

Delirium, Dementia, and Amnestic Disorders

Introduction

- Disorders in which a clinically significant deficit in cognition or memory exists
- The number of people with these disorders is growing because more people now survive into the high-risk period for dementia, which is middle age and beyond.

Delirium

- Characterized by a disturbance of consciousness and a change in cognition that develop rapidly over a short period.
- Its a mental state characterized by a disturbance of cognition, which is manifested by confusion, excitement, disorientation, and a clouding of consciousness.
- Hallucinations and illusions are common.

Delirium

- Usually begins abruptly
- Can have a slower onset if underlying etiology is systemic illness or metabolic imbalance
- Duration usually brief and subsides completely on recovery from underlying determinant

- The duration of delirium is usually brief (e.g., 1 week; rarely more than 1 month) and, on recovery from the underlying determinant, symptoms usually diminish over a 3- to 7-day period, but in some instances may take as long as 2 weeks
- The age of the client and duration of the delirium influence rate of symptom resolution.
- Delirium may transition into a more permanent cognitive disorder (e.g., dementia) and is associated with a high mortality rate

Predisposing Factors

- Delirium due to a General Medical Condition
- Substance-Induced Delirium
- Substance-Intoxication Delirium
- Substance-Withdrawal Delirium
- Delirium due to Multiple Causes

Dementia

- Defined by a loss of previous levels of cognitive, executive, and memory function in a state of full alertness.
- **Primary dementias:** dementia itself is the major sign of some organic brain disease not directly related to any other organic illness (Alzheimer)
- **Secondary dementias:** caused by or related to another disease or condition, such as human immunodeficiency virus (HIV) disease or a cerebral trauma.

Symptoms

- As the disease progresses, **apraxia** is evident.
 - the inability to carry out motor activities despite intact motor function, may develop.
- Memory
- Function

Etiological Implication

- Dementia of the Alzheimer's type
- Vascular dementia
- Dementia due to HIV disease
- Dementia due to head trauma
- Dementia due to Parkinson's disease
- Dementia due to Huntington's disease
- Dementia due to Pick's disease
- Dementia due to Creutzfeldt-Jakob disease

Alzheimer's disease

- accounts for 60 to 80 percent of all cases of dementia
- AD can be described in stages:
 - Stage 1. No apparent symptoms
 - Stage 2. Forgetfulness
 - Stage 3. Mild cognitive decline
 - Stage 4. Mild-to-moderate cognitive decline; confusion
 - Stage 5. Moderate cognitive decline; early dementia
 - Stage 6. Moderate-to-severe cognitive decline; middle dementia
 - Stage 7. Severe cognitive decline; late dementia

Dementia of the Alzheimer's type

- Onset is slow and insidious, and the course of the disorder is generally progressive and deteriorating.
 - Early onset (first symptoms at age 65 or before)
 - Late onset (first symptoms after age 65)
 - Etiologies may include
 - Acetylcholine alterations
 - Plaques and tangles
 - Head trauma
 - Genetic factors

Vascular dementia

- Dementia is due to significant cerebrovascular disease.
- There is a more abrupt onset than is seen in association with Alzheimer's disease, and the course is more variable.
- Etiologies may include
 - Arterial hypertension
 - Cerebral emboli
 - Cerebral thrombosis

Dementia due to HIV disease

- Dementia results from brain infections caused by opportunistic organisms or the HIV-1 virus directly.
- Symptoms may range from barely perceptible changes to acute delirium to profound dementia.

Dementia due to head trauma

- Serious head trauma can result in symptoms associated with the syndrome of dementia.
 - * Amnesia is the most common symptom
 - Repeated head trauma can result in *dementia pugilistica* with symptoms of:
 - * Dysarthria
 - * Emotional lability
 - * Ataxia
 - * Impulsivity

Dementia due to Huntington's Disease

- **Dementia due to Huntington's disease**
 - Damage from this disease occurs in the areas of the basal ganglia and the cerebral cortex.
 - The client usually declines into a profound state of dementia and ataxia.
 - Average course of the disease to complete incapacitation and death is about 15 years.

Dementia Due to Pick's Disease

- Etiology of Pick's disease is unknown
- Clinical picture similar to that of Alzheimer's disease
- Pathology results from atrophy in the frontal and temporal lobes
of the brain

Dementia due to Creutzfeldt-Jakob disease

- Clinical symptoms typical of syndrome of dementia
 - Symptoms also include involuntary movements, muscle rigidity, and ataxia
 - Onset of symptoms typically occurs between ages 40 and 60 years; course is extremely rapid, with progressive deterioration and death within 1 year
 - Etiology is thought to be a transmissible agent known as a “slow virus.” There is a genetic component in 5 to 15 percent.

