophylline
c. Vancomycin
d. Phenytoin
e. Digoxin
f. Cyclosporine

3. Design, evaluate, and modify pharmacotherapeutic strategies to treat patients in complex clinical situations, including:

a. Multiple diseases
b. Multiple medications
c. Intensive care setting
d. Polypharmacy in the elderly

COMPETENCY-BASED PERFORMANCE OBJECTIVES:

Junior Level: PGY-I, PGY-II

1. Take and record an appropriate drug and allergy history.

2. Write appropriate inpatient medication orders and outpatient prescriptions, under supervision.

3. Monitor the pharmacologic preparation of a patient for surgery.

4. Monitor the pharmacotherapeutic effects of medications.

5. Prescribe medications for patients without altered pharmacokinetic parameters.

6. Prescribe medications such as inotropes, pressors, diuretics, antiarrhythmics, and antihypertensives in emergency and critical care situations.

7. Prescribe medications pre- and post- operatively to prevent surgical complications, including infection, thromboembolic events, and stress related occurrences.

8. Prescribe and monitor appropriate analgesic therapy based on an assessment of a patient's pain.

9. Prescribe appropriate antimicrobial therapy for given surgical infections, and monitor the effectiveness of such therapy.

10. Appropriately prescribe and monitor the effects of anticoagulant therapy in surgical patients with thromboembolic disease.

11. Apply microbiology and antimicrobial knowledge in selecting appropriate therapeutic or empiric antibiotic coverage for a suspected infection.

Senior Level: PGY-III, PGY-IV, PGY-V

1. Manage patients in complex clinical pharmacotherapeutic situations.

2. Monitor and adjust the dose of medications (described as groupings in #14 of the first section) for patients with altered pharmacokinetics.

3. Monitor and alter the dose of selected medications based on serum concentrations.

4. Appropriately prescribe the following medications in the geriatric patient:

   a. Antihypertensives
   b. Digoxin
   c. Benzodiazepines
   d. Anticoagulants
   e. Analgesics
   f. Antimicrobials

5. Monitor and alter the dose of medications listed above in the elderly patient.

ANESTHESIOLOGY

COMPETENCY-BASED KNOWLEDGE OBJECTIVES:

1. Discuss the rationale governing the use of local, regional, and general anesthesia, including the following concepts:

    a. Careful cardiovascular, respiratory, and neurologic monitoring is the mainstay of safe anesthesia

    b. No specific anesthetic is inherently safer than any other; and as such, risk assessment must be considered in each case

    c. Regional anesthesia may provide some advantages, including:

        (1) Decreased blood loss

        (2) Improved perioperative graft patency in vascular reconstruction

        (3) Reduced incidence of venous thrombosis

    d. Combined regional and general techniques may improve outcomes in selected patient populations:

        (1) Significant cardiovascular disease and major abdominal or thoracic surgery

        (2) Severe pulmonary disease and major abdominal or thoracic surgery

    e. Preemptive analgesia, such as the use of epidural anesthesia, enhances perioperative comfort

2. Summarize the essential elements of the pre-anesthesia assessment, including:

    a. Targeted history and physical examination (review of systems, emphasizing cardiovascular and pulmonary disease)

        (1) Effects of chronic medications (anticoagulants, insulin, and antiarrhythmics)

        (2) Effects of preoperative medications (narcotics, anxiolytics, and atropine)

        (3) Effects of postoperative medications (including antihypertensives and antiemetics)

    b. Anatomic and physiologic variables germane to anesthetic success:

(1) Airway anatomy, including the Mallampati classification.

(a). Class 1: Visualization of all oro- and hypo- pharyngeal structures

(b). Class 2: Anterior and posterior tonsillar pillars are obscured by tongue

(c). Class 3: Soft palate and base of uvula are visible

(d). Class 4: Only the soft palate is visualized

(e). Increasing Mallampati score is associated with the reduced likelihood of successful direct laryngoscopic intubation.

