

PINTING CHEN, PGY-1
UCLA FAMILY MEDICINE
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DELIRIUM IN THE ELDERLY



DSM-5 DEFINITION

- Disturbance in attention and awareness
- Disturbance develops over a short period of time, represents a change from baseline, and fluctuates during the course of the day
- Disturbance in cognition
- Disturbances are not better explained by another pre-existing, evolving, or established neurocognitive disorder, and do not occur in the context of a severely reduced level of arousal, such as coma
- There is evidence that the disturbance is a direct physiological consequence of another medical condition, substance intoxication or withdrawal, or exposure to a toxin, or is due to multiple etiologies

DEFINITION (CONT)

- Acute, fluctuating syndrome of altered attention, awareness, and cognition
- Precipitated by an acute underlying condition or event in a vulnerable person

Prevalence

Intensive care unit

With mechanical ventilation

60% to 80%

Without mechanical ventilation

20% to 50%

Hospice

29%

Community (persons 85 years or older)

14%

At hospital admission

10% to 31%

Long-term care facility and postacute care

1% to 60%

RISK FACTORS

- Alcoholism
- Chronic pain
- Hx of baseline lung, liver, kidney, heart, **brain disease**
- Terminal illness
- > 65 y/o
- Male sex
- Inactivity
- Poor functional status
- Social isolation





RISK FACTORS ASSOCIATED WITH GERIATRIC POPULATION

- Dementia
- Depression
- Elder abuse
- Falls
- History of delirium
- Malnutrition
- Polypharmacy
- Pressure ulcers
- Sensory impairment

PRECIPITATING FACTORS

- Medications (higher risk vs lower risk)
- Dehydration
- Fracture
- Surgery
- Hypoxia
- Infection/Severe illness
- Drug or alcohol toxicity/withdrawal
- Ischemia/Shock
- Electrolyte disturbances
- Metabolic derangements
- Uncontrolled pain
- ICU
- Immobility/restraints
- Urinary or stool retention

CLINICAL PRESENTATION

- Disturbance of consciousness
- Change in cognition
- Perceptual disturbances
- Acute
- Waxing and waning
- Evidence of acute cause of delirium
- Older patients
- +/- psychomotor agitation, sleep-wake reversals, irritability, anxiety, emotional lability, hypersensitivity to lights and sounds

The background of the slide features three stylized trees with rounded canopies. The tree on the left is green, the middle one is yellow-green, and the one on the right is red-orange. The text is overlaid on a semi-transparent grey background.

DELIRIUM VS DEMENTIA

- Dementia:
 - Insidious and progressive onset
 - Occurs over months to years
 - Little fluctuation
 - Attention relatively intact
 - Less likely to have impairment in level of consciousness
 - ***Dementia with Lewy bodies: fluctuations and visual hallucinations

DELIRIUM VS PRIMARY PSYCHIATRIC ILLNESSES

- Depression
 - Also associated with poor sleep and difficulty with attention or concentration
 - Can also present with agitation
 - Dysphoria
 - Less fluctuation
- Mania
 - Hx of previous episodes of mania or depression
- Schizophrenia
 - Delusions are highly systematized, longer hx, clear sensorium

DELIRIUM VS SUNDOWNING

- Sundowning
 - Typically seen in demented patients (AD, LBD)
 - Agitation, anxiety, confusion during the late afternoon or evening
 - Presumed delirium when it is a new pattern until a causal link between sunset and behavioral disturbance is established
 - Chronic course
 - Not associated with an acute medical problem
 - Not associated with increased mortality risk

EVALUATION

- FIRST: Recognize delirium
 - Comparing to baseline cognition assessment (MMSE, Mini-Cog, Short Portable Mental Status Questionnaire)
 - Confusion Assessment Method



Confusion assessment method (CAM) for the diagnosis of delirium*

| Feature | Assessment |
|---------------------------------------|---|
| 1. Acute onset and fluctuating course | <p>Usually obtained from a family member or nurse and shown by positive responses to the following questions:</p> <p>"Is there evidence of an acute change in mental status from the patient's baseline?";</p> <p>"Did the abnormal behavior fluctuate during the day, that is, tend to come and go, or increase and decrease in severity?"</p> |
| 2. Inattention | <p>Shown by a positive response to the following:</p> <p>"Did the patient have difficulty focusing attention, for example, being easily distractible or having difficulty keeping track of what was being said?"</p> |
| 3. Disorganized thinking | <p>Shown by a positive response to the following:</p> <p>"Was the patient's thinking disorganized or incoherent, such as rambling or irrelevant conversation, unclear or illogical flow of ideas, or unpredictable switching from subject to subject?"</p> |
| 4. Altered level of consciousness | <p>Shown by any answer other than "alert" to the following:</p> <p>"Overall, how would you rate this patient's level of consciousness?"</p> <p>Normal = alert</p> <p>Hyperalert = vigilant</p> <p>Drowsy, easily aroused = lethargic</p> <p>Difficult to arouse = stupor</p> <p>Unarousable = coma</p> |



