DELIRIUM

Dr. Muhammad Sarfraz

Abstract: Delirium is an acute to sub-acute of confusion due to disturbance is mental abilities of perception and mood. Pathophysiology is unclear but it is supposed that delirium might occure due to increased cortisol level caused by acute illness or injury by organic pathological stimulus. Clinical features include restlessness, lethargy, confusion, fluctuation of behaviour and, mood. Delirium, diagnosed by DSM-IV criteria rapid onset fluctuation, disturbed consciousness and cognition changes must be present. Management include to treat the specific reversible stimulus, medications include antipsychotic drugs.

Key words: Confusion, Cognitive impairments, Restlessness, Antipsychotic drugs

Definition:

"Delirium is an acute-to-Sub Acute state of confusion due to disturbance in mental abilities of perception and mood"
It is an organic mental disorder

PATHOPHYSIOLOGY

Patho-physiology is unclear but it is supposed that delirium might occur due to increased cortisol levels caused by acute illness or injury or any organic pathological stimulus which releases cytokine and other neuroinflammatory agents which causes haywire discharge of neurological transmitters in CNS. This creates overall mental disorientation.

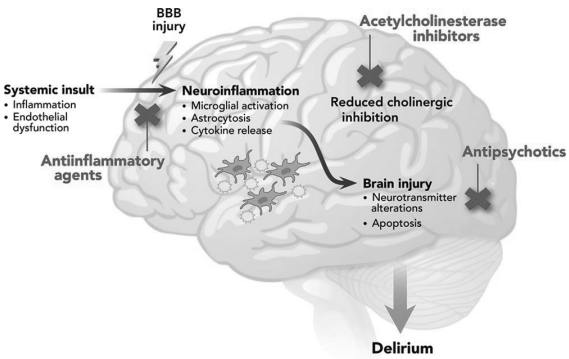

Figure 1: Pathophysiological Mechanism

SIGNS & SYMPTOMS:

The usual sings and symptoms are as follows:

- Inability to Stay focused on a certain topic
- Easily getting distracted by unimportant things
- Difficulty in speaking
- Difficulty in reading or writing
- Seeing things that do not exist (Visual hallucinations)
- Combative behaviour
- Restlessness
- Slowed movement (Decreased motor activity)
- Depression

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Dr Muhammad Sarfraz, MBBS, FCPS
Associate Professor of Medicine
Independent Medical College, Faisalabad.

1. Dr Muhammad Sarfraz, MBBS, FCPS
Associate Professor of Medicine
Independent Medical College, Faisalabad.

- Lethargy
- Personality changes
- Fluctuation of behaviour & mood

DIAGNOSTIC CRITERIA ACCORDING TO DSM-IV:

To be labelled as delirium all four of the following sets of symptoms have to be present:

1. **Rapid Onset:**

It is acute-to-sub acute in onset i.e. it develops within hours or days.

2. **Fluctuation:**

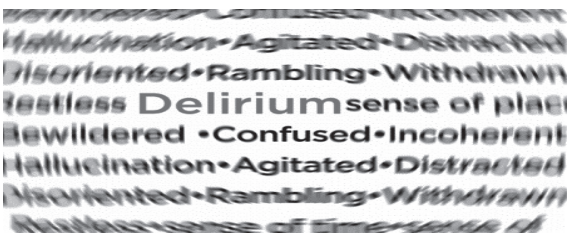
There is fluctuation of the symptoms over the course of a day.

3. **Disturbance Of Consciousness:**

i. Reduced environmental awareness i.e. patient is not able to comprehend normal time space orientation
ii. Reduced ability to focus on one task

4. **Change In Cognition:**

i. Language disturbance i.e. inability to speak or read
ii. Perceptual disturbance i.e. hallucination



GENERAL SEQUALE OF DISEASE:

Although it is a reversible condition during which normal sending and receiving of neurological signals becomes impaired due to combination of factors which make brain vulnerable and triggers a malfunction in brain activity. Symptoms develop rapidly within hour(s) to days. The thought and speech pattern becomes incoherent, memory gets impaired and misperceptions occur. The condition is worse at night time. Sleep reversal happens i.e. patient is asleep at day and awoke at night. Gradually episodic visual hallucinations start and persecutory delusions occurs. Patient gets restless, angry, suspicious and uncooperative.

