

Delirium, Dementia, Amnesia

Introduction

Cognitive disorders are type of brain disorders affecting a higher order brain functions such as cognition, perception, memory, reasoning, learning, creativity, judgment and decision making.

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** Delirium , dementia, and amnesia are common problems in the acute care setting that make it a challenge for the bedside psychiatrist to give the care needed to these patients.*

** Caring for patients with cognitive disorders can be challenging and physically and emotionally exhausting.*

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** The inability to diagnose dementia or delirium appropriately can increase morbidity and mortality in this patient population.*

(American Psychiatric Association, 1999)

**It's important to understand dementia and delirium in detail, as well as having a firm grasp on diagnosis, causes, and treatment options.*

(Hills,2008)

Definition

Cognitive disorders defined as a dysfunctions or deteriorations of brain functioning (APA 2000).

Etiology

Cognitive disorders may occur from temporary or permanent changes in the function of the brain as a result of genetic predisposition, infections, toxins, metabolic disorders, or injury.

Types of cognitive disorders

1. Dementia.

2. Delirium.

3. Amnesia.

Dementia

Dementia is defined as a loss of previous level of cognition, executives, and memory function in a state of full alertness (Bourgeois, Seaman, & Servis,2003).

Incidence and prevalence

Dementia is more common among individuals 60 years of age and older, and the incidence rises rapidly for clients 80 years of age and older.

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World health organization (2006) report estimated that approximately 22 million individuals world wide are affected by Alzheimer disease and Vascular dementias and predicted that approximately 80 million people will be affected by 2020 (Ferri et al.,2006; Lopez et al.,2006).

Signs and symptoms

- *The essential feature of a dementia is the development of multiple cognitive deficits that include memory impairment and at least one of the following cognitive disturbances: aphasia, apraxia, agnosia, or a disturbance in executive functioning (APA, 2004).*

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dementia may be accompanied by symptoms of delirium, delusions, depressed mood, hallucinations or other perceptual problems, behavior disorders, or communication problems.

Types of dementia

Dementia can be classified as a primary or secondary. Primary dementias are those , such as Alzheimer's disease, in which the dementia itself is the major signs of some organic brain disease not directly related to other organic illness. Secondary dementias are caused by or related to another disease or condition, such as HIV disease.

Physiology of Dementia

Dementia are usually considered chronic, progressive and irreversible disorder.

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additional changes include cortical atrophy, increased ventricular dilatation and decreased level of acetylcholine (memory loss), norepinephrin, and other neurotransmitters.

Diagnostic criteria for dementia according to DSM-IV

A. The development of multiple cognitive deficits manifested by both

(1) memory impairment (impaired ability to learn new information or to recall previously learned information)

(2) one (or more) of the following cognitive disturbances:

(a) aphasia (language disturbance)

(b) apraxia (impaired ability to carry out motor activities despite intact motor function)

(c) agnosia (failure to recognize or identify objects despite intact sensory function)

(d) disturbance in executive functioning (i.e., planning, organizing, sequencing, abstracting)

What is delirium?

** Delirium is a transient mental disorder, characterized by impaired cognitive function and reduced ability to focus, sustain or shift attention.*

** The disturbance develops over a short period of time (usually over hours or days), and generally fluctuates during the course of the day.*

(American Psychiatric Association, DSM IV)

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- *It is associated with a disturbance in the sleep-wake cycle and an increase or decrease in psychomotor activity. (Lipowski, 1990)*
- *Although delirium usually only lasts for a few days, it may persist for weeks or even months.
Kiely et al., (2004)*

What are the signs and symptoms of delirium?

- * Difficulty focusing, sustaining or shifting attention.*
- * Memory impairment, most commonly impaired recent memory.*
- * Disturbance of the sleep-wake cycle, for example drowsy during the day and agitated or restless at night.*
- * Speech or language disturbances, for example rambling speech.*

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- * *Disorientation to place or time*
- * *Disturbance in psychomotor behavior, for example agitation with increased psychomotor*
- * *Behavior and sluggishness with decreased psychomotor behavior*
- * *Emotional disturbances such as mood swings that may change over the course of a day and*
- * *Misinterpretations, illusions or hallucinations such as seeing, hearing or feeling things that are not there.*

What are the causes of delirium?

