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ELDER CARE

A Resource for Providers



Delirium, The Sixth Geriatric Vital Sign

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Delirium, an acute, confusional state, is associated with high morbidity in the elderly. Seen most often in a hospital setting, delirium can occur in up to 30% of elderly hospitalized patients, and in up to 70% of elderly patients in the ICU. Delirium prolongs hospital stays, is associated with functional decline, and results in higher rates of nursing home placement. For these reasons, health care providers who take care of the elderly must work diligently to prevent the onset of delirium, learn to quickly recognize its symptoms and signs, and utilize an effective treatment strategy.

The DSM-IV criteria for delirium, which are based on expert opinion, include the following: disturbed consciousness, cognitive change, rapid onset, and evidence of a physical cause. Efforts to create an evidence based diagnostic tool for delirium have led to the creation of the CAM, or Confusion Assessment Method.³ There are four diagnostic components of the CAM; the first two must be present plus at least one of the third or fourth: (1) acute onset of change in mental status, or rapid fluctuations, (2) inattention, (3) disorganized thinking, (4) an altered level of consciousness. The CAM is a well validated and useful tool to aid in the diagnosis of delirium.

Risk factors for delirium are many, and include male gender, age >80 years, dementia from any cause, alcohol abuse, and those with multiple co-morbidities. Sensory impairment, polypharmacy,

dehydration, immobility and malnutrition also increase the risk.

High risk patients may develop delirium when their baseline homeostasis is disrupted by any of many possible causes, including infection, metabolic disorders, drug and alcohol use, new medications or severe illness. Delirium is frequently seen during the peri-operative period.

Once delirium is diagnosed, a clinician should begin treatment by looking for reversible causes. Conditions that can precipitate the onset of delirium are myriad. Evaluate for hypotension, hypoxia, infection, and metabolic causes. Order a complete metabolic panel, blood alcohol level, chest x-ray, and ECG. Don't forget to check for urinary retention and fecal impaction. And, always review medications, especially those that are new. Further testing, including a head CT, lumbar puncture and/or EEG should follow if a treatable cause is not easily identified.

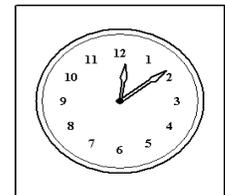
Delirium is categorized as hypoactive, hyperactive, or mixed, with older adults most often presenting in an hypoactive state. An agitated delirium is a true medical emergency, and standard therapy remains 0.25-0.5 mg of haloperidol IM with a maximum dose of 5 mg/24hours. Physical restraints can worsen symptoms and should be avoided.

An elderly inpatient can benefit from simple prevention techniques, listed on the reverse.

Ways to Prevent and Treat Delirium



Maximize Hearing and Vision



Frequent Reorientation



Treat Disease



Streamline Medications

DELIRIUM —TIPS FOR GOOD PRACTICE

- Don't accept "altered mental status" or "confusion" as a diagnosis; look for the delirium syndrome in your elderly patients. The CAM is a well validated assessment tool.
- Delirium is a common presentation in elders with multiple comorbidities.
- Medications are a frequent cause of delirium! Review thoroughly.
- Prevention is far easier than treatment—employ strategies for delirium prevention.

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Medications Associated with Delirium

Medications with Anticholinergic Effects

Anticholinergics
Antihistamines
Antipsychotics
Antispasmodics
Cyclic antidepressants
Mydriatics

Traditional Medicines

Burdock root
Black henbane
Atropa belladonna
Mandrake
Jinsom weed
St. John's Wort
Valerian

Miscellaneous Agents

Hypoglycemics
Hypnotics
Benzodiazepines
Antiarrhythmics
Beta blockers
Diuretics
Digoxin
Clonidine
Dopamine agonists
Corticosteroids
Muscle relaxants
Anticonvulsants
Antiemetics
H-2 receptor blockers

Using the CAM

- ◇ **Acute Change or Fluctuation in Mental Status**—Assess by history and observation. Staff and family can attest to the admission/pre-op or pre-hospital cognitive status of the patient. Any acute confusional state should make the clinician consider delirium.
- ◇ **Inattention**—Is the patient able to answer a direct question with an appropriate answer? Can the patient stay “on track” in normal conversation? If the answer is no, also look for fluctuations in levels of attention, which can further signal delirium.
- ◇ **Disorganized Thinking**—Is the patient’s speech/thought process rambling, unclear, unpredictable, illogical, and/or irrelevant?
- ◇ **Altered Level of Consciousness**—Assess the patient for alertness, vigilance, lethargy, stupor, or coma.

Types of Delirium

Agitated Delirium: A patient who is restless, picking at his/her bed clothes, and whose behavior is detrimental to his own well-being and safety as well as that of the staff.

Hypoactive Delirium: A patient who demonstrates sluggishness and/or psychomotor retardation, often mistaken for depression or fatigue.

Mixed: A combination of both agitated and hypoactive delirium.

Delirium vs. Dementia

Acute	Chronic
Obvious	Subtle
Reversible	Incurable (meds can slow progression)
Fluctuating	Progressive

Delirium, the Sixth Geriatric Vital Sign- Prevention Tips

Perform admission cognitive function test to establish a baseline

- Treat underlying medical causes
- Remove all lines/catheters as soon as possible
- Obtain a nutrition/dietary consult
- Encourage frequent re-orientation by staff
- Ensure hearing aids, glasses, and teeth are used, and travel with patients on transfer through facilities
- Check for clocks, schedule boards, visible calendar in all patients' rooms
- Encourage family participation in hospital
- Order physical therapy/early mobilization
- Encourage good sleep hygiene—don't interrupt sleep for vital signs, blood draws, daily weights

References and Resources

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3. Inouye SK, van Dyck CH, Alessi CA, Balkin S, Siegal AP, Horwitz RI. Clarifying confusion: The confusion assessment method. A new method for detection of delirium. *Ann Intern Med.* 1990;113:941-948.
4. Waszynski CM. The Confusion Assessment Method (CAM). Available at www.hartfordign.org/publications/trythis/issue13.pdf.



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