Dementia due to other medical conditions

- Endocrine disorders
 - Pulmonary disease
 - Hepatic or renal failure
 - Cardiopulmonary insufficiency
 - Fluid and electrolyte imbalance
 - Nutritional deficiencies
 - Frontal lobe or temporal lobe lesions
 - CNS or systemic infection
 - Uncontrolled epilepsy or other neurological conditions

Substance-induced persisting dementia

- Related to the persistent effects of abuse of substances such as:
 - Alcohol
 - Inhalants
 - Sedatives, hypnotics, and anxiolytics
 - Medications (e.g., anticonvulsants, intrathecal methotrexate)
 - Toxins (e.g., lead, mercury, carbon monoxide, organophosphate insecticides, industrial solvents)

Amnestic Disorders

- Amnestic disorders are characterized by an inability to
 - Learn new information despite normal attention
 - Recall previously learned information
- **Symptoms**
 - Disorientation to place and time (rarely to self)
 - Confabulation, the creation of imaginary events to fill in memory gaps
 - Denial that a problem exists or acknowledgment that a problem exists, but with a lack of concern
 - Apathy, lack of initiative, and emotional blandness

- *Onset* may be acute or insidious, depending on underlying pathological process.
- *Duration* and *course* may be quite variable and are also correlated with extent and severity of the cause.

Box 13 – 1 Etiological Factors Implicated in the Development of Delirium and/or Dementia

Biological Factors

Hypoxia: any condition leading to a deficiency of oxygen to the brain

Nutritional deficiencies: vitamins (particularly B and C); protein; fluid and electrolyte imbalances

Metabolic disturbances: porphyria; encephalopathies related to hepatic, renal, pancreatic, or pulmonary insufficiencies; hypoglycemia

Endocrine dysfunction: thyroid, parathyroid, adrenal, pancreas, pituitary

Cardiovascular disease: stroke, cardiac insufficiency, atherosclerosis

Primary brain disorders: epilepsy, Alzheimer's disease, Pick's disease, Huntington's disease, multiple sclerosis, Parkinson's disease

Infections: encephalitis, meningitis, pneumonia, septicemia, neurosyphilis (dementia paralytica), HIV disease, acute rheumatic fever, Creutzfeldt-Jakob disease

Intracranial neoplasms

Congenital defects: prenatal infections, such as first-trimester maternal rubella

Exogenous Factors

Birth trauma: prolonged labor, damage from use of forceps, other obstetric complications

Cranial trauma: concussion, contusions, hemorrhage, hematomas

Volatile inhalant compounds: gasoline, glue, paint, paint thinners, spray paints, cleaning fluids, typewriter correction fluid, varnishes, and lacquers

Heavy metals: lead, mercury, manganese

Other metallic elements: aluminum

Organic phosphates: various insecticides

Substance abuse/dependence: alcohol, amphetamines, caffeine, cannabis, cocaine, hallucinogens, inhalants, nicotine, opioids, phencyclidine, sedatives, hypnotics, anxiolytics

Other medications: anticholinergics, antihistamines, antidepressants, antipsychotics, antiparkinsonians, antihypertensives, steroids, digitalis

Amnestic Disorder due to a General Medical Condition

- **Head trauma**
 - **Cerebrovascular disease**
 - **Cerebral neoplastic disease**
 - **Cerebral anoxia**
 - **Herpes simplex virus–related encephalitis**
 - **Poorly controlled diabetes**
 - **Surgical intervention to the brain**

Substance-Induced Persisting Amnestic Disorder Related to

- Alcohol abuse
- Sedatives, hypnotics, and anxiolytics
- Medications (e.g., anticonvulsants, intrathecal methotrexate)
- Toxins (e.g., lead, mercury, carbon monoxide, organophosphate insecticides, industrial solvents)

Assessment

- Client history:
 - type, frequency, and severity of mood swings, personality and behavioral changes, and catastrophic emotional reactions
 - Cognitive changes, such as problems with attention span, thinking process, problem-solving, and memory (recent and remote
 - language difficulties
 - orientation to person, place, time, and situation
 - Appropriateness of social behavior.

- **Physical Assessment**

- signs of damage to the nervous system and
- evidence of diseases of other organs that could affect mental function
- Mental status examination Box 13–2.

