

Assessment and Management of Delirium

FREQUENCY OF DELIRIUM

Delirium is abrupt onset confusion produced by medical problems or drug toxicity. The term comes from Latin “de lira or out of the track” and this common clinical entity is frequently overlooked by treating physician or nursing staff. Unrecognized delirium produces multiple additional complications that result in poor outcome or patient death. Delirium is a common clinical syndrome present in 10-15% of people over the age of 65 admitted to the hospital. About three percent of nursing home patients are delirious at any point in time and higher percentages are found in the intensive care unit or the surgical unit. Primary care physicians overlook delirium in one-third to one-half of cases. This common syndrome has a high, one-month mortality (15%) as well as long-term consequences as most patients (80%) remain symptomatic at 6 months. Certain groups are at higher risks for developing delirium including patients with brain damage, elderly patients, those receiving multiple medications and those presently on psychoactive drugs.

SYMPTOMS

The symptoms of delirium include neurological, cognitive, psychiatric, behavioral and autonomic changes. Neurological manifestations of delirium include fluctuating levels of consciousness and motor irritability or myoclonus (i.e., jerking motion).

Cognitive manifestations include many symptoms present in dementia (e.g., memory impairment, altered speech) and abrupt drops in the Folstein mini-mental status score. Psychiatric manifestations of delirium include hallucinations, delusions, anxiety, sleep-disturbance, alterations of appetite and mood. Many patients who appear depressed in the emergency room actually suffer from unrecognized delirium. Behavioral problems include wandering, irritability, acute onset incontinence, fighting,

SYMPTOMS OF DELIRIUM

- Neurological
- Cognitive
- Psychiatric
- Behavioral

hostility or inappropriate sexual behavior. Autonomic instability includes tachycardia, hypertension, tachypnea or hypotension in patients who have become dehydrated.

Each delirious patient will have a different mixture of clinical symptoms. The typical clinical history of a delirious patient includes rapid onset, fluctuating course and variable mixture of symptoms. Most delirious patients develop symptoms over a period of days to weeks. The majority of delirious patients have fluctuation of symptoms and alteration of cognitive function. The hallucinations or delusions vary over time and vital sign changes usually indicate significant delirium. The typical clinical history is an elderly patient with multiple medical problems who develops rapid confusion with paranoid ideas and resistive behavior. The patients often seem more drowsy than before and these individuals usually have disruption of sleep-wake cycle. The patient typically has lucid periods where they seem normal and other times when the patient seems extremely confused and difficult to manage. Other patients may develop confusion and withdraw from activities.

Delirium is common in dementia patients. The typical Alzheimer patient is confused and disoriented but they have minimal fluctuation in symptoms except with sundowning where they become more confused at a particular time of day. Alzheimer patients who demonstrate significant variation in function or abrupt significant drops in mini-mental score (e.g., 6 or 8 points over one year) may suffer from delirium. Delirium is difficult to diagnose in Alzheimer patients because they are already confused, disoriented and behaviorally disturbed. Patients with old strokes or other forms of brain damage like past head injury are at significant risk for developing delirium. Individuals with mental retardation are vulnerable to delirium and difficult to diagnose because their level of cognition is impaired.

ASSESSMENT

Delirium management begins with recognition of its frequency and subtle clinical manifestations. A patient with a recent change in mental status requires a careful evaluation to exclude physical, neurological and psychiatric causes of confusion. The delirious nursing home resident is often identified by the CNA or nurse. The delirium assessment begins with a review of the medical record to determine when the patient developed alterations in mental status. The nurse should perform a set of vital signs to exclude fever, blood pressure changes, alteration of heart rate and oxygen de-saturation. The nurse

NURSING CHECKLIST FOR DELIRIUM

- Vital Signs
- Medication Review
- I & O

should review all medications to determine new potentially mind-altering drugs and perform a physical assessment. Many non-psychiatric medications have significant CNS effects. The patient's oral fluid intake, urinary output and nutritional status should be assessed. Malnutrition or dehydration are often a sign of other medical problems and these changes may produce confusion. Confused patients should have a manual rectal examination to exclude fecal impaction and the nurse should perform a basic nursing assessment to determine whether the patient has any evidence of physical changes. The physician should order a urinalysis, complete blood count and chemistry profile to exclude metabolic causes of confusion, assess hydration and assess for urinary tract infection. The blood count assesses for anemia, i.e., hematocrit and infection, i.e., leukocytosis. The nursing home can establish standing orders to perform these determinations in confused patients.