(2) Skeletal deformitie

(3) Neuromuscular diseases

(4) Aspiration risk (pregnancy, scleroderma, hiatal hernia)

c. Assigned Anesthesia Society of America class and physical status:

(1) Class 1: No organic disease

(2) Class 2: Mild to moderate systemic disea

(3) Class 3: Severe systemic disorde

(4) Class 4: Severe systemic disturbance; life threatening

(5) Class 5: Patient is moribund with little chance of survival

(6) Class E: Patient requires an emergency procedure

3. Outline the major characteristics of the pharmacokinetics and pharmacodynamics of anesthetic agents (local, volatile, opioid), considering:

a. Lipid solubility

b. Protein binding

c. Partition coefficients

4. Summarize the use and monitoring of drugs for sedation and analgesia to include:

a. Minimum anesthetic monitoring (pulse oximetry, electrocardiogram, blood pressure)

b. Advantages of scheduled postoperative analgesia versus intermittent dosing

c. Indications for patient-controlled anesthesia (PCA)

d. Importance of periodic assessment to determine:

(1) Level of consciousness

(2) Pulmonary status in sedated patients

5. Summarize the principles of administration for and compare the effectiveness of the following methods of anesthesia:

a. General

b. Spinal

c. Regional

d. Local

6. Describe the potential benefits of regional and local anesthesia, including:

a. Decreased respiratory depression

b. Diminished systemic effects (liver and renal toxicity)

c. Decreased direct cardiac depression

7. Outline the potential complications associated with the use of regional anesthesia, including

a. Spinal anesthetics (headache, cerebrospinal fluid leak, meningitis)

b. Regional nerve blocks (perineural hematomas)

8. Discuss the indications for the use of muscle relaxants.

9. Analyze anesthetic monitoring techniques, to include:

a. Swan-Ganz catheters

b. Arterial lines

c. Transvenous pacemakers

d. End-tidal carbon dioxide monitoring

e. Temperature monitoring

f. Transesophageal echocardiography

10. Describe the techniques and potential complications of managing an airway, including endotracheal and nasotracheal intubation.

11. Describe and explain the most common immediate postoperative anesthetic issues:

a. Airway stability

b. Ventilation and oxygenation

c. Pain control

d. Nausea and vomiting

e. Temperature regulation

f. Hemodynamic stability

12. Analyze therapeutic options for patients with chronic pain.

13. Recognize the condition of malignant hypothermia and its management:

a. Incidence in general population (1:10,000)

b. Autosomal inheritance with variable penetrance

c. Pathophysiology of defective sarcoplasmic reticulum and secondary diminished reuptake of myoplasmic calcium leading to increased aerobic metabolism of skeletal muscle

d. Inducing medications, including inhaled anesthetics and succinylcholine

e. Hallmarks of hypermetabolism, skeletal muscle rigidity, and increased temperature

f. Therapy includes the discontinuance of anesthetic agents, dantrolene administration, and fluid resuscitation with proper physiologic monitoring.

COMPETENCY-BASED PERFORMANCE OBJECTIVES:

Junior Level: PGY-I, PGY-II

1. Manage the airway in adults and children, employing appropriate:

    a. Physical maneuvers

    b. Oral/nasal support devices

    c. Suctioning techniques to maintain clear airway

2. Perform nasal and oral intubation.

3. Recognize the stages of general anesthesia and their implications, particularly in regard to airway management.

4. Recognize and treat the signs and symptoms of complications due to anesthetic agents such as:

    a. Cardiovascular collapse

    b. Acute metabolic disturbances

    c. Malignant hyperthermia

5. Perform preoperative assessment of patients.

6. Recognize risks and possible side effects of drugs used for pain control.

Senior Level: PGY-III, PGY-IV, PGY-V

1. Monitor patients under anesthesia, including the use of peripheral and pulmonary artery catheters.

2. Administer pre- and post- anesthesia care.

3. Apply appropriate monitoring devices.

4. Establish vascular access in a child and in an adult.

5. Manage the difficult airway, including the performance of both rigid and fiberoptic bronchoscopy.

6. Establish an emergent airway, utilizing percutaneous or surgical techniques.

ANESTHESIA FOR THE ELDERLY PATIENT

COMPETENCY-BASED KNOWLEDGE OBJECTIVES:

1. Summarize how the physiology of aging interacts with the effects of anesthesia, with particular attention to:

    a. How high sympathetic tone, loss of beta-receptor responsiveness, and volume sensitivity to both hypovolemia and hypervolemia make blood pressure inherently unstable.

    b. How increased chest wall stiffness, increased lung compliance, and increased brain sensitivity to sedative/ analgesics increase the likelihood of hypoxia, atelectasis, and pneumonia.

2. Summarize the pharmacokinetic and pharmacodynamic principles underlying the effective use of anesthetic agents, particularly how aging often leads to increased sensitivity and prolonged duration of drug effects.

3. Understand how the anesthesiologist approaches patient evaluation and the optimization of patient condition in preparation for surgery.

4. Recognize those issues important to an elderly patient when faced with the decision to have surgery, and be able to determine when mental impairment does or does not preclude the patient from providing informed consent.

5. Understand how the elderly patients are predisposed to hypothermia and how hypothermia adversely affects the risk of infection and cardiac morbidity.

