Acute Confusion in an Independent, Community-Dwelling Elderly Woman

Lee Ann Lindquist, MD, MPH

CASE PRESENTATION

History

A 79-year-old woman was brought to the emergency department with acute mental status changes and confusion. Her family indicated that she was living independently without difficulties and was fairly active. Specifically, the patient was able to prepare her own meals, perform housework, and routinely visit friends. Her family had last seen her cognitively intact about 1 week earlier. When family members visited earlier in the day, they found her confused, distracted, hallucinating, and unable to recognize them.

The patient had the following past medical history: early-stage dementia associated with Alzheimer's disease that was diagnosed 2 years ago (recent Folstein Mini-Mental State Examination [MMSE] score was 25 out of a possible 30), atrial fibrillation, constipation, hypertension, hypothyroidism, osteoporosis, and depression. Her medications included levothyroxine (88 μg/d), venlafaxine (37.5 mg/d), warfarin (2 mg/d), metoprolol (25 mg twice daily), hydrochlorothiazide (12.5 mg/d), diltiazem (240 mg/d), alendronate (70 mg/wk), calcium with vitamin D supplements (500 mg/d), docusate (100 mg/d), and donepezil (10 mg/d). She had been stable on all medications without any major changes in dosing over the previous 6 months.

Physical Examination

On examination, the patient's vital signs were as follows: oral temperature, 98.4°F (36.9°C); heart rate, 120 bpm; respiratory rate, 18 breaths/min; oxygen saturation, 97% on room air; and blood pressure, 119/88 mm Hg. She was verbally responsive and inattentive and intermittently followed commands. She was alert and oriented to person and city only. Her mucous membranes were dry and skin tenting was present. Cardiac examination revealed irregular rate and rhythm, with a II/VI systolic murmur loudest at the apex. Lungs were clear, and the abdomen was soft and nontender with normoactive bowel sounds. Rectal examination was hemoccult negative with hard brown stool in the vault. Musculoskeletal examination showed symmetric mild weakness of all 4 extremities. There were no rashes or dermatologic abnormalities. Findings on neurologic examination were as follows: cranial nerves II through XII intact, spontaneous speech, normal deep tendon reflexes, downgoing Babinski's sign, and no tremor or drift. A MMSE was performed for comparison with the patient's earlier MMSE score; the patient's latest score was 14. She was actively hallucinating in that she was talking to the walls, believing that she was in college at her dormitory room with friends.

- **What are the possible causes of this patient's mental status changes?**

EVALUATION OF MENTAL STATUS CHANGES IN THE ELDERLY

The development of acute mental status changes in an elderly patient often can be multifactorial. The clinician initially needs to determine whether these changes are due to new-onset or worsening dementia or delirium. Dementia is described as a gradual loss of memory and at least 1 other cognitive function (eg, language, visual-spatial, executive) that disrupts the social and occupational functioning of a generally alert person.[1] Over long periods, dementia progressively worsens. The initial phase involves delayed recall, decreased insight, disorientation to date, and anomia. Over years, dementia associated with Alzheimer's disease will progress to delusions, mood changes, aphasia, difficulties with grooming or dressing, and disorientation to place (eg, becoming lost in familiar locations).[2] Delirium, on the other hand, is described as a rapid onset of disturbed consciousness, especially decreased attention, with a fluctuating course (**Table 1**).

With delirium, cognitive and perceptional disturbances can be present in the form of memory deficits,

Dr. Lindquist is an assistant professor, Department of Medicine, Division of Geriatric and Internal Medicine, Northwestern University Feinberg School of Medicine, Chicago, IL.

Table 1. DSM-IV Criteria for Diagnosing Delirium

A.	Disturbance of consciousness (ie, reduced clarity of awareness of the environment) with reduced ability to focus, sustain, or shift attention.
B.	A change in cognition (eg, memory deficit, disorientation, language disturbance) or the development of a perceptual disturbance that is not accounted for by a preexisting, established, or evolving dementia.
C.	The disturbance develops over a short period of time (usually hours to days) and tends to fluctuate during the course of the day.
D.	Where the delirium is due to a general medical condition, there is evidence from the history, physical examination, or laboratory findings that the disturbance is caused by the direct physiologic consequences of a general medical condition.

