

# **INTRODUCTION TO NEUROPSYCHIATRIC DISORDERS**



# Definition

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**Cognition** includes memory, language, orientation, judgment, conducting interpersonal relationships, performing actions (praxis), and problem solving

# Definition

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Cognitive disorders are characterized by significant impairment in functions such as memory, judgment, language, and attention. this impairment represent a change from base line.

Cognitive disorders reflect disruption in one or more of the above domains, and are also frequently complicated by behavioral symptoms.

# Definition

- Cognitive disorders represent the complex interface between neurology, medicine, and psychiatry
- Organic mental disorders or organic brain disorders VS Functional disorders
- 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, associated with emotional lability, hallucinations or illusions and inappropriate behavior.
- It is an acute reversible condition.

# Epidemiology:

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- 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.

# Etiology:

- 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.

# Diagnosis:

- It is diagnosed according to etiology: delirium due to medical condition, substance intoxication delirium, substance withdrawal delirium.
- **Key features:** disturbance of consciousness, change in cognition, or the development of perceptual disturbance, over a short period of time and tend to fluctuate during the day.



# Management

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- **Laboratory tests:**

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

- **Treatment:**

Identify and treat the underlying cause.

# Dementia

- It is 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.

# Dementia ... cont'd

- Marked changes in personality, affect, and may be associated with behavioral problems.
- Dementias are commonly accompanied by hallucinations(20-30%),and delusions(30-40%).
- Symptoms of depression and anxiety are present in 40-50%of pts 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.

# Etiology:

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- 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.

# 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:

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- Potentially reversible causes for the dementia (hypothyroidism, CNS syphilis, subdural hematoma, vit B12 deficiency, uremia, hypoxia).
- Identify other treatable medical conditions that may worsen the dementia.

# Management ... cont'd

- Supportive measures.
- Ensure proper treatment of any underlying medical problems or associated disruptive symptoms.
- Maintain proper nutrition, exercise, and daily activities.
- Provide an environment with frequent cues for orientation to day, date, place, and time.
- As functioning decreases, nursing home placement may be necessary.



# Course and prognosis:

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- Dementia may be progressive, remitting, or 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.

# How to differentiate between Delirium & Dementia

## 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



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.

# Etiology:

- 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.



**Thank You for your  
attention**