10 Cognitive Disorders

Cognitive disorders often are thought of as disorders of elderly people. Although most common in this population, cognitive disorders can occur at any age. Very young or very old people with cognitive disorders have multiple health needs. Elderly clients usually have more than one chronic illness, and psychiatric disorders can be accompanied by other comorbidities.

Psychiatric–mental health nurse practitioners (PMHNPs) must approach clients with cognitive disorders by always assessing their needs using a multisystem approach.

Cognitive Disorders

Description

- Cognitive disorders cause a clinically significant deficit in cognition that represents a major change from the individual's previous baseline level of functioning.
- Two common disorders are
  - Delirium
  - Dementia.

Etiology

- Cognitive disorders are a general medical condition, a result of substance use or abuse, a reaction to medications or other ingested agents, or a combination of all of these.

Delirium

Description

- Delirium is a syndrome and not a disease.

- The hallmark symptom is a disturbance of consciousness accompanied by changes in cognition.
- Delirium is not accounted for by other current medical conditions.

Incidence and Demographics

- Common, especially in elderly people
- Often overlooked and mistaken for other conditions
- In individuals with psychiatric disorders, often mistaken for worsening of psychotic symptoms instead of a separate, distinct condition
- Prevalence varies based on age and client setting
  - 0.4% in general U.S. population age 18 or older
  - 1.1% in those age 50 or older
  - 30% in hospitalized clients age 50 or older
  - 60% in elderly clients in skilled-nursing facilities
  - 25% in clients with cancer
  - 40% in hospitalized clients with AIDS
  - 80% in terminal clients nearing death.

Risk Factors

- Age 50 or older
- Multisystem medical illness
  - The more physically ill the client, the higher the risk.
- Substance abuse
- Past episode of delirium.

Prevention and Screening

- At-risk family education
- Community education
  - Stigma reduction
  - Signs and symptoms of illness
  - Treatment potential for control of symptoms.
- Early recognition, intervention, and initiation of treatment
  - Whenever a client's clinical presentation changes rapidly from baseline, consider delirium as one possible differential diagnosis.

Assessment

History–Assess for the Following:

- Key findings
  - Disturbance of consciousness develops over a short time, usually hours to days.
  - This disturbance tends to fluctuate during the course of the day.
- Sleep–wake cycle disturbances
  - Reversal of the sleep–wake cycle is common.
  - Clients are awake at night and sleep during the day.
- Psychomotor agitation
  - The client exhibits purposeless, random actions.

- Illness course may resolve within hours to days.
  - The more quickly the underlying physiological disturbance is recognized and treated, the more rapidly the delirium will resolve.
  - Symptoms may persist for months in an individual when unrecognized.
  - Most symptoms resolve within 3–6 months.

Physical Exam Findings

- Evidence that significant clinical symptoms are a consequence of direct physiological processes, substance use or abuse, or general medical condition
- Usually nonspecific neurological abnormalities
  - Tremors
  - Incoordination
  - Urinary incontinence
  - Myoclonus
  - Nystagmus
  - *Asterixis*—A flapping motion of the wrists
  - Increased muscle tone and reflex.

Mental Status Exam Findings

Appearance

- Unconcerned with appearance
- Disheveled
- Highly inattentive.

Speech

- Impaired
- Disorganized
- Rambling
- Incoherent
- Slurred
- *Dysarthria*—Impaired ability to articulate words
- *Dysnomia*—Impaired ability to name objects
- *Dysgraphia*—Impaired ability to write.

Affect

- Rapid, unpredictable shifts in affective state without known precipitation
  - Lethargic
  - Agitated.

Mood

- Often unable to solicit from patient.

Thought Process

- Disorganized
- Distractible
- Perceptual disturbances
  - Illusions most common
  - Hallucinations less common than illusions but may be present.
- Delusions.

Thought Content
- Often hard to determine
- Hard to engage client in meaningful conversation.

Orientation
- Usually the first symptom to appear
- Usually disoriented to time and place.

Memory
- Grossly impaired.

Concentration
- Grossly impaired.

Abstraction
- Grossly impaired.

Judgment
- Grossly impaired.