TABLE 13 – 1 A Comparison of Dementia and Pseudodementia (Depression)

Symptom Element	Dementia	Pseudodementia (Depression)
<i>Progression of symptoms</i>	Slow	Rapid
<i>Memory</i>	Progressive deficits; recent memory loss greater than remote; may confabulate for memory “gaps”; no complaints of loss	More like forgetfulness; no evidence of progressive deficit; recent and remote loss equal; complaints of deficits; no confabulation (will more likely answer “I don’t know”)
<i>Orientation</i>	Disoriented to time and place; may wander in search of the familiar	Oriented to time and place; no wandering
<i>Task performance</i>	Consistently poor performance, but struggles to perform	Performance is variable; little effort is put forth
<i>Symptom severity</i>	Worse as the day progresses	Better as the day progresses
<i>Affective distress</i>	Appears unconcerned	Communicates severe distress
<i>Appetite</i>	Unchanged	Diminished
<i>Attention and concentration</i>	Impaired	Intact

Diagnostic Laboratory Evaluations

- Blood and Urine tests
- CT
- EEG
- MRI PET (positron emission tests)

Nursing Diagnosis

- Risk for trauma related to impairments in cognitive and psychomotor functioning
- Risk for suicide related to depressed mood secondary to awareness in decline of mental and/or physical capability
- Risk for other-directed violence related to impairment of impulse control; hallucinations
- Disturbed thought processes related to cerebral degeneration evidenced by disorientation, confusion memory deficits, and inaccurate interpretation of the environment
- Low self-esteem related to loss of independent functioning evidenced by expressions of shame and self degradation and progressive social isolation
- Self-care deficit related to disorientation, confusion, memory deficits evidenced by inability to fulfill ADLs

Outcomes

- Has not experienced physical injury.
- Has not harmed self or others.
- Has maintained reality orientation to the best of his or her capability.
- Discusses positive aspects about self and life.
- Fulfills activities of daily living with assistance.

Planning/Implementation

Nursing Interventions

The following measures may be instituted:

- a. Arrange furniture and other items in the room to accommodate client's disabilities.
- b. Store frequently used items within easy access.
- c. Do not keep bed in an elevated position. Pad siderails and headboard if client has history of seizures. Keep bedrails up when client is in bed (if regulations permit).
- d. Assign room near nurses' station; observe frequently.
- e. Assist client with ambulation.
- f. Keep a dim light on at night.
- g. If client is a smoker, cigarettes and lighter or matches should be kept at the nurses' station and dispensed only when someone is available to stay with client while he or she is smoking.
- h. Frequently orient client to place, time, and situation.
 - i. If client is prone to wander, provide an area within which wandering can be carried out safely.
 - j. Soft restraints may be required if client is very disoriented and hyperactive.

TABLE 13 – 2 Care Plan for the Client with a Cognitive Disorder

NURSING DIAGNOSIS: RISK FOR TRAUMA

RELATED TO: Impairments in cognitive and psychomotor functioning

Outcome Criteria	Nursing Interventions	Rationale
Client will not experience injury.	<p>The following measures may be instituted:</p> <ul style="list-style-type: none">a. Arrange furniture and other items in the room to accommodate client's disabilities.b. Store frequently used items within easy access.c. Do not keep bed in an elevated position. Pad siderails and headboard if client has history of seizures. Keep bedrails up when client is in bed (if regulations permit).d. Assign room near nurses' station; observe frequently.e. Assist client with ambulation.f. Keep a dim light on at night.g. If client is a smoker, cigarettes and lighter or matches should be kept at the nurses' station and dispensed only when someone is available to stay with client while he or she is smoking.h. Frequently orient client to place, time, and situation.i. If client is prone to wander, provide an area within which wandering can be carried out safely.j. Soft restraints may be required if client is very disoriented and hyperactive.	To ensure client safety.

TABLE 13 – 2 Care Plan for the Client with a Cognitive Disorder (continued)

NURSING DIAGNOSIS: DISTURBED THOUGHT PROCESSES

RELATED TO: Cerebral degeneration

EVIDENCED BY: Disorientation, confusion, memory deficits, and inaccurate interpretation of the environment

Outcome Criteria	Nursing Interventions	Rationale
Client will interpret the environment accurately and maintain reality orientation to the best of his or her cognitive ability.	<ol style="list-style-type: none"> 1. Frequently orient client to reality. Use clocks and calendars with large numbers that are easy to read. Notes and large, bold signs may be useful as reminders. Allow client to have personal belongings. 2. Keep explanations simple. Use face-to-face interaction. Speak slowly and do not shout. 3. Discourage rumination of delusional thinking. Talk about real events and real people. 4. Monitor for medication side effects. 	<ol style="list-style-type: none"> 1. All of these items serve to help maintain orientation and aid in memory and recognition. 2. These interventions facilitate comprehension. Shouting may create discomfort, and in some instances, may provoke anger. 3. Rumination promotes disorientation. Reality orientation increases sense of self-worth and personal dignity. 4. Physiological changes in the elderly can alter the body's response to certain medications. Toxic effects may intensify altered thought processes.

