Cognitive Impairment Disorders

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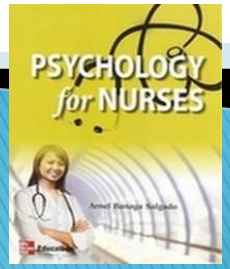

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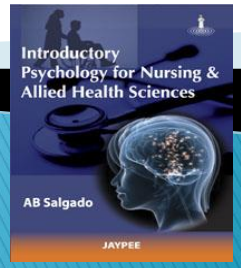

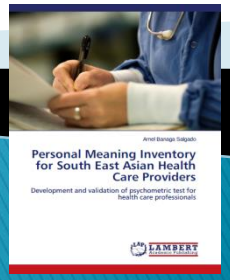

Learning Objectives

- Compare the clinical picture of delirium with dementia
- State the critical needs of a client with delirium
- Define the outcomes for a client with delirium
- Discuss the various interventions for a client with delirium
- Describe the various stages of Alzheimer's disease

Learning Objectives (cont.)

- Formulate the nursing diagnosis and outcomes for a client with Alzheimer's disease
- Discuss the various interventions suitable in the management of a client with Alzheimer's disease

Cognitive Impairment Disorder

Introduction

- Cognitive disorders are characterized by disturbances in orientation, memory, intellect and judgement resulting from changes in the brain.
- There are three main cognitive disorders, namely,
  - delirium,
  - dementia, and
  - amnestic disorder.

Delirium

- Delirium is a syndrome, not a disease.
- It can be due to multiple causes.
- Delirium is characterized by an impairment of consciousness along with global impairment of cognitive functions.
- This condition is transient and reversible.
- It is always secondary to other conditions such as medical or surgical problems or psychoactive substance use.

Epidemiology

- Delirium is a common condition but it often goes unrecognized and misdiagnosed.
- It is one of the most commonly seen disorders in medical practice.
  - 40–50 % of clients in surgical and cardiac intensive care units
  - 15–25% in medical wards
  - 10–15% of clients in general surgical wards

} develop delirium

Aetiology

- Changes in a chemical in the brain (acetylcholine) which transmits signals between nerves
- Dysfunction of reticular formation (area controlling arousal and attention)
- Drugs
- Electrolyte disturbances

Aetiology (cont.)

- Intracranial (brain infection, head injury, stroke, etc.)
- Cardiac/renal failure
- Endocrinal disorders
- Deficiency diseases

Risk Factors for Delirium

- Old age
- Young children
- Sensory impairment (poor vision and hearing)
- Pre-existing brain damage
- Malnutrition
- Fractures
- Systemic infections
- Past history of delirium

Nursing Assessment

Presence of delirium is suspected when a client abruptly develops

1. Disturbance in consciousness	– Reduced ability to focus, sustain or shift his attention – Reduced awareness of the environment – Difficulty understanding questions as their attention may wander – Sudden onset with a fluctuating course – Lucid periods alternating with asymptomatic periods – Periods of altered sensorium and confusion which are markedly worse during the evening and early morning hours (dusk and dawn), also known as sundowning

Nursing Assessment (cont.)

2. Disorientation	Disorientation to time followed by disorientation to place and then to person
3. Memory deficits	Immediate and recent memory may be impaired with preserved remote memory
4. Perceptual disturbances	Illusions and hallucinations (visual and tactile)
5. Impaired thought processes	Jumbled or irrelevant speech
6. Disrupted sleep-wake cycle	May be reversed with broken sleep. The client may have difficulty in sleeping at night

Nursing Assessment of Physical Needs

i. Physical safety

- A delirious client may be disoriented to place.
- Misinterpretation of the reality may scare the client and he may try to run away to avoid his ‘enemies’.
- Wandering, pulling out intravenous lines and catheters and falling out of bed are common dangers.

Nursing Assessment of Physical Needs (cont.)

Interventions

- Ensure that the physical environment is made as simple as possible.
- Encourage the client to use his eyeglasses, hearing aids. Adequate lighting can help the client to perceive the environment clearly and accurately.

Nursing Assessment of Physical Needs (cont.)

- Place clocks and calendars in view to keep the client oriented to time.
- Interact with the client whenever he is awake in slow, clear and loud enough voice, avoiding the medical jargon.
- Explain the events in the surroundings and procedures in simple language.

Nursing Assessment of Physical Needs (cont.)

ii. Biophysical safety

- Levels of arousal may range from:
  - lethargy, semi-coma to hyper-vigilance.
  - quiet, withdrawn and apathetic or extraordinarily alert and agitated in hyper-vigilant state.
  - having difficulty falling asleep at night and becoming more disoriented.

Nursing Assessment of Physical Needs (cont.)

Interventions

- Vital signs should be monitored carefully.
- Signs of autonomic instability such as tachycardia, elevated blood pressure, sweating and flushed face should be looked for and attended.

Nursing Assessment of Physical Needs (cont.)

iii. Bacteriological safety

- A delirious person is more prone to infections due to various reasons such as poor self-care, incontinence and injury.
- Poor nutrition, forced bed rest and decreased skin turgor may lead to bed sores and various systemic infections.
- These areas need early nursing assessment and intervention.

