

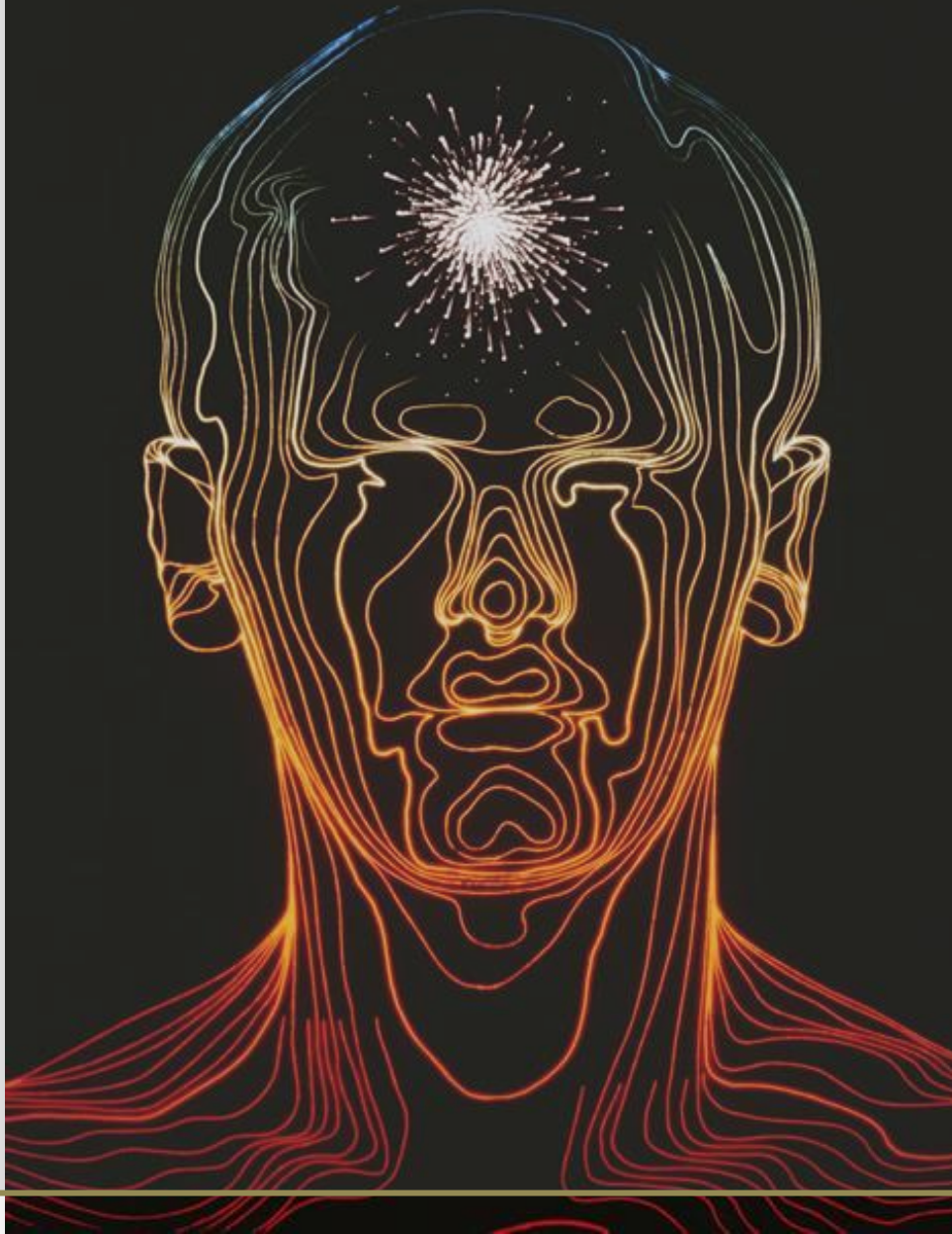


Psychiatry

433 Team



Lecture 1
Introduction to
Neuropsychiatric disorders





Definitions:

Cognition: is the set of all mental abilities and processes related to **memory**, **language**, **orientation**, **judgment**, **conducting interpersonal relationships**, **performing actions** (praxis), and **problem solving**.

Cognitive disorders are characterized by significant **impairment** **In one or more** of the above domains, and are also frequently **complicated by behavioral symptoms**. Also, represent the complex interface between **neurology**, **medicine**, and **psychiatry**.

