Delirium is a rapidly developing disorder of disturbed consciousness that fluctuates over the course of a day. The clinical presentation of delirium differs considerably from person to person. "Essential features of delirium include disturbances of consciousness, attention, cognition, and perception."

There are 3 subtypes of delirium that are based on the level of psychomotor activity. These include hyperactive delirium (increased psychomotor activity), hypoactive delirium (decreased psychomotor activity), and mixed delirium (a combination of hypoactive and hyperactive). Delusions and perceptual disturbances may also be present. It is estimated that delirium occurs in 11% to 42% of hospitalized patients with delirium ranges between 22% and 76%.2

The pathophysiology of delirium is not fully understood and it appears that "the development of delirium is usually multifactorial and involves the interrelationship between a predisposed patient and exposure to triggering factors."2 Delirium may be an indication of a medical emergency such as drug toxicity, hypoxia, hypoglycemia, liver failure, renal insufficiency, fluid and electrolyte imbalance, and cerebral edema or ischemia. Mortality of hospitalized patients with delirium ranges between 22% and 76%.2

The following assessments should be conducted on any person who has 1 or more risk factors for developing delirium.

**ASSESSMENT**

An early diagnosis of delirium is associated with improved outcomes; unfortunately, delirium is often unrecognized or misdiagnosed in older adults. A comprehensive assessment is instrumental in helping practitioners (1) differentiate between delirium and other causes of acute confusion, (2) determine appropriate medical and pharmacological treatments, and (3) identify progression from baseline measurements. The following assessments should be conducted on any person who has 1 or more risk factors for developing delirium.

- Maintain a log to determine patterns of behavior, psychomotor activity, and the impact of interventions. Observe carefully for symptoms of hypoactive delirium as this is often unrecognized or written off as being unimportant or as a sign of depression, fatigue, or dementia.4
- Use a standardized and validated instrument to assist in making a clinical diagnosis of delirium. There are several instruments available, including the Confusion Assessment Method (CAM), NEECHAM Confusion Scale, Memorial Delirium Assessment Scale, Nursing Delirium Screening Scale, and the Delirium-O-Meter. The most routinely used instrument is the CAM. The CAM comes in both a long and a short form. The short form has 4 questions and can be completed at the bedside in less than 5 minutes. There is also an instrument designed for individuals who are nonverbal or on mechanical ventilation (CAM-ICU). Because dementia impairs a person’s ability to communicate, the CAM-ICU may be the most useful instrument. The mini-mental state examination is useful in following a person over the entire course of delirium. The mini-mental state examination scores tend to improve as the delirium resolves.6
- Conduct a physical examination and comprehensive history to identify underlying causes of delirium.
- Laboratory and diagnostic studies should be ordered depending on the findings of the history and physical examination. Special attention should be placed on serum chemistry, thyroid studies, blood glucose level, urinalysis, pulse oximetry, complete blood count, chest radiography, and computed tomography.

**RISK FACTORS**

There are multiple risk factors for developing delirium. Individuals with multiple risk factors are more likely to develop delirium. The most common risk factors include2–4

- advanced age, usually older 65 years,
- history of dementia,
- sleep deprivation,
- sensory impairment,
- dehydration,
- severe illness such as AIDS, cancer, myocardial infarction, respiratory failure,
- fractures,
- hospitalization,
- recent postoperative status,
- immobility,
- polypharmacy (taking 4 or more medications),
- alcoholism and alcohol withdrawal,
- multiple comorbidities,
- malnourishment, and
- terminal illness.

**MANAGEMENT**

The treatment of delirium is based on the underlying cause. If pharmacological treatment is necessary, haloperidol (Haldol) is the pharmacological treatment of delirium that has benefited from the most extensive study.6 Medication for delirium usually can be discontinued within 7 to 10 days after resolution of delirium symptoms, particularly after normalization of the sleep-wake cycle.6 All other prescriptions and over-the-counter medications should be reviewed and evaluated. For essential medications, the lowest possible therapeutic dosage should be used. All nonessential medications should be discontinued.4

The following are key nonpharmacological interventions for a person with delirium or who is at risk for delirium.7

- Follow a consistent routine.
- Provide consistency in caregivers and limit the number of new or different caregivers.
- Create a comfortable environment by bringing in familiar items that the person will recognize and be comforted by. This could include photo albums, pictures in a digital picture frame, favorite flowers, and anything with a soft texture such as a favorite throw, comfortable sleepwear, and socks.
- Decrease environmental stimulation to avoid sensory overload.
- If available, implement music therapy interventions.
- Break up the schedule with short periods of diversional activities during periods of alertness.
- Avoid activities that increase fear and anxiety such as showers or any activity with loud noises.
- For safety reasons, keep the bed in the lowest possible position when occupied and avoid the use of physical restraints. Physical restraints may increase agitation and the risk for injury.
• Use supportive aids such as glasses and hearing aids as appropriate for the person. Glasses should be clean and hearing aids should be in good working order.
• Ensure that the person receives a nutritionally balanced diet.
• Encourage fluid intake to maintain hydration.

Communicating with a person who has both dementia and delirium tends to be more challenging. The person’s ability to understand what you are saying and his or her ability to make you understand can be inconsistent. The following communication techniques are useful when interacting with a person with dementia and superimposed delirium.
• Gain the person’s attention prior to providing verbal instructions.
• Provide instructions in a clear calm voice with a slower cadence.
• Try not to give more than 1 instruction at a time.
• Use verbal encouragement during activities.
• Provide cueing or role modeling to demonstrate desired activity or behaviors.

Delirium can be very distressing to both professional and family caregivers. Delirium impairs communication and increases the burden of care. Early assessment and management of delirium often leads to a more rapid resolution of symptomatology and improved outcomes.

REFERENCES

See www.alz.org for more information