Nursing Diagnoses for a Confused/Delirious Client

- ✓ Risk for injury
- ✓ Acute confusion
- ✓ Disturbed sensory perception
- ✓ Disturbed thought process
- ✓ Fear
- ✓ Impaired memory
- ✓ Disturbed sleep pattern
- ✓ Self-care deficit
- ✓ Functional urinary incontinence
- ✓ Imbalanced nutrition
- ✓ Deficient fluid volume

Nursing Diagnoses for a Confused/Delirious Client (cont.)

For the family and caregiver

- ✓ Caregiver role strain
- ✓ Disturbed family coping
- ✓ Interrupted family functioning

Nursing Outcome Criteria for a Confused Patient

Outcome	Short-term Goals	Long-term goals
Consciousness	- Shows cognitive orientation - Communicates appropriately	- Opens eyes when called and to external stimuli - Obeys commands
Risk for injury	- Does not fall or injure himself - Does not wander out of the ward - Gait improves - Hallucinations and illusions under control	- Remains safe and free from injury while in hospital
Orientation	- Able to tell correctly day, date, month, etc. - Interpret current events correctly	- Identifies self - Identifies significant others

Planning and Implementation

- The Nursing Interventions Classification (NIC) can be used as a guide to plan and develop interventions for a delirious and confused client.
- It is important to identify and treat the underlying medical–surgical cause as early as possible because the longer a condition goes untreated, the greater is the risk that it causes permanent brain damage.

Evaluation

- Delirium is a transient disorder and appropriate management will ensure that:
  - the underlying cause is identified and treated,
  - the client will not injure himself, and
  - the client regains orientation to time, place and person at the time of discharge.

Dementia

- Dementia is a group of disorders characterized by multiple impairments in cognitive functions in clear consciousness.
- This impairment represents a definite decline from a previous level of daily living and social and occupational functioning.

Epidemiology

- Dementia is a disorder of old age.
- 5% of all persons who reach the age of 65 suffer from dementia.
- About 15% have mild dementia and 5% have severe dementia.
- The lifetime prevalence of dementia increases with increasing age, i.e. 10–15% by the age of 75 and 20–40 % by the age of 85.

Aetiology

Primary (irreversible) dementia	Secondary (reversible dementia)	
▪ Alzheimer's disease ▪ Vascular dementia	**Intracranial** ▪ Head injury ▪ Cerebral tumours ▪ Subdural haematoma ▪ Normal pressure hydrocephalus **Neurodegenerative disorders** ▪ Parkinson's disease ▪ Wilson's disease **Infections** ▪ HIV ▪ Neurosyphilis ▪ Encephalitis ▪ Creutzfeldt-Jakob disease	**Drugs and Toxins** ▪ Chronic alcoholism **Nutritional disorders** ▪ Thiamine deficiency ▪ B_{12} deficiency ▪ Folic acid deficiency **Metabolic disorders** ▪ Hypothyroidism ▪ Hyperthyroidism ▪ Dialysis dementia

Alzheimer's Disease

- Dementia of the Alzheimer's type (DAT) is the most common dementia.
- The exact cause of DAT is not known.
- The underlying changes in brain are quite characteristic and are almost similar in all types of dementias.

Risk factors for DAT

- Female gender
- Family history of DAT and past history of head injury

Stages of Alzheimer's Disease

i. Stage 1

ii. Stage 2

iii. Stage 3

Stage 1 (May Last 1–2 Years)

- Obvious memory deficits, poor concentration and loss of energy and initiative, difficulty learning new things
- Becomes anxious and restless easily. Mood changes especially fleeting depression are common
- Pre-existing personality traits may become exaggerated

Stage 1 (May Last 1–2 Years) (cont.)

- May cook up false stories or a timid person may pick fights
- Difficulty in finding right words
- Handwriting may be altered with perseveration of words and phrases
- Presenting signs at this stage may be mistaken for depressive illness and antidepressants may be prescribed.

Stage 2 (Confusion)

- Cognitive functions decline further affecting the skills used in the activities of daily living
- Becomes easily disoriented to time and place
- Mood swings or brief episodes of anger without any apparent cause
- Motor restlessness may alternate with periods of inertia
- Apraxia (loss of purposeful activity in the absence of motor and sensory impairment)

Stage 2 (Confusion) (cont.)

- Language difficulties (aphasia)
- Word finding difficulty (anomia) to complete loss of vocabulary
- The ability to read and write is affected
- Difficulty in understanding the speech of others. This often leads to total breakdown of communication

Stage 3 (End Stage)

- All intellectual functions are grossly impaired and neurological deficits, e.g. hemiparesis, increased muscle tone and unsteady gait lead to marked disability
- Does not recognize family members and friends or even familiar objects (agnosia)
- May develop fatuous and gross euphoria

Stage 3 (End Stage) (cont.)

- Speech is replaced by jargon speech
- May become bedridden, emaciated and incontinent
- Death is usually due to infections (e.g. pulmonary, urinary) or aspiration

Nursing Diagnosis

- Making a diagnosis of Alzheimer's disease includes ruling out other causes of dementia especially of reversible dementia.
- Do a careful history-taking, physical examination and laboratory tests.
- The use of Mini-Mental State Examination test can help in the diagnosis as well as in the monitoring of deterioration.
- It is imperative to differentiate between dementia, depression and delirium.