History



Medication review



Physical exam

Older patients
Neuro exam

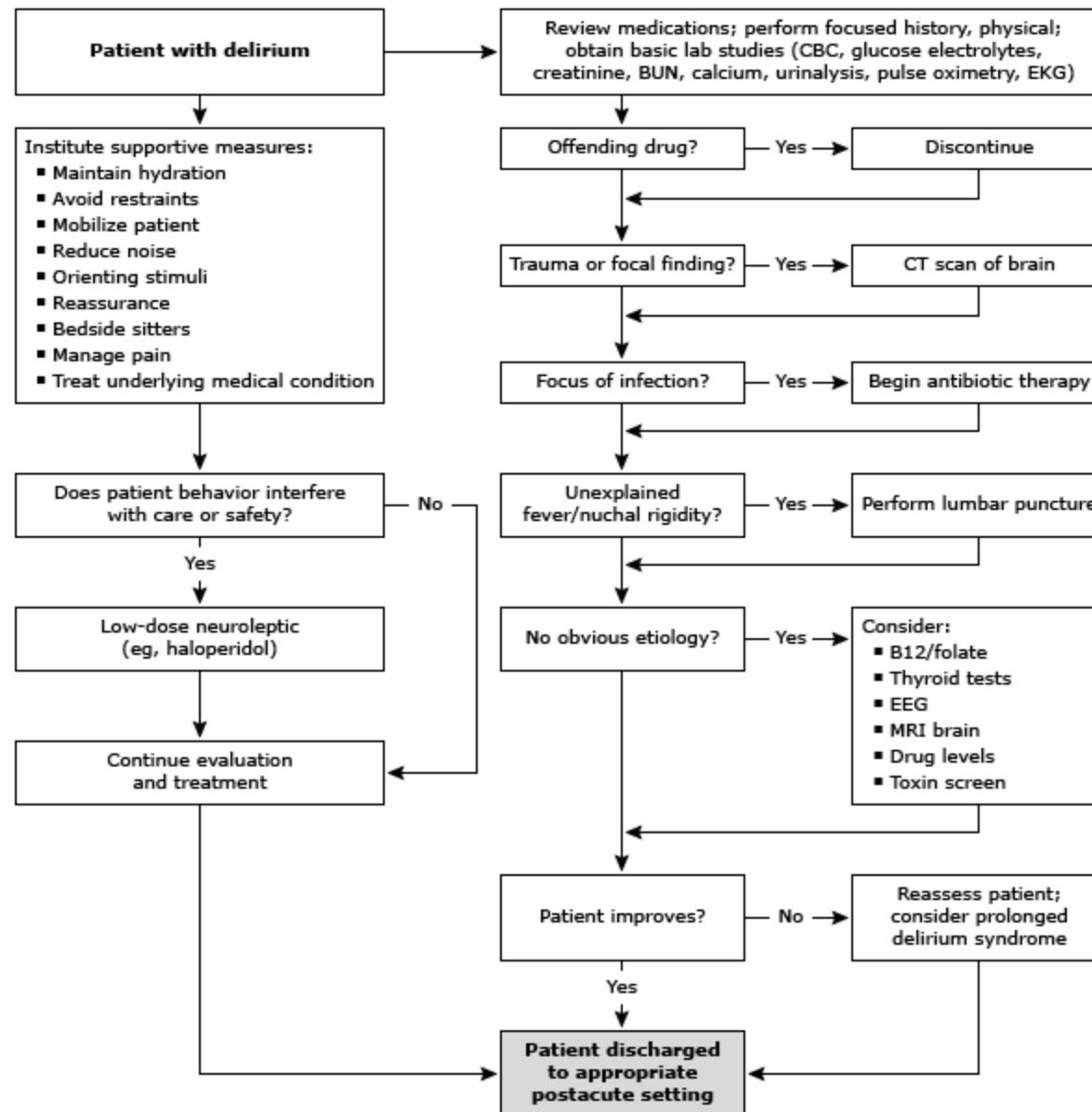


Labs/imaging

CBC, BMP,
kidney/liver studies,
UA, EKG

WORK-UP

Assessment and management of patient with delirium



MANAGEMENT

- 30-40% of delirium is preventable
- **PREVENTION, PREVENTION, PREVENTION!**
- Multicomponent nonpharmacologic approach
 - Orientation
 - Therapy
 - Mobilization
 - Avoid psychoactive medications
 - Normal sleep-wake cycles
 - Easy accessibility to hearing aids/glasses
 - Avoiding dehydration
- Pain management
- Nutrition
- Avoiding restraints, catheterizations
- Avoiding disturbances at night
- Treat the underlying condition/cause

MANAGEMENT (CONT)

- Melatonin/melatonin agonists
- Pharmacological tx should **only** be reserved for patients who are a threat to their own safety or the safety of others
- Hypoactive delirium: no symptomatic treatment
- Terminal delirium

MANAGING AGITATION

- Hyperactivity → increased falls, wandering off, removing IV lines and feeding tubes
- Mild confusion and agitation → nonpharmacologic interventions
 - AVOID: challenging hallucinations or delusions, restraints
- Medications (off-label)
 - Haloperidol
 - Benzodiazepines
 - Cholinesterase inhibitors
 - Other sedative agents

Table 8. Pharmacologic Treatment of Delirium

| <i>Drug</i> | <i>Dosage</i> | <i>Adverse effect</i> | <i>Comment</i> |
|---------------------------------|---|--|---|
| Antipsychotic* | | | |
| Haloperidol | 0.5 to 1.0 mg twice daily orally every four or intramuscularly every 30 to 60 minutes as needed (maximum dosage of 20 mg in a 24-hour period) | Extrapyramidal effects, prolonged corrected QT interval/torsades de pointes, metabolic syndrome with long-term use | Agent of choice Avoid intravenous use because of short duration of action Avoid in patients with withdrawal syndrome, hepatic insufficiency, neuroleptic malignant syndrome, or Parkinson disease Associated with increased mortality rate in older patients with dementia-related psychosis |
| Atypical antipsychotics* | | | |