Diagnostic and Laboratory Findings
- Findings consistent with underlying physiological etiology
- EEG abnormalities
  - Generalized slowing
  - Generalized increased activity if delirium is related to alcohol withdrawal.

Differential Diagnosis
- Dementia (see below)
- Substance intoxication or withdrawal (see Chapter 11)
- Schizophrenia (see Chapter 9)
- Schizophreniform disorder (see Chapter 9)
- Mood disorders with psychotic features (see Chapter 7).

Clinical Management
- Undertake treatment of underlying condition or disorder.
- Avoid the use of new medications whenever possible, as using them may cloud the diagnostic picture.

Pharmacological Management
- Symptomatic treatment
- Agitation and psychotic symptoms
  - Antipsychotic agents
  - Anxiolytic agents
  - Haldol, Risperdal, and Ativan commonly used.

Nonpharmacological Management
- Monitor for safety needs.

- Determine reality orientation frequently.
- Pay attention to basic needs:
  - Hydration
  - Nutrition.
- Client should be neither sensory deprived nor overstimulated.
- It is helpful to have in the patient's room familiar people; familiar pictures or decorations; a clock or calendar; and regular orientation to person, place, and time.

General Health Considerations

- Delirium is associated with high morbidity, usually from injury.
- High morbidity also results from associated problems related to inactivity
  - Pneumonia
  - Hydration and nutritional deficits.
- Safety concerns exist.

Life Span Considerations

Children

- Especially susceptible
- Related to immature brain development
- Often mistaken for uncooperative behavior
- If a child is not soothed by common methods (e.g., parental presence), delirium is suspected.
  - Most common in febrile states
  - Medications known to affect cognition
    - Especially common with anticholinergic medications.

Older Adults

- Susceptibility related to physiological changes of aging
- Elderly men more prone than elderly women for unknown reasons.

Dementia

Description

- Dementia is a group of disorders characterized by development of multiple cognitive deficits:
  - Impaired executive functioning
  - Impaired global intellect with preservation of level of consciousness
  - Impaired problem solving
  - Impaired organizational skills
  - Altered memory.
- Various forms of dementia share common symptoms but have different underlying pathology.

Dementia of the Alzheimer's Type (DAT)

- Most common type
- Gradual onset and progressive decline without focal neurological deficits
- Hallmark amyloid deposits and neurofibrillary tangles.

Vascular Dementia (VD)

- Second most common type
- Formerly called *multi-infarct dementia*
- Primarily caused by cardiovascular disease and characterized by step-type declines
- Most common in men with preexisting high blood pressure and cardiovascular risk factors
- Hallmarks are carotid bruits, fundoscopic abnormalities, and enlarged cardiac chambers.

Dementia Due to HIV Disease

- Classified as a subcortical dementia
- Parenchymal abnormalities visualized on MRI scan
- HIV-associated neurocognitive disorder or HIV encephalopathy less severe forms
- HIV can cause many psychiatric symptoms
- Manifests by progressive cognitive decline, motor abnormalities, and behavioral abnormalities
- Co-occurring with obsessive–compulsive disorder, posttraumatic stress disorder, generalized anxiety disorder, depression, and mania
- Development of dementia in client with HIV is an indicator of poor prognosis; death usually occurs within 6 months
- Psychotic symptoms usually occur in late-stage infection
- Clinical signs of late-stage HIV-related dementia include cognitive, motor, behavioral, and affective impairment:
  - Global cognitive impairment
  - Mutism
  - Seizures
  - Hallucinations
  - Delusions
  - Apathy
  - Mania.

✓ Remember that protease inhibitors can increase levels of Wellbutrin, benzodiazepines, and selective serotonin reuptake inhibitors (SSRIs). Use caution when prescribing these drugs to individuals taking protease inhibitors.

- Protease inhibitors may induce the metabolism of Depakote and Ativan, thus causing subtherapeutic levels.

Pick's Disease

- Also known as *frontotemporal dementia*
- Neuronal loss, gliosis, and Pick's bodies present
- Personality and behavioral changes in early stage
- Cognitive changes in later stages
- *Kluver–Bucy syndrome*—Hypersexuality, hyperorality, and placidity.