Adapted with permission from American Psychiatric Association. Diagnostic and statistical manual of mental disorders: DSM-IV TR. 4th edition, text revision. Washington (DC): The Association; 2000:143. Copyright © 2000, American Psychiatric Association.

disorientation, and hallucinations. The similarities and differences between delirium and dementia are listed in **Table 2**. Patients who have underlying dementia are at increased risk of developing delirium.[3] Other predisposing factors for delirium are advanced age, functional impairment in activities of daily living, increased number of medical comorbidities, history of alcohol abuse, and sensory impairment. Some physicians find the Confusion Assessment Method to be helpful in the diagnosis of delirium.[4] The following criteria are evaluated and, if items 1, 2, and either 3 or 4 are positive, the diagnosis of delirium can be made:

1. Acute change in mental status and fluctuating course: Is there evidence of these?
2. Inattention: Does the patient have difficulty focusing attention?
3. Disorganized thought: Is the patient's thinking incoherent or disorganized?
4. Altered level of consciousness: Is the patient anything besides alert (eg, vigilant, lethargic, stuporous, or comatose)?

Key Point

Delirium in the elderly is common and can be differentiated from dementia by the following characteristics: acute onset, fluctuating mental status pattern throughout the day, and decreased attention span.

Delirium has been associated with increased risk of morbidity and impending mortality. Several studies have found that patients with delirium have increased length of hospital stay, increased hospital mortality, and greater need for posthospitalization nursing home placement.[5–8] There is an increased risk of death up to 2 years following a hospital course involving delirium.[9]

Discussion of Findings in the Case Patient

Obtaining history from a patient with acute mental status changes in order to assess the causes of dementia and/or delirium is usually not helpful; however, pertinent information may be provided by the patient's friends and family members. The case patient's family reported that she had been living independently 1 week prior to the current mental status changes. Although she had baseline dementia, deterioration of this magnitude is unlikely to occur within a week for patients with Alzheimer's disease, which suggests delirium superimposed on her early-stage dementia. In addition, physical examination indicated that the patient was dehydrated without any obvious cause (eg, infection). Vitals signs are most notable for tachycardia, which provides further evidence that the patient is dehydrated. Although she was prescribed a β-blocking agent, her heart rate was tachycardic and irregular. These findings imply that she was not taking this drug or was improperly taking it.

- **What is the differential diagnosis of delirium?**

This patient's acute mental status changes point toward the diagnosis of delirium. The most important step in the work-up of an elderly patient with mental status changes is to determine the cause(s) of delirium because some are reversible. The most common reversible causes of delirium spell out the word DELIRIUMS (**Table 3**).

Drugs are an important cause of delirium. Anticholinergics, tricyclic antidepressants, anti-inflammatory agents (prednisone), benzodiazepines, digitalis, cimetidine, lithium, opioids (especially meperidine), and some antibiotics (levofloxacin) are just a few agents that can cause changes in mental status.[10] One must determine whether there have been recent changes in medication regimens, such as addition or discontinuation of medications and/or changes in dosing. For example, a patient prescribed a short course of oral prednisone to overcome an asthma exacerbation may not exhibit side effects such as agitation or psychosis until days later. Consumption of over-the-counter flu and cold medications, such as diphenhydramine, should also be assessed. Diphenhydramine has strong sedating and anticholinergic properties, which may cause confusion, urinary retention, and constipation in the elderly. Elderly patients sometimes use acetaminophen with sleep assist (eg, Tylenol PM), which