6. Be familiar with the causes, diagnosis, and management of postoperative delirium.

7. Explain the principles and techniques of preemptive analgesia, including non-steroidal analgesics and peripheral nerve and field blocks.

8. Analyze and compare the hemodynamic effects, benefits, risks, and contraindications for the following advanced techniques of postoperative pain control:

    a. Epidural infusions of local anesthetics and/or opioids.

    b. Continuous nerve blocks

    c. Intrapleural and extrapleural catheters

COMPETENCY-BASED PERFORMANCE OBJECTIVES:

Junior and Senior Levels: PGY I - V

1. Assess the risk surrounding the stress of the proposed surgery relative to the benefit of the surgery, with the perspective of the physiological reserve of the patient, and be able to adjust the scope of the proposed surgery accordingly.

2. Appropriately select medications and adjust dosages for the elderly patient.

3. Recognize postoperative delirium and be able to diagnose and treat reversible causes.

4. Perform common field and nerve blocks for postoperative analgesia.

5. Establish effective dialogue with anesthesia and internal medicine colleagues for the comprehensive care of complicated patients.

INTERNAL MEDICINE

COMPETENCY-BASED KNOWLEDGE OBJECTIVES:

1. Discuss principles for effective communication when requesting a medical consultation, to include:

   a. Indications for requesting a pre- or post- operative medical evaluation on a surgical patient

   b. Clear articulation of reason(s) for requesting consultation

   c. Direct communication with the consultant whenever possible

   d. Medical records that provide meaningful clinical information from the history, physical examination, and laboratory

   e. Clarification of the role you wish the consultant to assume.

2. Describe effective communication with the patient's primary care provider when the patient is diagnosed with a surgical problem, to include:

   a. Maintaining a collaborative approach to management

   b. Enlisting the primary care provider in preoperative and postoperative care

c. Obtaining medical and psychosocial information about the patient, including other illnesses, social stressors and supports, patient preferences regarding end-of-life care

3. Discuss key components of a general surgical consultation performed on a medical patient with emphasis on:

a. Clarifying reasons for the consultation request and urgency

b. Assessing need for further laboratory or radiologic studies

c. Direct communication to responsible caregivers

d. Need for timely follow-up when definitive action is delayed

e. Importance of prompt communication with the primary care provider after performing a surgical procedure

4. Explain preoperative assessment of cardiovascular risk in noncardiac surgery:

a. Review rationale for preoperative risk stratification and commonly used clinical risk assessment scales (Goldman criteria, Detsky criteria)

b. Clinical risk factors for perioperative cardiovascular events

c. Indications for preoperative stress ECG, exercise or pharmacologic stress test with nuclear perfusion imaging, stress echocardiography, ambulatory ECG monitoring, or coronary angiography

d. Methods to reduce risk of perioperative cardiovascular events such as beta-blockers in elderly patients

e. Common presentations of perioperative cardiovascular events such as angina, myocardial infarction (MI), arrhythmias, and congestive heart failure (CHF)

5. Explain preoperative assessment of pulmonary risk factors for perioperative morbidity and mortality:

a. History of cigarette smoking, exercise capacity, COPD, asthma

b. Clinical evaluation using physical examination and observation of the patient walking

c. Indications for preoperative pulmonary function tests and their interpretation

d. Predictors of difficulty weaning after general anesthesia

e. Pre- and post- operative measures that can reduce risk of pulmonary complications

f. Perioperative management of bronchospasm

6. Discuss measures to reduce risk for perioperative deep venous thrombosis and pulmonary emboli:

a. Stratification of risk for perioperative venous thrombosis based on patient characteristics and type of surgery (high, medium, low)

b. Choice of deep venous thrombosis (DVT) prophylaxis based on risk stratification

c. Indications for coumadin, subcutaneous low dose heparin, subcutaneous low molecular weight heparin, pneumatic compression devices, early mobilization

d. Clinical and laboratory methods for diagnosing DVT and pulmonary embolus (PE) based on pretest likelihood

7. Describe assessment and management of hypertension in the perioperative period:

a. Definitions of hypertensive urgency, emergency, and malignant hypertension.

