

Haloperidol May Work as Delirium Prophylaxis

BY DOUG BRUNK
San Diego Bureau

LONG BEACH, CALIF. — So little is known about effective interventions for delirium that efforts to help elderly patients with the condition leave many clinicians, well, delirious.

The goal of treating delirium is not just to control agitation or hallucinations, but to reverse the delirium and thereby mitigate associated morbidity and mortality risks, Dr. Jay S. Luxenberg said at the annual meeting of the California Association of Long Term Care Medicine.

"The modern concepts of delirium emphasize that delirium can be a persistent issue for a given patient, persisting months and even years," said Dr. Luxenberg, an internist and geriatrician who is medical director of the Jewish Home in San Francisco. "It may actually reflect a current decline in cognitive functions."



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DR. LUXENBERG

Another emerging concept about delirium is that it markedly and independently affects patient outcomes such as length of stay, functional decline, and loss of independent living.

"What we need to be thinking of is baseline vulnerability to delirium: what pushes people over the edge," said Dr. Luxenberg, also of the University of California, San Francisco. "Ultimately, the precipitating factor is just that: the precipitating factor. Of course if they have a urinary tract infection, we're going to treat it. If they have bronchitis, we're going to treat it."

The exact incidence of delirium among the elderly is not known, but Dr. Luxenberg said that it is surely higher than the national average of 2% reported by Medicare for the period of July 1, 2006, through Dec. 31, 2006. "It isn't being identified as clearly as it should be," he asserted.

He recommended being specific about delirium symp-

toms of risk factors during admission assessments. "On your problem list, identify things explicitly because the people who do the [Minimum Data Set] look for written data from the doctor," he said.

"Anytime a patient is on a lot of medications we should list polypharmacy as one of their problems, even if they need every one of those drugs. Similarly, if the person has delirium, we should write it, not imply it."

In a study of 2,158 patients with an average age of 84, admitted to a skilled nursing facility from a hospital, 16% had delirium as defined by the Confusion Assessment Method (J. Gerontol. A Biol. Sci. Med. Sci. 2003;58:M441-5). In addition, about 13% of patients had two or more symptoms of delirium and about 40% had one symptom of delirium.

Unresolved, delirium can have significant impact on mortality. One study of 393 postacute care patients (with an average age of 84 years) found that functional recovery differed significantly by delirium resolution status (J. Gerontol. A Biol. Sci. Med. Sci. 2006;61:204-8).

Specifically, patients who resolved their delirium within 2 weeks without recurrence regained 100% of their pre-hospital functional level, while those who did not retained less than 50% of their prehospital functional level.

In a more recent study, researchers used the Memorial Delirium Assessment Scale to assess psychomotor activity in 457 newly admitted delirious postacute care patients (J. Gerontol. A Biol. Sci. Med. Sci. 2007;62:174-9). The patients were classified as hyperactive, hypoactive, mixed, or normal. Hypoactive patients were 1.6 times more likely to die during 1 year of follow-up compared with patients who had normal psychomotor activity, a difference that was statistically significant.

Patients with the hyperactive and mixed subtypes had an increased risk of dying during 1 year of follow-up compared with patients who had normal psychomotor activity, but the elevations were not statistically significant.

The current data on treatment options for delirium "makes you yearn for more data and better studies," he said.

A Cochrane review that Dr. Luxenberg helped assemble on the use of antipsychotics for delirium found only three studies suitable for inclusion (Cochrane Database of Systematic Reviews 2007, Issue 2. Art. No.: CD005594. DOI:10.1002/14651858. CD005594.pub2.). Meta-analysis was only possible in comparing risperidone (Risperdal) vs. haloperidol (Haldol) and olanzapine (Zyprexa) vs. haloperidol.

The results showed no significant difference in overall effect on delirium with olanzapine or risperidone compared with haloperidol.

Data on the use of cholinesterase inhibitors and benzodiazepines for delirium are even more sparse.

One controlled study of haloperidol as a delirium prophylaxis in hip surgery patients found that while there was no effect on the postoperative incidence of acute confusion, patients in the haloperidol arm had earlier improvement of delirium scores and had less severe delirium compared with patients who did not take the drug. The average age of study participants was 79 years (J. Am. Geriatr. Soc. 2005;53:1658-66).

