Delirium

An Acute Confusional State

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Acute confusional state, also known as delirium or encephalopathy, is so common in hospitals that it's almost seen as routine by many hospital staff. Between 14 to 56% of all hospitalized patients develop confusion. Intubated patients in the intensive care unit have an even higher rate, reaching about 82%.

While delirium is all too familiar to hospital workers, it is deeply unnerving and distressing to friends and family members. Their loved one may not recognize them, or may even be accusing them of unrealistic actions like trying to imprison or kill the patient. It can seem as if a psychotic stranger possesses the patient's body.

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Delirium is usually transient and improves as the patient heals from their illness. That doesn't mean delirium is benign. Delirium is associated with up to a two-fold increase in 12-month mortality, even after adjusting for disease severity. It is also associated with longer hospital stays and an increased risk of developing dementia.

Symptoms of Delirium

Patients suffering from delirium may not know where they are, or even know what year it is. They may mistake the identities of normally well-known people who come to visit them. Hallucinations are common as well. One of the strongest hallmarks of an acute confusional state is difficulty paying attention to anything for a prolonged period of time.

Sometimes delirium can cause someone to become agitated, in which case they may scream or struggle to get out of bed. Such agitated patients may also try to remove tubes or IV lines that are providing life-saving medications. Fortunately, only about 10% of delirious patients are of this so-called "hyperactive" subtype.

Most of the time, delirium is less obvious as patients just lay quietly in bed, but still have no real idea of what is going on around them. These people may be lethargic or even unresponsive. This is known as "hypoactive" delirium, and this makes up about 40% of patients. The remaining 50% of patients with delirium are "mixed," alternately suffering from hyperactive and hypoactive symptoms.

This fluctuation in severity is a hallmark of delirium. One minute a patient may

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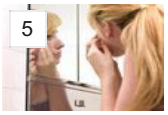
5 
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seem like their usual self, but the next minute they may act like someone else entirely. These fluctuations may also last as long as hours. Delirium often worsens at the time the patient would normally go to bed, a phenomenon known in hospitals as "sundowning."

Causes of Delirium

The current way of thinking about delirium is that a person may have risk factors for confusion, which under certain conditions precipitate full-blown delirium. For example, an elderly patient may have mild cognitive impairment, but then develop a urinary tract infection that leads to an acute confusional state. Alcohol use, depression, malnutrition, or impairment of vision and hearing can also predispose someone toward delirium.

There is a very long list of things that can cause someone with an underlying risk factor for acute confusional state to become frankly delirious. I find it helpful to use the mnemonic "delirium" to recall some of the most likely causes.

D - Drugs. This is probably the most common cause of delirium. Adding three new drugs in a hospital stay increases the risk of delirium three-fold in elderly patients. The most common offenders are anticholinergic medications like many of those used to treat urinary incontinence. Benzodiazepines and opiates are also frequent culprits. However, the list of other medications that can cause delirium also includes antihistamines, antiepileptics, steroids, some antibiotics, and many others.

E - Epilepsy. While seizures have traditionally been thought of as a less likely cause of mental status changes, recent studies have shown that a high percentage of patients, especially in ICUs, are actually suffering from nonconvulsive status epilepticus, meaning they are almost constantly seizing without stereotypical convulsive limb movements.

L - Lungs. Too little oxygen or too much carbon dioxide due to difficulty breathing can contribute to acute confusional states. Obstructive sleep apnea is a risk factor.

I - Infection. Depending on how predisposed someone is to an acute confusional state, just about any infection can push them over the edge into delirium, including mild viral infections. More commonly, a urinary tract infection, pneumonia, or skin infection is the cause.

R - Retention. This can mean retention of either urine or stool. Constipation is a frequent contributor to delirium.

I - Inflammation. This is an intentionally broad category, since so many things in the body can elicit an inflammatory response. Allergic reactions are one possibility. Surgery is a common contributor to delirium. Bowel obstructions or perforations can do this as well.

U - Unstable. Acute confusional states can serve as a warning sign that a patient is becoming seriously ill. Blood pressure that is too low or too high can cause encephalopathy, as can a myocardial infarction (heart attack). Strokes rarely cause delirium without some other sign of a stroke, such as weakness of an arm or leg, but may rarely just cause confusion.

M - Metabolic. This includes thyroid problems as well as diabetes, which can lead to blood sugar levels that are too low (hypoglycemia) or too high (hyperglycemia). Other hormones like cortisol can also lead to changes in thinking. Malnutrition and renal failure might also be included in this category.

As you can see, there is a large number of reasons for a patient to be confused in the hospital. Most confused patients have more than one such reason for delirium. The list above also doesn't include other common precipitants of delirium like sleep deprivation, catheterizations, and multiple procedures that are commonplace in hospitals. Sometimes doctors have to a walk a fine line in

delirium management. For example, while pain can cause delirium, so can too much pain medication. While physical restraints are sometimes needed to stop a confused patient from pulling out lines and tubes, physical restraints also worsen confusional states.

Fortunately, there are additional steps that medical staff and family members can take to help prevent delirium from getting out of hand while underlying problems are being corrected. Delirium is frightening, but almost never permanent. Proper care of the patient can help ensure that everyone gets through the experience with as little confusion as possible.

Sources:

Dubois MJ et al. Delerium in an ICU, a study of risk facters Intensive Care medicine. 2001 27 1297-1304

Ely EW, Shintani A, Truman B. et al. Delirium as a predictor of mortality in mechanically ventilated patients in the intensive care unit. JAMA 2004; 291(14):1753-1762.

Peterson JF, Delerium and its motoric subtypes, J am. Geriat. Soc 54 (3) 479-484, 2006.

Vanja C. Douglas, A. Andrew Josephson, Delirium. Continuum: Lifelong learning Neurol 2010; 16(2) 120-134

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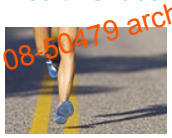

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