Table 2. A Comparison of Dementia and Delirium

Characteristic	Dementia	Delirium
Onset	Gradual	Acute
Time course	Progressive over years	Fluctuating throughout day and night
Memory impairment	Global cognitive impairment	Global cognitive impairment
Consciousness	Not until terminal stage	Impaired, changing
Attention	Not affected until later	Poor attention span
Disorientation	Months to years later	Early in course
Sleep-wake cycle	No difficulties or may have day-night reversal	Disturbed on an hour-to-hour

Adapted with permission from Espino DV, Jules-Bradley AC, Johnston CL, Mouton CP. Diagnostic approach to the confused elderly patient. Am Fam Physician 1998;57:1361.

contains diphenhydramine.[11,12] Drug interactions and concomitant alcohol use also need to be explored.

Infections affecting the urinary tract, lungs, gastrointestinal tract, and blood often manifest differently in elderly patients. Instead of presenting with dysuria or urinary frequency, elderly patients with urinary tract infections may only exhibit mental status changes. A fall history or a history of being found on the floor is also useful because this may precede a subdural hematoma or intracranial bleed.[13,14]

Key Point

Reversible causes of delirium (eg, medications, electrolyte imbalances, infection, renal failure) need to be determined because addressing these issues may help improve the mental status of the elderly patient. Medication mismanagement (eg, overuse of calcium supplements) should be explored in all elderly patients with acute mental status changes, and close family members should be included in the history taking.

- **What diagnostic studies are indicated in this patient?**

Laboratory studies are essential in the evaluation of elderly patients with mental status changes. Work-up of mental status changes should involve a complete blood count with differential, chemistry panel, urinalysis, and blood cultures. With these tests, the physician can determine whether infections, anemia, renal failure, or electrolyte imbalances are possible causes of mental status changes.

Electrolyte disorders, such as hyponatremia and hypernatremia, are common in the geriatric population and can cause confusion in community-dwelling elderly persons. Serum levels of medications with therapeutic ranges (eg, dilantin, digoxin, theophylline) should be assessed. Lumbar puncture (LP) is often performed in younger patients for mentation changes. While LP is sometimes helpful, clinical experience has shown that attempting this procedure in a delirious elderly patient can be extremely difficult due to agitation. Additionally, elderly patients are more likely to have osteophytes, compression fractures, and narrow disc areas, which are contraindications to performing LP. In many cases, sedating medications need to be given to calm the patient; however, it is useful to avoid sedatives when trying to determine the etiology of delirium. Unless clinical suspicion is high for meningitis or encephalitis, LP is not worthwhile as part of the initial work-up of acute mental status changes in the elderly. Finally, a one-time straight urinary catheterization to rule out urinary retention and a rectal examination to rule out fecal impaction also assists in determining the reversible causes of delirium.

Table 3. Causes of Delirium

D	Drugs/dehydration
E	Electrolyte imbalance
L	Low oxygenation
I	Infection
R	Retention (urinary, fecal)
I	post-Ictal
U	Uremia
M	Metastases to brain
S	Subdural hematoma

If respiratory infection is suspected on clinical grounds, a chest radiograph may be useful. Computed tomography scanning of the head without contrast is the initial test of choice in the emergency department to rule out subarachnoid bleed or subdural hematoma. Other testing, such as magnetic resonance imaging of the brain, can be performed at a later point to further determine the etiology of delirium.