Differences between Dementia and Depression

	Dementia	Depression (Pseudo-dementia)
Onset	- Slow, over months - Cognitive deficits antedate depressive symptoms	- Gradual with acute - Exacerbations during stress - Depression antedate cognitive deficit
Manner of presentation	- Client minimizes or denies cognitive deficits - Tries to cover up by making up stories, i.e. confabulates	- Client complains of memory loss and poor functioning - Exaggerates these deficits

Differences between Dementia and Depression (cont.)

	Dementia	Depression (Pseudo-dementia)
Mood and Affect	- Apathetic and indifferent	- Sad/depressed with or without anxiety
Facial	- Fatuous, labile and superficial affect	- Expression sad–worried
Activity Level	- Usually not altered	- Lethargic, fatigued and lacks motivation. Avoids people

Differences between Dementia and Depression (cont.)

	Dementia	Depression (Pseudo-dementia)
Cognitive Functions	- Impaired memory, attention, abstract thinking, judgement - Agraphia, aphasia, apraxia in later stages	- Poor concentration, forgetfulness that is inconsistent
Speech and Language	- Incoherent, inappropriate - Word finding difficulty - Perseveration	- Slow and monotonous - Reduced in output - Contains depressive themes

Differences between Dementia and Depression (cont.)

	Dementia	Depression (Pseudo-dementia)
Response to questions	- Often evasive, angry - When pressed for answers catastrophic reaction may occur	- Answers are slow and 'I do not know' type
Prognosis	- Progressive	- Recovers completely with proper and timely treatment

Differences between Dementia and Depression (cont.)

	Delirium	Dementia
Onset	Sudden	Slow and gradual
Consciousness	Clouded	Clear
Memory impairment	Mild	Marked
Disorientation	Marked	Mild
Attention-concentration	Impaired	Intact initially
Perception	Visual hallucinations Illusions	Absent
Sleep-wake cycle	Disturbed/reversed	Intact
Course	Fluctuating	Stable
Prognosis	Good if treated early	Progressive

Nursing Outcome Criteria

1. Risk for injury

   With environmental changes and aides, the client:

   - remains free of danger at home or in hospital
   - remains burn free
   - does not hurt himself if falls
   - remains free of danger during seizures

Nursing Outcome Criteria (cont.)

- does not wander off
- returns safely within one hour of wandering
- takes correct doses of prescribed medications
- does not ingest toxic or inedible foods and fluids

Nursing Outcome Criteria (cont.)

2. Impaired environmental interpretation

- Realizes and states that he does not know where he is or that he has trouble remembering
- Able to acknowledge the reality of stimuli (sound/object) leading to misinterpretation (illusion) once it has been pointed out to him

Nursing Outcome Criteria (cont.)

- Does not become aggressive when experiencing paranoid ideas
- Does not feel unsafe and threatened because of delusions and illusions

Nursing Outcome Criteria (cont.)

3. Self-care deficits and ineffective coping
   - Able to carry out self-care activities to some extent
   - Able to follow the stepwise instructions for self-care (e.g., bathing, dressing.)
   - Remains appropriately dressed
   - Uses toilets for voiding or expresses his needs

Nursing Outcome Criteria (cont.)

- Refrains from collecting and hoarding things (e.g., food, waste material)
- Does not intrude on others' privacy
- Does not make inappropriate sexual advances

Nursing Outcome Criteria (cont.)

4. Impaired communication
   - Able to communicate his needs or help needed
   - Uses his hearing aid and/or eyeglasses
   - Understands when spoken to and answers appropriately
   - When aphasic, he is able to tell his needs by gestures, signaling the right word, or with the help of pictures.

Nursing Outcome Criteria (cont.)

5. Caregiver role strain
   - Family participates in planning the care of the client
   - Family expresses their emotions and needs
   - Has access to various professional helping services such as counselling, legal and financial

Nursing Outcome Criteria (cont.)

- Has access to various community resources
- Uses the respite care from time to time
- Takes holidays or time off on regular basis without any guilt

Planning and Implementation

- The planning of care for a client with dementia focuses on the immediate needs of the client.
- Identification of areas of needs, level of functioning and caregivers' needs helps in planning the intervention strategies.
- A positive and respectful attitude towards the client generates more cooperation from the client and decreases the anxiety and catastrophic reactions.

Planning and Implementation (cont.)

- Although many families look after their loved ones, yet they need emotional and physical support, information and legal and financial guidance.
- There are Alzheimer's Associations throughout the globe to help and guide the families. There are other resources that might be available in some communities.

Evaluation

- The main aim of evaluation is to ensure that interventions taken had enhanced the quality of life for both the client and family.
- The outcome criteria set for a client with dementia needs to be evaluated and altered from time to time as the condition deteriorates and the level of functioning goes down further.
- Frequent and appropriate revision of outcome criteria will reduce the client's anxiety and the frustration of the staff and family.