| Olanzapine (Zyprexa) | 2.5 mg once daily orally (maximum dosing of 20 mg in a 24-hour period) | Extrapyramidal effects, prolonged corrected QT interval/torsades de pointes, increased risk of cerebrovascular accident, hypotension, anticholinergic effects, metabolic syndrome with long-term use | Associated with increased mortality rate in older patients with dementia-related psychosis |
| Quetiapine (Seroquel) | 25 mg twice daily orally | | |
| Risperidone (Risperdal) | 0.5 mg twice daily orally | | |
| Benzodiazepine | | | |
| Lorazepam (Ativan) | 0.5 to 1.0 mg every four hours orally as needed | Paradoxical excitation, respiratory depression, oversedation | May worsen delirium |
| Antidepressant | | | |
| Trazodone | 25 to 150 mg orally at bedtime | Oversedation | Second-line agent Associated with prolonged and worsening delirium symptoms |

OUTCOMES

- Risk of falls
- Length of hospital stay
- Hospital costs
- Duration of mechanical ventilation
- Cognitive impairment
- Functional impairment
- Long-term care facility placement
- Mortality

AAFP RECOMMENDATIONS FOR PRACTICE

- Physicians should train nursing staff, home health aides, and family members/caregivers on recognizing and treating delirium (C)
- The Confusion Assessment Method is the most effective tool in identifying delirium (C)
- Assessment for and prevention of delirium should occur at hospital admission and throughout the stay (C)
- Multicomponent prevention methods are effective in deterring delirium episodes (B)
- Antipsychotics should be used as a last resort in treating delirium (A)

BEST PRACTICES IN GERIATRIC MEDICINE

- Choosing Wisely Campaign:
 - Do not use benzodiazepines or other sedative-hypnotics in order adults as first choice for insomnia, agitation, or delirium
 - Avoid physical restraints to manage behavioral symptoms of hospitalized older adults with delirium
 - Do not prescribe antipsychotic medications to patients for any indication without appropriate initial evaluation and appropriate ongoing monitoring

QUESTIONS?

THANK YOU!

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