"Somebody should do this study again," Dr. Luxenberg said. "This is potentially interesting."

Until more is known about medical interventions for delirium, other approaches are worthy of consideration, including the use of bright or blue light for circadian rhythm disturbances, complementary and alternative medicine, and minimizing the need for restraints by using clysis and by using intramuscular injections instead of intravenous injections, he said.

"Deemphasize the idea that you have to search for an underlying cause of delirium, such as [ordering] a CT scan to look for intra-abdominal abscesses," he said. "Looking for the common things—the drugs, the [urinary tract infections]—suffices. If the patients aren't coughing, they're not short of breath, and their oxygen saturation is fine, they probably don't need a chest CT to look for occult pneumonia as the cause of their delirium." ■

Protocol Targets Six Modifiable Risk Factors for Delirium

BY BRUCE JANCIN
Denver Bureau

DALLAS — Prevention of delirium in hospitalized seniors is a largely untapped opportunity to achieve major improvements in health care—and the blueprint for success already exists in the form of standardized evidence-based approaches such as the Elder Life Program.

"We don't have really convincing evidence that we can cure delirium. Our best hope is to prevent it. And there's data out there to say we can," said Dr. Robert M. Palmer, head of the section of geriatric medicine at the Cleveland Clinic Foundation.

He cited a seminal yet underappreciated clinical trial published 8 years ago by Dr. Sharon K. Inouye and coworkers at Harvard Medical School, Boston. They assigned 852 patients, who were aged 70 years or older and admitted to a hospital general medicine service, to either a multicomponent risk factor intervention program or usual care. Delirium was assessed daily until discharge.

Delirium developed in 9.9% of the intervention group and in 15.0% of controls, for a highly significant 40% reduction in relative risk. The total number of delirium

episodes and total days with delirium were similarly reduced. The effect was seen starting on day 3 and increased throughout the rest of the stay (N. Engl. J. Med. 1999;340:669-76).

The intervention, known as the Elder Life Program, systematically targeted six established modifiable risk factors for delirium: cognitive impairment, sleep deprivation, immobility, dehydration, visual impairment, and hearing impairment.

To prevent cognitive impairment, for example, the protocol called for simple activities that maintain reality orientation. Sleep deprivation was addressed nonpharmacologically via warm bedtime drinks, relaxation tapes, and back massage. For hearing impairment, there was provision of amplifying devices and ear-wax disimpaction.

"Each of these interventions can be done by any of us if we think of it and have a good nursing staff and a good team to work with," Dr. Palmer stressed at the annual meeting of the Society of Hospital Medicine.

The program had no significant effect on severity of delirium or on recurrence rates, underscoring that primary prevention is the best approach.

A program like this is a golden oppor-

tunity for hospitalists to make a difference at their institutions, he added.

Another potential opportunity was highlighted in a separate study that identified five delirium precipitants that occur with increased frequency within 24 hours before diagnosis of the condition. These precipitants are the addition of more than three medications, malnutrition, use of physical restraints, any iatrogenic event, or use of a bladder catheter.

"The point is, these are things we and our nurses do to patients which are at least associated with the incidence of delirium. For us as hospitalists, maybe if we change the processes of care we can prevent delirium," he said.

Delirium, a syndrome with multiple etiologies and pathophysiologies, is marked by a unifying theme: acute decline in attention and cognition.

Well-designed prospective observational studies have shown that 10%-15% of medically ill patients older than age 65 years have delirium when they present for

hospitalization, whereas another 10%-15% develop new-onset delirium after admission.

Delirium occurs in 30%-50% of elderly patients following hip or knee surgery and in 70%-84% of patients in the intensive care unit.

The clinical consequences of delirium can be considerable. Delirium is consistently associated with increased morbidity and mortality, prolonged length of hospital stay, and nursing home placement, Dr. Palmer said.

The condition is estimated to cost more than \$7 billion annually in increased Medicare hospital expenditures.

Although delirium is an acute condition, it is associated with increased long-term mortality.

A Yale University study showed that patients who experienced delirium during hospitalization had a 62% increased risk of mortality during the subsequent year, compared with those without delirium (Arch. Intern. Med. 2005;165:1657-62). ■

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