b. Impact of hypertension on operative risk, including assessment of end-organ damage

c. Perioperative management of hypertension, including pharmacologic management in patients who have restricted oral intake

d. Management of hypertension in geriatric patients

e. Indications for seeking medical consultation in the hypertensive patient

8. Describe the perioperative assessment and management of the diabetic patient:

a. Determination of glycemic control by glycosylated hemoglobin level

b. Assessment for ketoacidosis and/or hyperosmolar state

c. Appreciate presentation of diabetes in the elderly

d. Describe methods for intraoperative and perioperative management in Type I and II diabetes

e. Describe formulas for determining insulin dosage during and after surgery in insulin-requiring patients

f. Discuss indications for sliding scale insulin treatment

g. Appreciate common side effects of oral hypoglycemic agents

h. Describe emergent management of hypoglycemia

i. Discuss indications for medical consultation in the diabetic patient

9. Discuss the perioperative assessment and management of other common endocrinologic problems, including:

a. Hypothyroidism and hyperthyroidism

b. Hypoparathyroidism and hyperparathyroidism

10. Describe assessment and management of common electrolyte disturbances:

a. Hypo- and hyper- natremia

b. Hypo- and hyper- kalemia

c. Divalent homeostasis

11. Discuss approach to the patient with jaundice:

a. Interpretation of liver function tests and imaging studies to distinguish hepatocellular disease from biliary obstruction (intrahepatic and extrahepatic)

b. Causes of postoperative jaundice

c. Presentation of viral hepatitis (acute and chronic)

d. Impact of liver disease on drug metabolism

12. Discuss approach to the surgical patient with renal failure

a. Describe clinical and laboratory assessment of renal function

b. Distinguish acute renal failure from chronic renal failure

c. Segregate causes of acute renal failure into prerenal, intrarenal, and postrenal (obstructive)

d. Describe clinical signs and symptoms of uremia

e. Discuss differential diagnosis of postoperative acute renal failure

f. List indications for acute hemodialysis and hemofiltration

g. Describe medical management of acute renal failure

h. Appreciate impact of renal failure on drug excretion

i. List medications that can cause acute renal failure

13. Describe indications for subacute bacterial endocarditis (SBE) prophylaxis based on type of valvular problem and type of procedure.

14. Describe preoperative assessment and management of a patient with a coagulopathy.

15. Describe how to assess and manage postoperative fever.

16. Describe surgical risks in the obese patient.

17. Recognize unique features of the geriatric surgical patient:

a. Impact of age on operative morbidity and mortality

b. Age-related changes in cardiovascular and pulmonary physiology

c. Pharmacologic alterations with aging and polypharmacy

d. Risk factors for postoperative delirium and its management

e. Cardiovascular risk assessment and use of beta-blockers to reduce risk of perioperative ischemic events

f. Skin care

g. Nutritional assessment and correction of nutritional deficiencies

h. Diminished special senses such as hearing and eyesight

i. Ethical issues such as informed consent in the demented patient, advanced directives, do-not-resuscitate (DNR), end-of-life care, communicating with families

j. Assessment for post-surgical care, including home nursing and nursing home placement

k. Importance of the care team in managing elderly patients

COMPETENCY-BASED PERFORMANCE OBJECTIVES:

1. Diagnose and manage surgical patients with concomitant acute and/or chronic medical illnesses.

2. Properly perform perioperative evaluation of the surgical patient with:

   a. Moderate to high cardiovascular and respiratory risk

   b. Immunosuppressed state

   c. Significant psychiatric problem

3. Perform a general surgery consultation to a medical service patient.

PSYCHIATRY

COMPETENCY-BASED KNOWLEDGE OBJECTIVES:

Review diagnosis of psychiatric illness pertinent to surgical patients:

1. Describe the signs and symptoms of psychiatric disorders of significance to the general medical management of surgical patients, including:

   a. Disorders diagnosed in childhood

   b. Schizophrenia and psychotic disorders

   c. Cognitive disorders

   d. Mood disorders

   e. Anxiety-related disorders

   f. Eating disorders

   g. Substance-related disorders

   h. Personality disorders

2. Outline the medical treatment of psychiatric disorders, and describe their pharmacologic side effects:

a. Antilytics

(1) Central nervous system (CNS)

(2) Depression

(3) Addiction/tolerance

b. Antipsychotic medications, including: (side effects, including

(1) Sedation

(2) Hypotension

(3) Anticholinergic effects

(4) Extrapyramidal symptoms

(5) Lower seizure threshold

c. Antidepressants, including: (side effects, including sedation

(1) Sedation

(2) Anticholinergic effects

(3) Monoamine oxidase inhibitors (MAOI)

(4) Food and drug interactions, including anesthesia conduction

d. Mood stabilizers

(1) Lithium (side effects, including tremor, gastrointestinal)

(a) Tremor

(b) Gastrointestinal disturbances

(c) Renal effects

(2) Carbamazepine (side effects, including leukopenia)