Table 4. Laboratory Values of Case Patient

Variable	Result	Normal Range
Leukocyte count ($\times 10^3/\mu L$)	7.3	3.5–10.5
Platelet count ($\times 10^3/\mu L$)	278	150–450
Hemoglobin (g/dL)	12.9	11.6–15.4
Hematocrit (%)	38.7	34–45
Sodium (mEq/L)	137	135–148
Potassium (mEq/L)	3.9	3.5–5.0
Chloride (mEq/L)	94	95–108
Carbon dioxide (mEq/L)	33	24–32
Blood urea nitrogen (mg/dL)	9	0–20
Glucose (mg/dL)	115	65–110
Creatinine (mg/dL)	1.7	0–1.7
Calcium (mg/dL)	13.9	8.5–10.5
Albumin (mg/dL)	3.4	3.5–5.0
Phosphorus (mg/dL)	4.3	2.5–4.5
Thyroid-stimulating hormone (μIU/mL)	0.980	0.4–4.0
Magnesium (mg/dL)	1.7	1.8–3.0
Troponin (ng/mL)	Initial, 0.02; at 6 hours, 0.01	0.00–0.03
International normalized ratio	1.5	Patient goal, 2.0–3.0
Blood culture	Negative	N/A
Urine	Negative leukocyte esterase; negative nitrites; 5 lymphocytes	N/A
Urine culture	Negative	N/A
Urine toxicology screen	Negative	N/A
Alcohol level	Negative	N/A

N/A = not applicable.

Key Point

A complete blood count, chemistry panel, urinalysis, and blood cultures should be ordered routinely as part of the evaluation of elderly patients who present with new mental status changes because causative conditions (eg, infections, electrolyte imbalance, uremia) may be found.

DIAGNOSIS OF CASE PATIENT

The laboratory test results for the case patient are presented in **Table 4**. A noncontrast computed tomography scan of the patient's head revealed no masses or hemorrhages. Electrocardiogram demonstrated rapid ventricular rate and atrial fibrillation. Notably, her laboratory studies revealed elevated levels of bicarbonate, calcium, and creatinine. As discussed earlier, the patient's tachycardic state suggested that she might not have been compliant with taking her β-blocker. Coupled with the subtherapeutic warfarin levels (she had previously been therapeutic for 8 months), there was concern that she may have been taking her medications improperly, and her family was asked to bring in her medications. The family found her pillboxes and noted that none of her medications had been taken 3 days prior to admission. They also found a half-empty bottle of calcium carbonate antacid near the patient's bedside that was presumably purchased on her last grocery trip 2 weeks earlier. Her family recollected that she had been experimenting with spicier foods in her meal planning and had experienced some epigastric distress. With the extra calcium carbonate from the antacid added to her calcium supplements and alendronate usage for osteoporosis, her intake of calcium may have been excessive. Hypercalcemia caused by excessive intake of calcium supplements is occasionally seen. The triad of hypercalcemia, elevated bicarbonate level, and elevated creatinine level is described as milk-alkali syndrome.

MILK-ALKALI SYNDROME

Epidemiology and Pathogenesis

The milk-alkali syndrome was first described in 1923 in a patient who had consumed a large amount of antacids and subsequently developed a triad of hypercalcemia, metabolic alkalosis, and renal insufficiency.[15] With the emergence of proton-pump inhibitors and histamine blockers for treating reflux disease, the prevalence of this syndrome has decreased. However, because of increased calcium supplementation use in osteoporosis care, it is the third leading cause of hypercalcemia after primary hyperparathyroidism and malignancy, accounting for up to 12% of cases.[16,17] Milk-alkali syndrome begins with the development of hypercalcemia that in turn produces a decrease in kidney function and metabolic alkalosis. The alkalosis causes further hypercalcemia by limiting calcium excretion in the urine. Hypercalcemia causes vomiting, which causes dehydration and further increases calcium levels, thereby worsening the hypercalcemia.[18] Case reports of milk-alkali syndrome have shown calcium levels as high as 20 mg/dL.[19]

Clinical Manifestations

The acute form of milk-alkali syndrome usually occurs 1 week after excessive quantities of calcium are

consumed.[15] Symptoms of hypercalcemia, such as nausea, vomiting, weakness, and mental status changes, are prevalent. The mental status changes can present as psychosis, acute hallucinations, or lethargy. Hypercalcemic symptoms are predominantly seen first, and nausea and vomiting associated with fluid loss further exacerbate mental status changes. The chronic form of the milk-alkali syndrome usually occurs after months of calcium supplementation use and symptomatically presents as muscle aches, fatigue, polyuria, polydipsia, and pruritus. This form is often found incidentally on laboratory examination rather than in a symptomatic patient. The subacute form of milk-alkali syndrome occurs when milk-alkali products are intermittently consumed over years. These patients have symptoms of both acute and chronic forms and respond similarly to withdrawal of calcium supplements. The resolution of renal insufficiency in these patients may be delayed.[20]

Key Point

The milk-alkali syndrome is a possible cause of delirium in elderly patients who are taking diuretics and consuming calcium supplements for osteoporosis and/or reflux disorder.