The nursing staff should determine whether the patient is experiencing hallucinations or delusions.

A simple conversation with the patient can determine many new psychiatric symptoms. The Nurse can perform a mini-mental status examination and compare this value to the annual or admission assessment. Substantial drops in the mini-mental score, e.g., over 3 points per year, many indicate abrupt cognitive decline.

DRUGS THAT CAUSE DELIRIUM

- Elavil
- Demerol
- Valium
- Barbiturates

MANAGEMENT

The nurse should collect the data and communicate with the attending physician or medical director. The physician should examine the patient and perform a neurological examination or refer the patient to an outpatient unit or emergency room for assessment. Delirium is a major illness that requires prompt medical attention. The mortality and morbidity associated with delirium is probably related to the duration of delirium and the severity at which an intervention is performed. Patients with pre-existing serious medical conditions should be reassessed. Diabetics should have finger-stick blood sugars while patients with chronic obstructive pulmonary disease should be checked for infections or hypoxia. Cardiac patients should be assessed for congestive failure, hypoxia, hypotension and medication toxicity. Urinary tract infections or urosepsis frequently cause delirium in women. Cancer patients are particularly prone to confusion and the

treating clinician should exclude new infections. Subdural hematomas can produce confusion in frail Alzheimer patients who fall. These blood clots may produce minimal neurological symptoms until late in the course and any Alzheimer patient with new-onset confusion is a possible candidate for CT of the head.

Delirium is commonly produced by combinations of problems. Identification of a single cause should not stop the assessment. Patients who develop drug-induced delirium (e.g., anticholinergic drugs like Elavil or Demerol) will frequently develop other medical complications such as dehydration or infection and the combination of causes produces confusion. Each medical problem must be corrected to facilitate clinical improvement.

MEDICAL PROBLEMS THAT PRODUCE DELIRIUM

MEDICAL PROBLEM	COMPLICATION
COPD	<ul style="list-style-type: none"> ▪ Hypoxia ▪ Infection ▪ Medication Toxicity (e.g., theophylline)
Diabetes	<ul style="list-style-type: none"> ▪ Hypoglycemia ▪ Infection ▪ Hyperglycemia
Heart Disease	<ul style="list-style-type: none"> ▪ Congestive heart failure ▪ Hypotension ▪ Arrhythmias with brain hypoxia ▪ Medication Toxicity (e.g., digitalis)
Hypertension	<ul style="list-style-type: none"> ▪ Hypotension ▪ Drug Toxicities

Management of the delirious patient begins with a thorough assessment and identification of each type of problem that contributes to confusion. The team must take a systematic methodical approach. Many drugs that produce delirium linger in the blood stream of elderly patients for weeks and delirium will require prolonged, careful medical management. Any infection, exacerbation of medical problems or metabolic abnormality must be completely treated. All infections must be eliminated. Intravenous fluids are used to correct dehydration or electrolyte

abnormalities. All confusing medications should be stopped. Confused, disoriented patients are often restrained or immobilized but staff must assure that patient continue to ambulate. Demented patients will frequently lose cognitive skills during delirium but these abilities can be re-acquired with sufficient energy by the treatment staff.

The best treatment for delirium is prevention. Adequate hydration, nutrition, exercise, avoiding risky drugs and careful medical management are the best methods to avoid the hazards of delirium. Psychotropic medications should be avoided when possible with the delirious patient. Patients receiving psychotropic medications should have all drugs discontinued until the patient's confusion clears unless there are questions of drug withdrawal (e.g., benzodiazepines). Low-dose antipsychotics such as Haldol 0.5mg q 6hrs can be used to sedate patients. Social isolation should be avoided and the patient's environment and room should be well-lighted. Staff should frequently reassure patient and family, as patients are often terrified. Agitated patients are better managed with sitters than with restraints.

CONCLUSION

The management of delirium requires identification of each potential cause, methodical treatment and perseverance until the patient is completely clear.