

DoM

DEPARTMENT
of MEDICINE
Improving Lives

OBJECTIVES FOR COMMON CLINICAL PROBLEMS

Delirium/Dementia

A. KNOWLEDGE: Students should be able to define, describe, and discuss:

1. The difference between delirium and dementia including:
 - Duration of symptoms: acute versus chronic
 - Presence of altered level of consciousness and impaired concentration
 - Fluctuation

For Delirium:

1. The diagnostic criteria for delirium including:
 - Acute onset and fluctuating course
 - Inattention
 - Disorganized thinking
 - Altered level of consciousness
2. The most common and most serious causes of delirium, including:
 - Prescription medications, over-the-counter drugs and supplements, alcohol and drug/alcohol withdrawal,
 - Infectious causes (e.g., urinary tract infection, pneumonia, cellulitis, encephalitis, meningitis).
 - Congestive heart failure, myocardial infarction
 - Metabolic causes (e.g. hyper/hyponatremia, hyper/hypoglycemia, hypercalcemia, hypoxia/hypercapnea, dehydration, uremic encephalopathy, hepatic encephalopathy, and Wernicke's encephalopathy).
 - Cerebrovascular accident, intracranial hemorrhage, subdural hematoma
 - Seizures/ post-ictal state
 - Hypertensive encephalopathy
 - Miscellaneous causes (e.g. fecal impaction, postoperative state, sleep deprivation, urinary retention)

3. The risk factors for developing delirium, including:
 - Dementia
 - Advanced age
 - Substance abuse
 - Comorbid physical problems such as sleep deprivation, immobility, dehydration, pain, and sensory impairment
 - ICU admission
 - Surgery
4. The diagnostic work-up of delirium.
5. Indications, contraindications, and complications of lumbar puncture.
6. Principles of management of the common causes of delirium.
7. Nonpharmacologic measures to reduce agitation and aggression, including:
 - Avoiding the use of physical restraints whenever possible.
 - Using reorientation techniques.
 - Assuring the patient has devices to correct sensory deficits.
 - Promoting normal sleep and day/night awareness.
 - Preventing dehydration and electrolyte disturbances.
 - Avoiding medications which may worsen delirium whenever possible (e.g. anticholinergics, benzodiazepines)
8. The risks of using physical restraints.
9. The risk and benefits of using antipsychotics for delirium associated with agitation, aggression and frightening delusions.

For Dementia:

1. The diagnostic criteria for dementia:
 - Impairment of memory and one other area of cognition
 - Functional impairment
 - Progressive decline
2. The most common causes of dementia including:
 - Alzheimer disease
 - Vascular dementia
 - Lewy-Body dementia

- Depression
 - Anticholinergic and sedating medications
 - Brain tumor, chronic subdural hematoma
3. Dementia mimics including:
 4. The diagnostic work-up of dementia
 5. Pharmacological treatment including:
 - Benefits and adverse effects of cholinesterase inhibitors
 - Risks of antipsychotics in Lewy Body dementia
 6. Nonpharmacological management including:
 - Education of the family about diagnosis and prognosis
 - Alzheimer Society and other support groups
 - Identification of potential safety risks such as driving, stove use, medication noncompliance
 - Home Care Nova Scotia, Adult Day programs and other resources
 - Appointment of Power of Attorney
 - Information for family and/or referral to social work for future care planning

B. SKILLS: Students should be able to demonstrate specific skills, including:

1. History-taking skills: Students should be able to obtain, document, and present a medical history that differentiates among etiologies of altered mental status including eliciting appropriate information from patients, their families and other appropriate collateral historians regarding the onset, progression, associated symptoms, and impairment in activities of daily living (IADLs and ADLs).
2. Physical exam skills: Students should be able to perform an examination to establish the diagnosis and severity of disease, including:
 - Mental status examination including cognitive assessment using tools such as the Mini-Mental Status Examination (MMSE), clock drawing and serial subtractions
 - Complete physical and neurologic examination
3. Differential diagnosis: Students should be able to generate a differential diagnosis recognizing specific history and physical exam findings that suggest a specific etiology for altered mental status.

4. Laboratory interpretation: Order and interpret diagnostic and laboratory tests based on the differential diagnosis. These may include:
 - CBC with differential
 - Electrolytes, Urea, Cr, glucose, calcium, liver enzymes and liver function tests
 - ABG
 - Toxicology screen (stipulate)
 - VDRL, HIV serology
 - Vitamin B12
 - Thyroid function tests
 - Urinalysis and urine culture
 - Blood cultures
 - CK, troponin
 - CXR
 - EKG
 - Cerebrospinal fluid analysis (color, opening pressure, chemistries, cell counts, staining, cultures, cytology, cryptococcal antigen, VDRL)
 - Students should be able to define the indications for:
 - Cranial CT
 - Cranial MRI
 - Electroencephalogram (EEG)

5. Management skills: Students should be able to develop an appropriate evaluation and treatment plan for patients that includes:
 - Recognizing that altered mental status in an older inpatient is a medical emergency and requires that the patient be evaluated immediately
 - Writing appropriate fluid and replacement orders for patients with common electrolyte and metabolic disturbances
 - Writing appropriate antibiotic orders for the treatment of common infectious etiologies
 - Ordering appropriate nonpharmacologic and pharmacologic interventions for patients with acute altered mental status with accompanying agitation and aggression
 - Understanding that the diagnosis of dementia will often change the investigation and planned treatment for other illnesses, and the importance of discussing this with the family