It was named as **organic mental** disorders or organic brain disorders (because there is impairment in the brain) vs functional disorders (because there is impairment in function of the brain).

Advances in molecular biology, diagnostic techniques, and medication management have significantly improved the ability to **recognize** and to **treat cognitive disorders**.





Delirium:


Delirium is an **impairment of consciousness** (short-term confusion and changes in cognition) Usually accompanied by **global impairment of cognitive functions** ①, associated with **emotional lability** ② (mood changes), **hallucinations** ③ or ④ **illusions** and **inappropriate behavior**. It is an **acute reversible** condition.

W3Definitions Box:

① **Global cognitive impairment:**

More than one of cognitive functions impaired.


② **Emotional lability:** Excessive emotional reactions and frequent mood changes.

■ Press here for Example → 

③ **Hallucination (Abnormalities of Perception)**


Misinterpretation without existence of a real stimulus. It differs from illusion and has two types:

1. Visual (more common in delirium).
2. Auditory.

■ Press here for Example → 

④ **Perceptual impairment (illusion):** (Ab of Perception).

Misinterpretation of real (existent) stimulus.

■ Press here for Example → 

For your information:

Types of Delirium: Press here ► 

Epidemiology:

Common among **hospitalized patients**, about 10% of all hospitalized patients.

Very young and **elderly** are more susceptible to delirium.

Patients with **history of delirium** or **brain injury** are more likely to have an episode of delirium than the general population.





Delirium:

Etiology: (Most of it is due to problems outside CNS).

Major causes include systemic disease, CNS disease, and either intoxication with or Withdrawal from prescribed medications, or drug of abuse.

Delirium is thought to involve dysfunction of reticular formation and acetyl-choline transmission.

Noradrenergic hyperactivity has been associated with alcohol withdrawal delirium (Delirium tremens) .

There are four subcategories based on several causes:

- 1 general medical condition (e.g., infection).
- 2 substance induced (e.g., cocaine, opioids, phencyclidine [PCP]).
- 3 multiple causes (e.g., head trauma and kidney disease); and
- 4 delirium not otherwise specified (e.g., sleep deprivation).

Note: A simple cause of delirium in elderly is constipation (it causes electrolytes imbalance).

Diagnosis:

It is diagnosed according to etiology: delirium due to

- 1 medical condition, 2 substance intoxication delirium, 3 substance withdrawal (Press here for

Example → 

Key features: disturbance of consciousness, change in cognition, or the development of perceptual disturbance, over a short period of time and tend to fluctuate(changes) during the day.

Note: in diagnosis for delirium the most important feature is orientation to time. And we can use Mini-mental state examination to check for cognitive impairment





Delirium:


Management:

1 Laboratory tests:

Delirium is a **medical emergency**, its cause must be identified as quick as possible.

2 Treatment:

Identify and treat the **underlying cause**.

■ Press here for Examples → 



● **What is a delirium?**
<https://www.youtube.com/watch?v=OKwBI6Dfr2U>





Dementia:

Dementia characterized by severe multiple **cognitive deficits**, including **memory loss**.

Consciousness is not impaired.

The major defects involve **orientation, memory, perception, intellectual functioning, and reasoning**. The defects represent a change from baseline and interfere with functioning.

Marked changes in **personality**, affect, and may be associated with **behavioral** problems.

Dementias are commonly accompanied by **hallucinations (20-30%)**, and **delusions ① (30-40%)**.

Symptoms of **depression and anxiety** are present in **40-50%** of patients with dementia.

Epidemiology:

A syndrome of **the elderly**, 5% of Americans over the age of 65 have severe dementia, and 15% have mild dementia.


Increasing **age** is the most important **risk factor**.

15% of dementia cases are reversible.

Definitions Box:

① Disturbed thought (delusion):

False thought & belief with poor evidence to support this wrong thought. (Abnormal **thought** Content).

■ Press here for Example → 

Etiology:

Most common cause is **Alzheimer's** disease (50-60%) followed by **vascular disease**.

Other common causes include **head trauma, alcohol, movement disorders** (such as Huntington's disease and parkinsonism) and **HIV** infection.





