

Chapter 7

COGNITIVE DISORDERS

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- ❖ DELIRIUM

- ❖ DEMENTIA

- ❖ AMNESTIC DISORDER

- ❖ The primary common feature to all the disorders is an impairment in cognition (E.g., memory, language, or attention,...)

Delirium

☞ Delirium is an acute, reversible organic condition with multiple etiologies.

☞ **The major causes of delirium:-**

- ☑ CNS disease- e.g., epilepsy
- ☑ Systemic disease- e.g., cardiac failure
- ☑ Intoxication or withdrawal from pharmacological or toxic agents

Possible causes delirium

- **Trauma** – head injury, post-operative states
- **Infection** – systemic infections, septicemia, intracranial infections such as meningitis and encephalitis
- **Metabolic causes** – uremia, hepatic failure, congestive cardiac failure, water and electrolyte imbalances, hypoxia etc...
- **Endocrine causes** – hypoglycemia, diabetic precoma
- **Vascular causes** – circulatory disturbances
- **Neoplasms** – primary and secondary neoplasms of the brain
- **Others** – vitamin deficiency (B1, B12,) sensory deprivation...

Clinical Features

The key feature of delirium is

- ✚ An impairment of consciousness.
- ✚ Relatively lucid period is detected at day time.
- ✚ Orientation to time is commonly lost, even in mild case.
- ✚ Orientation to place and the ability to recognize other persons- e.g., physician, family members may be impaired in severe cases
- ✚ A delirious patient rarely loses orientation to self.

Investigations

- ❖ Delirium is a **medical emergency** and investigations to detect the underlying pathology should be carried out without delay.
 - ❖ Thoroughly taken history
 - particularly related to medications and
 - substance use is necessary.
 - ❖ The mental status examination should focus on the cognitive functioning of the patient.
 - ❖ A neurological examination may give reliable cues.
- Lab. tests include a full or a CBC, urine analysis, serum electrolytes, and LFT.
- ❖ CSF, EEG, if valuable and will show changes in rhythm and slowing.

TREATMENT

-  Hospitalization, preferably in ICU is indicated and treatment should be directed at the underlying cause.
- Metabolic abnormalities are corrected and hydration and nutrition cared for.
- For patients who are at risk of developing seizures, anticonvulsant is necessary.

Rx con...

- Patient should be nursed in an environment with optimum sensory stimuli.
 - Too much or too little sensory stimulation may be harmful.
- The room should be quiet and adequately lighted except for those sensory deprivation
- Frequent change of nursing personnel is to be avoided so that the patient is familiar with the attending staff.

- ❖ Relatives should be encouraged to visit the patient frequently for the same reason.
- ❖ Soft physical restrains may be needed in case of severe restlessness and excitement.
- ❖ The two major symptoms of delirium that may require pharmacological treatment are **psychosis** and **insomnia.**
- ❖ The drug of choice for psychosis is haloperidol (Haldol),

Dementia

-  Dementia- is a progressive, *generalized impairment of **intellectual functions** and **memory*** without impairment of consciousness.
- Dementia is chronic condition

Etiology

- ❖ Dementia has many causes:
- ❖ Dementia of Alzheimer's type and vascular dementia together represent 75% of all cases.
- ❖ **Other causes of dementia are:**
 - ✚ **Trauma** – head injury, repeated head injuries as in boxers (punch-drunk syndrome)
 - ✚ **Infections** – encephalitis, ADIS dementia complex
 - ✚ **Vascular** – single or multiple infarcts, subdural haematoma
 - ✚ **Metabolic** – uremia, hepatic failure, hypercalcaemia
 - ✚ **Endocrinal** - hypothyroidism

- + **Neoplasms** – primary and secondary (metastatic) cerebral tumors
- + **Degenerative** – Alzheimer's disease, Pick's disease, Huntington's disease, Parkinson's disease
- + **Others** – Epilepsy, normal pressure hydrocephalus, vitamin (B12) deficiencies, alcohol, multiple sclerosis.

The major defects in dementia involve:

- Orientation
- Memory
- Perception
- Intellectual functioning
- Reasoning

Treatment

- ❖ Symptomatic treatment includes:
 - ✓ The maintenance of nutritious diet
 - ✓ Proper exercise
 - ✓ Recreational and activity therapies
 - ✓ Attention to visual and auditory problems
- ❖ Treatment of associated medical problems—such as urinary tract infections, and cardiopulmonary dysfunction.

Current Available pharmacologic Treatments

- ✿ Short acting benzodiazepine for insomnia and anxiety
- ✿ Antidepressant for depression
- ✿ Antipsychotic drugs for delusions and hallucinations
- ✿ Rivastigmine, Galantamine, and Tacrine are cholinesterase inhibitors used to treat mild to moderate cognitive impairment in Alzheimer's disease in developed countries.

Amnestic Disorders

- Amnestic Disorders are characterized by severe memory impairment for recent events.
- Long-term memory is sometimes affected.
- Immediate recall of events is normal, as other cognitive functions.
- The patient is alert and conversation can be carried out normally.
- Learning of new material is grossly affected.
- Secondary to the memory impairment there may be disorientation of time.

Etiology

- The commonest cause in clinical practice is alcohol abuse, and is caused by **thiamine deficiency**.
- Gastric carcinoma and dietary deficiencies resulting in thiamine deficiency produces amnestic syndromes.
- Damage to diencephalic and medial temporal structures (mamillary bodies, fornix, hippocampus) as a result of surgery or trauma, anoxia, infraction, infections, CO poisoning or neoplasms of third ventricle result in amnestic syndromes

Treatment

- The primary approach is to treat the underlying cause of the amnestic disorder.
- The administration of thiamine may prevent the development of additional amnestic symptoms, but rarely is the treatment able to reverse severe amnestic symptoms, once they are present.
- While the patient is amnestic, supportive prompts regarding the date, the time, and the patient's location can be helpful and can reduce the patient's anxiety.
- After the resolution of the amnestic episode, supportive psychotherapy may help patients incorporate the amnestic experience into their lives.

Thank you!!!!