(a) Leukopenia

(b) Agranulocytosis

(c) Aplastic anemia

e. Hypnotics

3. Understand the etiology and treatment options for acute mental status changes that can follow surgery, including:

a. Somnolence
b. Confusion
c. Disorientation
d. Agitation
e. Convulsions
f. Hallucinations

4. Summarize common psychiatric reactions to surgical treatments and procedures, including:

a. "ICU psychosis"
b. Delirium
c. Depression
d. Anxiety reaction
e. Acute drug withdrawal
f. "Sundowning"

5. Identify and assess characteristics of the suicidal patient:

a. Identifying signs

(1) Drug overdose

(2) Self-inflicted injuries

b. Predisposing conditions

(1) Depression

(2) Alcoholism

(3) Personality disorders

(4) Addiction

(5) Schizophrenia

(6) Manic-depressive psychosis

c. Risk Factors

(1) History of suicide attempts

(2) Advanced age

(3) Recent loss

(4) Chronic illness

6. Recognize the need for the prescription of suicide precautions.

7. Recognize the management of patients with altered mental status.

8. Understand general principles of drug and/or alcohol withdrawal and their impact on surgical patients.

9. Discuss the epidemiology of mental health problems in elderly patients, including:

a. Normal changes of aging

(1) Reaction time

(2) Precision-requiring activities

(3) Risk taking

b. Medications

c. Psychiatric problems as primary or secondary diagnosis for nursing home residents

d. Organic disorders (Alzheimer's disease)

e. Primary and secondary depressions, including pseudodementia and sleep disorders

f. Interactions between mental and physical health

g. Alcohol abuse

10. Identify factors unique to elderly persons that predispose to delirium.

11. Describe approaches to supporting the dying patient:

a. Pain management/comfort measures

b. Communication skills with patient and family

c. Coping skills, patient support systems, and family dynamics

d. Limiting/withdrawing support

(1) "Do not resuscitate" orders

(2) Living will

(3) Health care proxy

(5) Persistent vegetative state

(4) Irreversible coma

(6) Role of ethics consultation

(7) Competency determination

(8) Documentation

(9) Potential organ donation

e. Review the definitions of death

12. Understand the role of the psychiatric consult team.

13. Review the effect of psychiatric illness on surgical care and the effect of surgery on psychiatric illness:

a. Identify common psychiatric reactions to surgical treatments/procedures (see objective #4 and #5 above).

b. Outline procedures utilized to assess competency in the hospitalized patient.

c. Describe the signs and symptomatology of child, partner, or elder abuse and the institutional and legal procedures for reporting suspected abuse cases.

d. Formulate appropriate responses for managing disruptive patients, including agitated patients, malingerers, and sociopaths.

14. Implement initial psychiatric treatment and access referral systems for ongoing psychiatric evaluation and care:

a. Specify the considerations for management of surgical patients with complex psychiatric illness.

b. Outline plans for follow-up care and referrals for surgical patients with psychiatric problems.

c. Determine the special psychiatric issues associated with the management of:

(1) Burn patients (burn delirium, pain management, deformity)

(2) Transplant patients

(3) Cancer patients

(4) Head and spinal cord injury patients

COMPETENCY-BASED PERFORMANCE OBJECTIVES:

1. Apply knowledge of the impact of psychiatric illness to the management of surgical patients:

a. Incorporate the review of psychiatric symptomatology in the evaluation of surgical patients.

b. Obtain a psychiatric drug profile.

c. Monitor use of psychiatric medications

d. Assess pain and prescribe appropriate medication.

e. Manage minor psychiatric problems in postoperative patients.

2. Apply knowledge of the initial management of psychiatric problems to surgical patients:

a. Manage disorientation and anxiety in intensive care patients.

b. Assess suicidal potential, request psychiatric consultation, and institute suicide precautions.

c. Inform families of patient deaths, request autopsies, and organ donation.

d. Consider recommendations from psychiatric consultations.

e. Record signs and symptoms of abuse and initiate required reports.

f. Evaluate the effect of disruptive behavior and deliberate non-compliance on surgical outcomes.

3. Facilitate a team approach to surgical patients with psychiatric problems and assure follow-up as needed:

a. Manage the surgical care of patients with complex psychiatric illness.

b. Monitor the psychiatric treatment of general surgical patients.

c. Arrange for appropriate follow-up care and/or referral of patients with complex psychiatric illness.

d. Assist with competency determinations in appropriate cases.

e. Manage patients with special psychiatric concerns such as:

(1) Trauma

(2) Burns

(3) Transplant

(4) Malignancy

(5) Head and spinal cord injury