Creutzfeld–Jacob Disease
- Fatal and rapidly progressive disorder
- Occurs mainly in adults middle age or older
- Initially manifests with fatigue, flu-like symptoms, and cognitive impairment
- Later manifests with aphasia, apraxia, emotional lability, depression, mania, psychosis, marked personality changes, and dementia
- Death usually occurs within 6 months.

Huntington's Disease
- Subcortical type of dementia
- Characterized mostly by motor abnormalities (e.g., choreoathetoid movements)
- Psychomotor slowing and difficulty with complex tasks
- Memory, language, and insight usually intact until late stages
- High incidence of depression and psychosis.

Lewy Body Disease
- Caused by lewy inclusion bodies in the cortex
- Presents with hallucinations, Parkinsonian features, and extrapyramidal side effects (EPSs)
- Reacts adversely to antipsychotics.

Etiology
- Multiple theories ranging from psychological to neurobiological
  - Probable multifactorial etiological profile.
- Primary cause mostly unknown
- General medical condition, result of substance use or abuse, reaction to medications or other ingested agents, or combination of all of these
- Diffuse cerebral atrophy and enlarged ventricles in DAT
- Decreased ACh and norepinephrine in DAT
- Genetic loading
- Genes on chromosomes 1, 14, and 21 have been identified in families with history of DAT
- Autosomal dominant trait
- Inherited alleles for apolipoprotein E-4 (APOE4) on chromosome 19 suspected to be related to late-onset dementia.

Incidence and Demographics
- Often misdiagnosed or unrecognized, especially in early stages and in young clients
- Affects 1.6% of individuals in the U.S. age 65 or older
  - 16%–25% in individuals age 85 or older
- DAT the most common
  - Affects an estimated 4 million Americans
  - Duration of illness averages 8–10 years.

Risk Factors
- Age
- Multisystem medical illnesses

- Genetic loading
  - Family history of dementia in first-order relative.
- History of substance use or abuse.

Prevention and Screening

- At-risk family education
- Community education
  - Stigma reduction
  - Signs and symptoms of illness
  - Treatment potential for control of symptoms.
- Early recognition, intervention, and initiation of treatment
  - Allows for ruling out age-related memory changes or unidentified conditions
  - Routine screening not recommended because no definitive treatment exists
  - Cognitive and functional evaluation at least every 3 years for people age 65 or older
  - Baseline and regular cognitive evaluation to monitor cognitive decline and treatment response to medications in individuals diagnosed with dementia.
- Significant and protracted prodromal symptom period usually noted before full onset of illness.

Assessment

History–Assess for the Following:

- Detailed history of present illness, including time frame, progression, and associated symptoms
- Past medical history of hypertension, strokes, head trauma, and psychiatric illness
- Psychiatric history of depression, anxiety, and schizophrenia
- Social history, including present living situation; marital status; occupation; education; and alcohol, tobacco, or illicit drug use
- Medications, including prescription, over-the-counter, alternatives, supplements, and home remedies
- Initial and periodic functional history and assessment
- Validate history with family or caregiver.

Memory Impairment

- Most prominent feature of disorder
- Usually earliest symptom
- Produces multiple deficits in daily functioning
  - Unable to learn new information
  - Forgets past information
  - Loses valuables
  - Forgets daily activities like eating and dressing
  - Becomes easily lost
  - Has other cognitive deficits such as *impaired executive functioning.*
- Instruments for assessing level of impairment
  - Mini-Mental State Examination (MMSE; Crum, Anthony, Bassett, & Folstein, 1993)
  - Short Portable Mental Status Questionnaire (SPMSQ; Pfeiffer, 1975).

- Blessed Dementia Rating Scale (BDRS; Blessed, Tominson, & Roth, 1968).

✓ Remember to always consider visual, sensory, language, physical disabilities, and education when administering mental status tests.

Physical Exam Findings

- *Amaurosis fugax*—Unilateral transient vision loss, described as "curtain over eye"
- Unilateral focal–motor weakness
- Asymmetrical reflexes.