NURSING DIAGNOSIS: SELF-CARE DEFICIT

RELATED TO: Disorientation, confusion, and memory deficits

EVIDENCED BY: Inability to fulfill ADLs

Outcome Criteria	Interventions	Rationale
Client will accomplish ADLs to the best of his or her ability. Unfulfilled needs will be met by caregivers.	<ol style="list-style-type: none"> 1. Provide a simple, structured environment: <ol style="list-style-type: none"> a. Identify self-care deficits and provide assistance as required. Promote independent actions as able. b. Allow plenty of time for client to perform tasks. c. Provide guidance and support for independent actions by talking the client through the task one step at a time. d. Provide a structured schedule of activities that does not change from day to day. e. ADLs should follow usual routine as closely as possible. f. Provide for consistency in assignment of daily caregivers. 2. Perform ongoing assessment of client's ability to fulfill nutritional needs, ensure personal safety, follow medication regimen, and communicate need for assistance with activities that he or she cannot accomplish independently. 3. Assess prospective caregivers' ability to anticipate and fulfill client's unmet needs. Provide information to assist caregivers with this responsibility. Ensure that caregivers are aware of available community support systems from which they may seek assistance when required. Examples include adult day care centers, housekeeping and homemaker services, respite-care services, or the local chapter of a national support organization: <ol style="list-style-type: none"> a. For Parkinson's disease information: National Parkinson Foundation Inc. 1501 NW 9th Ave. Miami, FL 33136-1494 1-800-327-4545 b. For Alzheimer's disease information: Alzheimer's Association 225 N. Michigan Ave., Fl. 17 Chicago, IL 60601-7633 1-800-272-3900 	<ol style="list-style-type: none"> 1. To minimize confusion. 2. Client safety and security are nursing priorities. 3. To ensure provision and continuity of client care.

Client/Family Education

Box 13 – 3 Topics for Client/Family Education Related to Cognitive Disorders

- Nature of the illness
 - Possible causes
 - What to expect
 - Symptoms
- Management of the illness
 - Ways to ensure client safety
 - How to maintain reality orientation
 - Providing assistance with ADLs
 - Nutritional information
 - Difficult behaviors
 - Medication administration
 - Matters related to hygiene and toileting
- Support services
 - Financial assistance
 - Legal assistance
 - Caregiver support groups
 - Respite care
 - Home health care

Treatment Modalities

- **Delirium:**

- Correction underlying cause
- attention must be given to fluid and electrolyte status, hypoxia, anoxia, and diabetic problems.
- Staff members should remain with the client at all times to monitor behavior and provide reorientation and assurance.
- The room should maintain a low level of stimuli.
- Some physicians prefer not to prescribe medications for the delirious client, reasoning that additional agents may only compound the syndrome of brain dysfunction.

- **Dementia:**

- Focus must be directed to the identification and resolution of potentially reversible processes.
- The need for general supportive care, with provisions for security, stimulation, patience, and nutrition, has been recognized and accepted

Pharmaceutical Agents

- For agitation, aggression, hallucinations, thought disturbances, and wandering
 - Risperidone (Risperdal)
 - Olanzapine (Zyprexa)
 - Quetiapine (Seroquel)
 - Ziprasidone (Geodon)
 - Haloperidol (Haldol)
- For depression
 - Fluoxetine (Prozac)
 - Sertraline (Zoloft)
 - Citalopram (Celexa)
 - Paroxetine (Paxil)

- For anxiety (should not be used routinely for prolonged periods)
 - Chlordiazepoxide (Librium)
 - Alprazolam (Xanax)
 - Lorazepam (Ativan)
 - Oxazepam (Serax)
 - Diazepam (Valium)
- For sleep disturbances (for short-term therapy only)
 - Flurazepam (Dalmane)
 - Temazepam (Restoril)
 - Triazolam (Halcion)
 - Zolpidem (Ambien)
 - Aleplon (Sonata)
 - Trazodone (Desyrel)