Delirium has a large number of possible causes. It may result from a general medical condition, substance use or withdrawal (including medications), or can be due to multiple etiologies. In older hospitalized patients, the latter is often the case.

(Inouye ,& Charpentier, 1996)

However, there is also a small proportion of delirium cases in which the cause cannot be identified.

(American Psychiatric Association, 1999)

Conditions & Disorders that are commonly associated with delirium, including:

- *General illnesses and infections such as pneumonia or urinary tract infection*
- *Disorders of the central nervous system such as a stroke or subdural haematoma*
- *Disorders of the heart or lungs such as heart or respiratory failure*
- *Medication use*
- *Disorders of metabolism such as kidney failure or dehydration. (British Geriatric Society ,2006)*

What is the epidemiology?

Around 10-15% of older people admitted to hospital are delirious at the time of admission and a further 5%-40% are estimated to develop delirium while in hospital (Britton ,& Russell, 2005)

Types of delirium

- *Hyperactive delirium*
- *Hypoactive delirium*
- *Mixed*

Hyperactive delirium

- *Physically/verbally aggressive, agitated, wanders*
- *Physically hyperactive*
- *Very alert to stimuli*
- *Labile mood*

Hypoactive delirium

- *Lethargic, somnolent, withdrawn, decreased response to stimuli*
- *Physically hypoactive*
- *Clouded, inattentive, slow to respond*
- *unarousable or requires aggressive stimuli to arouse*

Mixed delirium

Evidence of both hyperactive and hypoactive behavior

Risk Factors

- *Pre-existing cognitive impairment such as dementia.*
- *Visual impairment.*
- *Alcohol related health concerns*
- *Age 70 years or more.*
- *A previous history of delirium*
- *Patients with comorbidities such as chronic obstructive pulmonary disease, hypertension, and stroke.*

Definition of Amnesia

The inability to retain or recall past experience.

(Townsend ,2008)

Characteristics of Amnesia

Amnestic disorders are characterized by inability to learn new information (short term memory deficit), and inability to recall previously learned information (long term memory deficit), apathy , lack of initiative and emotional blindness.

Etiology

A- Amnestic disorder due to general medical condition:

that include head trauma , cerebrovascular disease, cerebral neoplastic disease, cerebral anoxia,interruptions to cerebral blood flow, hippocampus changes ,herpes simplex encephalitis, poorly controlled insulin-dependent diabetes, (APA,2000; Wise, Gray & Seltzer,1999)

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*B-Substance induced persisting amnestic disorder :
DSM-IV identifies the following substances with
which amnestic can be associated.*

*1- Alcohol (Korsakoff's syndrome) (Wernicke's
encephalopathy due to thiamine deficiency)*

2- Medications

- Sedatives, hypnotics and anxiolytics

- Anticonvulsant

- Intrathecal Methotrexate (chemotherapy)

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C- Toxins

- Lead, mercury, carbon monoxide, organophosphate insecticides, industrial solvents.

Types of Amnesia

- *Retrograde amnesia is the inability to remember events that occurred before the accident*
- *Anterograde amnesia is the inability to remember events that occur after the accident or inability to form new memory*

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According to period, amnesia is divided to:

- a. Transient global amnesia. This type of amnesia has no consistently identifiable cause, but researchers have suggested that migraines or transient ischemic attacks may be the trigger. This type last for 1 month or less.*
- b. chronic amnesia. This type memory impairment last for more than one month.*

Signs and symptoms

- a. Memory loss or impairment (short and long term memory)*
- b. Confusion*
- c. Disorientation*
- d. Attentional deficits*
- e. Confabulation (filling gaps in memory with imaginary events) may be noted during the early stages of amnestic disorder but usually disappears with time.*
- f. lack of insight*

Difference between Amnesia, Dementia and Delirium

Amnestic disorder is diagnosed when there is severe memory impairment without other significant cognitive impairments (eg, aphasia, apraxia, agnosia, or disturbances in executive functioning) or impaired consciousness, no other disturbances of higher cortical functions which would indicate a diagnosis of either delirium or dementia.

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Amnesia also occurs (onset) suddenly like delirium while dementia has gradual onset.

Delirium is reversible while dementia is irreversible, on the other hand amnesia is depend on cause.