Mental Status Exam Findings

Appearance

- Apraxia
- Decreased self-care activities of daily living.

Speech

- Deterioration of language skills
- Aphasia
- Circumlocutory phrases
- Indefinite object recognition (e.g., calling items "things" and unable to find discrete name)
- In advanced stages are
  - Mutism
  - Echolalia.

Affect

- Lability.

Mood

- Difficult to illicit.

Thought Process

- Agnosia.

Thought Content

- Difficult to illicit.

Orientation

- Disoriented to time and place
- Disoriented to person in late stages of disorder.

Memory

- Impaired in many dimensions of memory:
  - Word registration
  - Recall
  - Retention
  - Recognition.

Concentration
- Distractible.

Abstraction
- Concrete on proverb testing.

Judgment
- Grossly impaired for self- and social judgment.

Diagnostic and Laboratory Findings
- CBC, chemistry profile, thyroid function tests, B_{12} level, and folate level to rule out metabolic causes or unidentified conditions
- Syphilis drug toxicity screening if indicated by history
- Alcohol/illicit drug screen if suspected/indicated
- Urinalysis if urinary tract infection suspected
- Arterial oxygen or pulse oximetry if hypoxemia suspected
- CT or MRI not routinely used
- EEG not useful
- Neuropsychological testing recommended to complete diagnostic assessment.

Differential Diagnosis
Nonpsychiatric
- Parkinson's disease
- Hearing loss
- B_{12} and folate deficiencies
- Trauma, especially with history of falls
- Hypothyroidism
- Infection
- Cerebrovascular accident
- Polypharmacy
- Alcohol intoxication.

Psychiatric
- Mood disorders (see Chapter 7)
- Delirium (see above)
- Anxiety disorders (see Chapter 8).

Clinical Management
General Considerations
- Rule out or treat any conditions that may contribute to cognitive impairment.
- Discontinue unnecessary medications, especially sedatives and hypnotics.

Pharmacological Management
- Cognitive symptoms
  - N-Methyl D-Aspartate Glutamate Receptor Antagonists
    - Prevent overexcitation of glutamate receptors and stabilize the neurodegenerative process

- Memantine (Namenda; 10–20 mg bid)
  - May slow the degenerative process
  - Promotes synaptic plasticity
  - May be used in combination with cholinesterase inhibitors.

- Cholinesterase Inhibitors
  - May be initiated for mild to moderate Alzheimer's disease
  - Modest clinical improvement in some clients, with studies showing 2- to 3-point improvement in MSE testing
  - Treat only symptoms, slow loss of function, and may improve agitated behaviors
  - Do not prevent pathological progression of disease
  - Not effective in severe, end-stage disease
  - Should stop if side effects develop, usually nausea and vomiting
  - Commonly used agents:
    - Donepezil (Aricept; 5–10 mg/d)
      - Now first line
      - Best with mild symptoms
      - May elevate LFTs, so monitor.
    - Rivastigmine tartrate (Exelon; 1.5–6 mg bid; increase gradually to avoid nausea)
      - Best with moderate symptoms.
    - Tacrine (Cognex; 40–160 mg/d)
      - May elevate LFTs and cause liver toxicity, so monitor
      - Many drug interactions (Cummings, 2000).

- Psychosis and Agitation
  - Try nonpharmacological therapies first.
  - Use antipsychotic agents regularly for agitation or psychotic symptoms.
  - Use lowest effective dose and attempt to wean periodically.
  - Antipsychotics may cause many side effects of significance in the older adult:
    - EPS
    - Sedation
    - Postural hypotension
    - Anticholinergic side effects.
  - Benzodiazepines may be used for treating anxiety or infrequent agitation.
    - Are not as effective as antipsychotics for severe symptoms (Jervis, 2002).

- Depression
  - Treat clients with depressive symptoms:
    - Depressed mood
    - Insomnia
    - Fatigue
    - Irritability
    - Appetite loss.
  - Use lowest effective dose.
  - Treat for 6–12 months, then attempt to wean; depression may recur and require lifelong treatment.

- Patients may have less depression as the dementia progresses and they become less aware of their circumstances.
- SSRIs have fewer side effects than tricyclic antidepressants (Draper, 1999).