RISK AND PRE-DISPOSING FACTORS:

- Old age: Usually above 65 years of age (30% of the delirium patients are elderly)
- Surgery: Observed in 10-20% of post surgical cases
- Renal impairment
- Dementia
- Sleep deprivation
- Sensory deprivation e.g. darkness

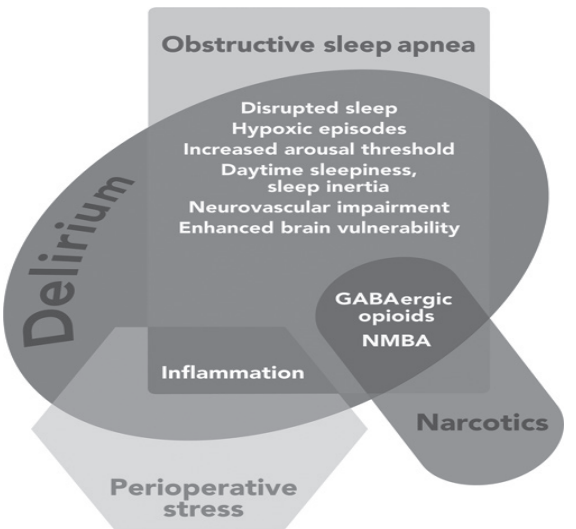


Figure 2: Risk and Predisposing Factors

CAUSES

Causes are classified as follows:

1. **Systemic Infections:**
   a. Pneumonia
   b. UTI
   c. Cellulitis
   d. Sepsis

2. **Metabolic Disturbances:**
   a. Hypoglycaemia
   b. Hepatic encephalopathy
   c. Hypothyroidism
   d. Renal impairment

3. **Drug Toxicity:**

It is caused by many drugs but following are specifically responsible

   a. High dose corticosteroids
   b. Digoxin
   c. Opiates
   d. Anti-cholinergic

4. **Acute Neurological Illness/Insult:**
   a. Stroke
   b. Meningitis
   c. Subdural hematoma
   d. Space occupying lesions

5. **Hypoxia: Due to**
   a. Myocardial infarction
   b. COPD exacerbation
   c. Pneumonia
   d. Pulmonary oedema

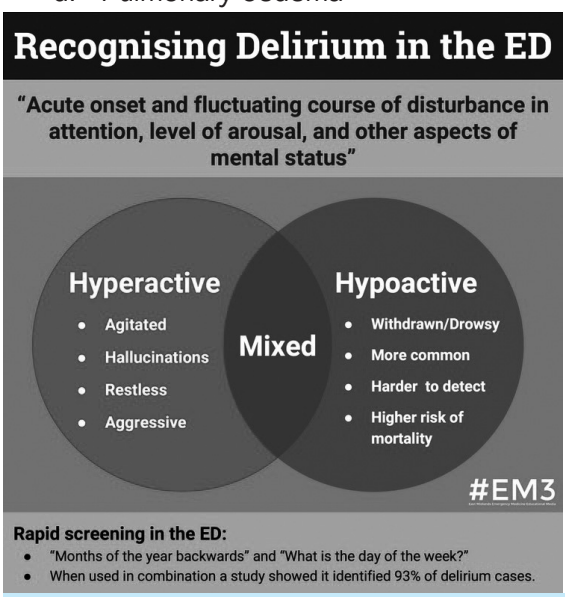


Figure 3: Types of Delirium

TYPES OF DELIRIUM

There are mainly three types of delirium:

1. Hyperactive delirium: It is most easily recognized type of delirium, mostly characterized by restlessness, agitation, hallucinations and hyper-motor activity
2. Hypoactive delirium: Symptoms include Sluggishness, inactivity, drowsiness with confusion
3. Mixed delirium: This includes both hypo & hyperactive signs and symptoms.

MANAGEMENT

Goal of management should be to treat the specific reversible stimulus causing confusion & disorganisation.

1. **General measures:**

- This includes providing calm and quite environment.
- The place should be well lit and properly organized.
- Patient should be well hydrated.
- In case of high fever temperature should be reduced.
- Proper nursing of surgical wounds.
- Counselling of the family of patient regarding condition.
- Preventing falls and pressure injuries.

2. **Medications:**

- Severe delirium should be controlled with antipsychotics like HALOPARIDOL, ranging between 1.5 mg to 30 mg a day. Elderly should be given low dose of haloparidol. Haloparidol is started orally but if patient doesn't comply intravascular administration can be done.
- OLANZAPINE is also a good alternative and can be give at night for insomnia.

3. **Treating the reversible causes**

- Systemic infections can be controlled via proper antibiotics e.g. ciprofloxacin in

case of UTI, Lenazolid in case of sepsis
- Correcting metabolic disorders like hypoglycaemia and hyponatremia with dextrose and normal saline infusions
- Cessation of drugs like corticosteroids, opioid pain killers and digoxin.
- Maintaining good oxygen flow to body tissues by treating cause of hypoxia like COPD with nebulisation.

Figure 4: Prevention and General Management of Delirium

References:

1. Davidson's Principle & Practice of Medicine.
2. Kumar & Clark's Clinical Medicine.
3. Ferri's Clinical Management of Neurological Disease.