

Doctors 2021 - رّوح - Medicine - Mu

## PSYCHOLOGY SHEET

**Delirium, Dementia, Amnesia**

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# 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.

- **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.

\*\*delirium and dementia are related to age " with ageing process" so they are the most common

- 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)

Dementia is a progressive disease = gets worse over time and unfortunately the aim of medications is to slow the progression of this disorder but not a definitive cure

## Cognitive disorders

### Definition:

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

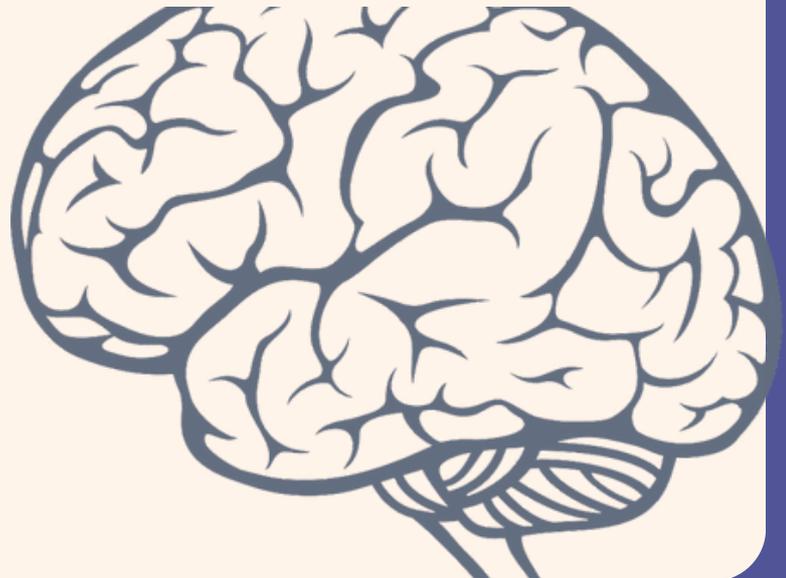
**cognitive disorder : is a dysfunction of higher brain function**

### Etiology:

Cognitive disorders may occurs 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



## Definition:

Dementia is defined as a loss of previous level of cognition, executives, and memory function in a state of full alertness **Conscious**(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.

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: according to DSM 4

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).

**\*problem of doing certain orderexecutive functioning**

Dementia may be accompanied by symptoms of delirium, delusions, depressed mood, **hypoactive or hyperactive** ,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(**gradual of onest**), progressive ( **worsen while gitting older**)and irreversible disorder(**drugs wont heal, but delay the progression of the disorder**) 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 ( "in short term memory" as impaired ability to learn new information or "in long term memory" as to recall previously learned information)

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

a)aphasia (language disturbance\***disorder in speech and communication**)

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)

عدم القدرة على تمييز الاشياء على الرغم انه sensation شغال

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

# Delirium

## Defintion:

Delirium is a transient (**won't transfer to chronic**) 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 )

• It is associated with a disturbance in the sleep-wake cycle and an increase or decrease in psychomotor activity. (Lipowski, 1990)

\***problems in sleep, awakw cycle by change the sleep time to be during the morning**

• Although delirium usually only lasts for a few days, it may persist for weeks or even months. Kiely et al., (2004)

## signs and symptoms :

\* **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 (تمتمة)**

**(not understandable speech)**

\* **Disorientation to place or time**

\* **Disturbance in psychomotor behavior, for example agitation with increased psychomotor.**

**(hyperactive)**

\* **Behavior and sluggishness with decreased psychomotor behavior**

**(hypoactive)**

\* **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. (this is happen due to decrease of attention)**

### 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 (**especially when hyperthermic in children**)
- Disorders of the central nervous system such as a stroke or subdural haematoma
- Disorders of the heart or lung such as heart or respiratory failure
  - Medication use (**Ex: anaesthetics so post operative in recovery room we see delirium**)
- 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)  
(**pay the attention that the hospitalization is one of the causes of delirium as we learned previously at this lec**)

### Types of delirium:

- Hyperactive delirium
- Hypoactive delirium
- Mixed

### Hyperactive delirium:

- Physically/verbally aggressive, agitated, wanders
- Physically hyperactive
- Very alert to stimuli (**very sensible**)
- Labile mood (**mood swings, mood fluctuation**)

### 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 "COPD", hypertension, and stroke "SVA".

# Amnesia

### Definition of Amnesia:

The inability to retain or recall past experience **short or long term memory**. (Townsend, 2008)

### Characteristics of Amnesia:

Amnesic 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-** Amnesic 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)

**B-** Substance induced persisting amnesic disorder :

DSM-IV identifies the following substances with which amnesic can be associated:

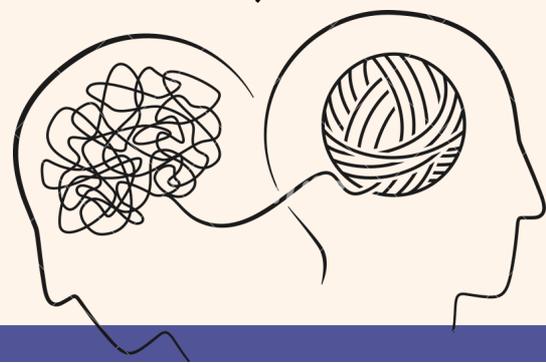
1- Alcohol (Korsakoff's syndrome) (Wernicke's encephalopathy due to thiamine (vit. B1) deficiency)

2- Medications

- Sedatives, hypnotics and anxiolytics (anti anxiety)
- Anticonvulsant
- Intrathecal Methotrexate (chemotherapy)

**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

### According to period, amnesia is divided to:

- 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 lasts for 1 month or less.
- chronic amnesia.** This type memory impairment lasts for more than one month. (could last forever)

### Signs and symptoms:

- Memory loss or impairment** ( short and long term memory )
- Confusion**
- Disorientation** (dont recognais the time&place)
- Attentional deficits**
- Confabulation** (filling gaps in memory with imaginary events) may be noted during the early stages of amnesic disorder but usually disappears with time.
- lack of insight** (he dont know about his memory proplems )

### Difference between Amnesia, Dementia and Delirium:

Amnesic 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.

**dementia:** chronic/progressive/irreversible

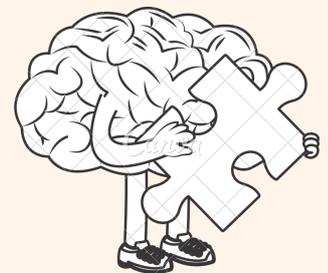
**amnesia:** acute, transient or chronic /if it chronic it will be progressive /according to the cause: reversible or irreversible

**delirium :** acute /not progressive/reversible

**no general note : synonyms**

\*(acute , transient , reversible) suddenly

\*(chronic , permanent , irreversible) gradual



**in amnesia no cognitive problems or executive functioning mainly on memory and attention**

**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.**

# Test yourself



**1. which of the following do cognitive therapists believe?**

- a.uncovering childhood trauma is the goal of therapy**
- b.how we think is an important part of how we feel**
- C. altering one's unhealthy routines alone will lead to psychological wellbeing health**
- D. certain medications are needed to help people maintain psychological**

**Answer:b**

**2.The term "cognition" includes**

- a.thinking, problem solving, reasoning, and dreaming.**
- b.classical and instrumental conditioning.**
- c.the use of memory systems.**
- d.an active process by which sensory input is selected, organized, and integrated.**

**Answer:a**

**3.Which of these is the strongest risk factor for developing the disease?**

- a.Heredity**
- b.Age**
- c.Exposure to toxins**
- d.None of the above**

**Answer:b**

**4.What is the most prevalent in cognitive disorders :**

- a.Apraxia-difficulty initiating or performing movements.**
- b.Aphasia**
- c.Agnosi**

**Answer:a**

**5.Abrupt onset Reversible/brief Impaired short term memory LOC fluctuate Psychomotor agitation Emotional instability Slurred speech Visual/tactile hallucinations Anxious/startled:**

- a.Delirium**
- b.Amnesia**
- c.Dementia**

**Answer: a**



**6. insidious onset Slow progressive development Impaired short term memory  
Long term memory fails slowly LOC unchanged Eventually loss abstract**

**Misidentification Aphasia, Apraxia:**

- A. Delirium**
- b. Amnesia**
- c. Dementia**

**Answer: c**

**7. syndrome involving disturbance of consciousness with change in cognition:**

- a. Delirium**
- b. Amnesia**
- c. Dementia**

**Answer: a**

**8. deterioration of language function (i.e. Difficulty with verbal expression.).  
Usually begins with the inability to name familiar objects or people and the  
progresses to speech that becomes vague or empty.**

- a. aphasia**
- b. apraxia**
- c. Agnosia**
- d. disturbance in executive functioning**

**Answer: a**

**9. impairment to execute motor functions despite intact motor abilities (i.e.  
Unable to transfer to sitting position.)**

- a. apraxia**
- b. apraxia**
- c. Agnosia**
- d. disturbance in executive functioning**

**Answer: a**

**10. inability to recognize or name objects despite intact sensory abilities (Unable  
to identify a ball.)**

- a. apraxia**
- b. apraxia**
- c. Agnosia**

**Answer: c**

"التوكل قوّة؛ ولو جمعت للمرء أشكال المواساة وألوانها فلن يجد شيئاً يمسح  
على قلبه ويقوّي أركان طمأنينته مثل تفويض أمره لله، واستشعاره أنه في ظلال  
معية الله، وأن الله كافيه أمره" 