Nonpharmacological Management

- Educate client and family about the illness, treatment, and community resources.
- Assist with long-term planning, including financial, legal, and advanced directives.
- Assess home and driving safety.
- Use behavior therapy to identify causes of problem behaviors and change the environment to reduce the problem behaviors.
- Use recreational therapy, art, and pet therapy to reduce agitation and promote normalized behavior.
- Use reminiscence therapy to process through any unresolved issues and recollect the past.
- Maintain a simple daily routine for bathing, dressing, eating, toileting, and bedtime.
- Integrate cultural beliefs into the management of all clients with dementia (Cummings & Jeste, 1999).

Psychotherapeutic Approaches for HIV-Related Dementia

- Major psychodynamic themes for individuals with HIV-related dementia are issues of guilt, self-esteem, and fear of dying.
- Because the client may not be able to give a complete and accurate history, family or friends should be questioned about any unusual behavior or mental status changes.
- Changes in the level of activity, in interest in other people, or in personality are clues to an acute central nervous system disturbance.
- Some changes are directly due to brain dysfunction, while other changes are due to psychological distress over a systemic problem—for example, anxiety that the person is dying.
- The spectrum of neuropsychiatric and neurological manifestations depends on the severity of immunosuppression.
- Psychiatric disorders may preexist or result from HIV.

✓ Remember that even subtle neurocognitive impairment may affect psychological coping.

- Neuropsychiatric disorders are much more prevalent in late-stage illness.

Life Span Considerations

- Primarily a disease of older adults but can occur in children
  - Diagnosis based on impaired cognition; diagnosis not applicable until ages 4–6 years, when cognition can be fully assessed
  - Dementia in children usually presents as deterioration in functioning, such as school performance or delay in normal development.

Case Study

Rachael, a 59-year-old homemaker with a positive family history for Alzheimer's disease, has been very worried lately at her subjective belief that she is losing her memory. She has hesitated to go for an evaluation because of her concern and is very upset as she shares her beliefs with the PMHNP. She gives a social history of being happily married for the past 35 years and of having several children and two new grandchildren. She has had no recent stressors and has felt a slow decline in her memory for the past 2 years. She believes no one else has noticed, but recently it is harder to hide her deficit from her family.

She has been employed as a nurse for the past 25 years at the local hospital but has begun to notice a decline in her ability to keep track of all of the information needed to do her job well. She has a history of asthma and periodically uses a rescue inhaler and steroids to manage her asthma. She routinely takes one aspirin a day and uses over-the-counter kava kava when she feels stressed. She has been taking Pravachol 20 mg/day for her cholesterol level for the past 2 years. She has no significant physical findings but does show mild impairment in short-term memory testing during the mental status exam. There are many issues to consider in planning care with this client:

- What is the probable diagnosis at this time?
- What further assessment is needed?
- What role does the medication taken by the client play in decision making?
- Would you include the family at this time in the care planning?
- Are medications indicated at this time?
- What steps would you take to reduce the client's discomfort as she discusses her concerns?

Review Questions

1. Risk factors for the development of delirium include all of the following except

   a. Consistent use of aspirin-based products
   b. Age older than 50
   c. Substance abuse
   d. Multisystem illness

2. The most significant finding that should alert you to the possible diagnosis of delirium is

   a. Rapid onset of symptoms different from baseline functioning
   b. Slow, progressive onset of symptoms different from baseline functioning
   c. Presence of a strong family history suggesting vulnerability
   d. Rapid alteration in vital signs

3. Prevention and screening actions are essential in the identification of dementia because
   a. Early detection can prevent some of the deterioration of the illness
   b. Early recognition allows for ruling out reversible forms of dementia
   c. Medications are more effective in treating dementia if started later in the illness
   d. Comorbidities can be prevented by early recognition

4. The medication most commonly used to treat moderate cognitive deficits seen in dementia is
   a. Strattera (atomoxetine)
   b. Exelon (rivastigmine tartrate)
   c. Haldol (haloperidol)
   d. Celebrex (celecoxib)

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Notes: