

Δ MS: What is It? Delirium in the Elderly

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Background:

Delirium –a.k.a. “delta ms” -is a problem associated with high mortality and morbidity in the elderly. However, it is unrecognized in up to 32 to 67% of cases.

New-onset delirium during hospitalization has an incidence of 6-56%. In elderly postoperative patients, the incidence is as high as 52%. When elderly patients develop delirium, they have increased lengths of hospital stay, rates of nursing home placement, and functional decline.

There is evidence that delirium may not resolve quickly in some patients even after correction of underlying illness. In a study of elderly patients who developed new-onset delirium during hospital admission, only 17.7% had full resolution of new symptoms by 6 months after hospital discharge¹. It raises the possibility that delirium may unmask underlying cognitive deficits.

Factors Associated with Delirium:

Delirium arises from the interrelationship between the vulnerability of a patient who has predisposing factors and precipitating factors that include noxious insults to the patient².

Predisposing Factors

A prospective cohort study of elderly hospitalized general medical patients identified 4 baseline risk factors associated with new-onset delirium: visual impairment, severe illness, cognitive impairment, and BUN/creatinine ratio greater than 18. Patients with 1 or 2 of these factors had a delirium incidence of 16-23%. Patients with 3 or 4 factors had an incidence of 32-83%. Patients with pre-existing functional impairment, advanced age, hearing impairment, and malnutrition are also more prone to develop delirium.

Precipitating Factors

In general, any medical illness can precipitate delirium:

D- rugs (narcotics, benzodiazepines, meds with anticholinergic effects)

E- lectrolyte disturbances

L- ungs (hypoxia, hypercarbia), liver (hepatic failure)

I- nfections, iatrogenic events

R- enal failure, restraints

I- ndwelling bladder catheters, immobilization (bedrest)

U- rinary tract infections

M- iscellaneous: cardiac disease (MI, CHF), neurologic disease (CVA, seizure, meningitis), pain

CAM: An Easy Way to Diagnose Delirium

The Confusion Assessment Method (CAM) has been shown to be an effective tool for diagnosing patients with delirium. When utilizing the CAM, four criteria are examined:

1. Acute change in mental status with a fluctuating course
2. Inattention (i.e. difficulty focusing attention)
3. Disorganized thinking (illogical thought, incoherent speech)
4. Altered level of consciousness

A patient is diagnosed with delirium if both 1 and 2 are present, with one of criteria 3 or 4. The CAM has 94-100% sensitivity and 90-95% specificity in diagnosing delirium.

Management:

Once delirium is diagnosed, it is important to identify the underlying etiologies. Begin with a thorough history and physical exam. Determine whether the patient has a history of alcohol abuse to rule out the presence of DTs. Review the medication list. Let your history and physical exam findings guide your choice of lab and radiology work-up. It is appropriate to order an electrolyte panel, CBC, and UA on every delirious patient. An LP is not part of the standard work-up in the absence of head trauma or signs of a CNS infection.

Treatment of underlying medical conditions should be the primary goal of care. Non-pharmacologic measures should always be undertaken before pharmacologic management. Some simple measures that can help are:

- Providing eyeglasses and hearing aids;
- Removing foley catheters or IV lines;
- Asking family members to bring familiar objects from home³.

However, if the patient is at risk for harming himself or others, it is appropriate to use antipsychotic medications. As always, “start low and go slow” with dosing of these medications. If IV or IM Haldol is necessary, start with 0.5 to 1mg repeated every 30 minutes until the patient is calm. A patient who is naïve to Haldol may require a total dose of 2 mg to calm agitation.

¹ Levkoff SE, Evans DA, Liptzin B et al: Delirium: The Occurrence and Persistence of Symptoms among Elderly Hospitalized Patients. Arch of Intern Med 1992, 152:334-340.

² Inouye SK: Delirium in Hospitalized Older Patients. Clinics in Geriatric Medicine 1998, 14(4):745-64.

³ Inouye SK, Bogardus ST, Charpentier PA et al: A Multicomponent Intervention to Prevent Delirium in Hospitalized Older Patients. NEJM 1999, 340(9): 669-676.