Dementia:

Diagnosis:

- 1 **Dementia of the Alzheimer's type**, which usually occurs in persons **over 65** years of age and is manifested by **progressive intellectual disorientation** and **dementia, delusions**, or **depression**
- 2 **Vascular dementia**, caused by **vessel thrombosis** or **hemorrhage**
- 3 **Other medical conditions** (e.g. human immunodeficiency virus [**HIV**] disease, **head trauma**, **Pick's disease**, **Creutzfeldt-Jakob disease**, which is caused by a slow-growing transmittable virus)
- 4 **Substance induced**, caused by **toxin** or **medication** (e.g., gasoline fumes, atropine)
- 5 **Multiple etiologies**
- 6 **Not otherwise specified** (if cause is unknown).

Management:

- 1 **Potentially reversible** causes for the dementia
(**hypothyroidism, CNS syphilis, subdural hematoma, vit B12 deficiency, uremia, hypoxia**).
- 2 Identify other **treatable medical conditions** that may worsen the dementia.
- 3 **Supportive measures**.
- 4 Ensure **proper treatment** of any underlying medical problems or associated disruptive symptoms.
- 5 Maintain proper **nutrition, exercise**, and **daily activities**.
- 6 Provide an environment with frequent cues for **orientation** to **day, date, place**, and **time**.
- 7 As functioning decreases, **nursing home** placement may be necessary.





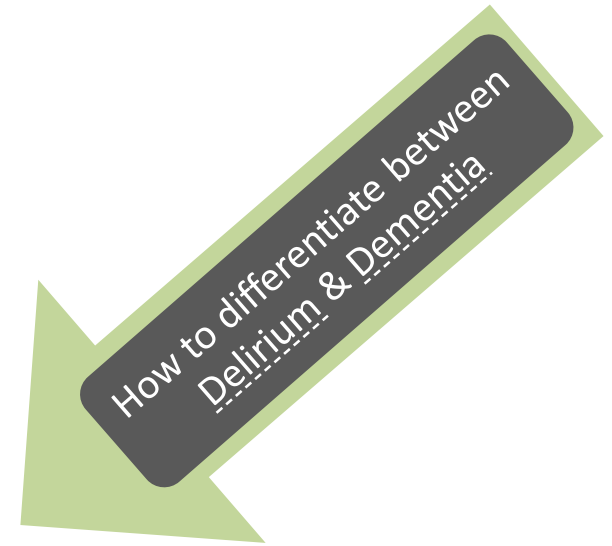
Dementia:

Course and Prognosis:

Dementia may be **1** progressive, **2** remitting, or **3** stable.

In reversible causes of dementia the course depends on how quickly the cause is reversed.

For Dementia of Alzheimer's type the course is likely to be one of slow deterioration.



Dementia

- History of **Chronic** disease.
- **Insidious** onset
- Duration **months-years**.
- **Progressive** course, majority **irreversible**.
- level of consciousness **Normal** early on.
- **Normal** level of arousal.
- Usually in **nursing homes** and psychiatric hospitals.

Delirium

- History of **Acute** disease.
- **Rapid** onset.
- Duration **days-weeks**.
- **Fluctuating** course, often **reversible**
- **Fluctuating** level of consciousness.
- **Agitation** or stupor.
- In medical, surgical and neurological **words**.





Amnestic disorder:

Amnestic Disorder

Amnestic Disorder **Impaired** recent short term and long term **memory** attributed to **a specific organic cause** (drug or medical disease) patient is normal in other areas of cognition.

Diagnosis:

- The development of **memory impairment** as manifested by impairment in the ability to **learn new** information or the inability to recall **previously** learned information.
- The **memory impairment** cause significant impairment in **social** or **occupational** functioning.
- The **memory impairment** dose not occur during the course of a **delirium** or **dementia**.
- The disturbance is due to general **medical condition** or **substance**.





Amnestic disorder

Etiology:

- **Amnestic Disorder:** is marked by **memory impairment** and **forgetfulness**.

The **three subcategories** are ① caused by **medical condition** (hypoxia) ② caused by **toxin** or **medication** (e.g., marijuana, diazepam) and ③ **not otherwise specified**.

Most common form is caused by **thiamine deficiency** associated with **alcohol dependence**.

May also result from head **trauma**, **tumor**, **surgery**, **hypoxia**, **infraction**, **seizures** and **herpes simplex encephalitis**.

Typically any process that damages certain **diencephalic structures** (lympic system, hypothalamus, thalamus) and **temporal structures** (mamillary bodies, fornix, hippocampus) can cause the disorder.

Management:

- Identify the **cause** and **reverse** it if possible, otherwise, institute **supportive medical procedures**.






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THE BRAIN BOGGLES THE MIND.

Done by 

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