Treatment/Prognosis

The treatment of milk-alkali syndrome involves discontinuation of calcium carbonate and calcium supplements. Further treatment in the acute phase includes vigorous fluid hydration with normal saline. Case reports in nonelderly adults discuss administering about 4 to 6 L of saline intravenously in the first 6 to 8 hours and reducing the rate to 200 to 300 mL/h until normal calcemia is achieved.[21] Due to the propensity of the elderly patient to become fluid overloaded, a gentler approach may be recommended. If an elderly patient becomes fluid overloaded, furosemide may be used to remove excess fluid. However, furosemide may aggravate hypercalcemia because it has a greater effect on sodium excretion than on calcium excretion. Sodium diuresis also increases the excretion of potassium and magnesium. Therefore, volume status, electrolytes, and urine output should be monitored closely.

In most case reports reviewed, these 2 therapies often lead to improvements in mentation and renal function in the acute setting. For some patients with chronic milk-alkali syndrome, renal insufficiency can remain for years following the discovery of the syndrome. Patients with underlying renal insufficiency and concomitant use of calcium supplements and/or hydrochlorothiazide are most at risk for developing milk-alkali syndrome.[22] Considering that many elderly patients have all 3 features, clinicians should be aware that this syndrome can occur and cause mental status changes.

General Measures and Medications in the Management of Delirium

When treating delirium in the elderly, determining the underlying causes, maintaining behavioral control, and preventing complications are important.[23] Fifty percent of older patients affected by delirium have no identifiable precipitant.[24] While the underlying causes are being explored, nonpharmacologic steps can be taken to decrease the severity of delirium. Environmental modifications may help, such as frequent reorientation, providing objects that provide orientation (ie, clocks, calendars), appropriate lighting (well-lit rooms during the day, room darkening at night), stimulating activities during daytime hours, and correcting sensory deficits (ie, eyeglasses, hearing aids). Multiple medications have been used to maintain behavioral control in the agitated patient with delirium (**Table 5**). When administering antipsychotics for delirium to elderly patients, the general consensus is to "start low and go slow."[25] Medication regimens usually include a standard daily dose as well as a smaller dose, of shorter duration on an as-needed basis. For instance, haloperidol 0.5 mg to 1 mg by mouth daily plus 0.25 or 0.5 mg by mouth every hour as needed can be given for agitation. The goal is to decrease the agitation caused by delirium while avoiding sedation of the patient. Ultimately, management of delirium in elderly patients is best done on a case-by-case basis.[26]

Key Point

Nonpharmacologic management of delirium involves frequent reorientations, appropriate lighting, stimulating activities during daytime hours, and correcting sensory deficits (ie, eyeglasses, hearing aids). Multiple medications are available to assist with agitation occasionally present during delirium. A general rule is to "start low and go slow."

CASE RESOLUTION

The case patient was gradually rehydrated with fluids, and her hypercalcemia as well as her mentation slowly improved. Her MMSE score returned to between 24 and 25 and she was discharged. It was believed that she had consumed a large amount of antacids. The addition of calcium carbonate antacids to

Table 5. Medications Commonly Used for Managing Delirium

Medication	Usual Doses	Comments
Haloperidol	Start 0.5–1 mg orally twice daily or IV/IM; doses up to 10 mg/d are usually effective	Development of EPS occasionally
Olanzapine	Start 2.5–5 mg orally once daily; doses up to 15 mg/d are usually effective	Sedating, anticholinergic properties at higher doses; hyperglycemia; dose-related EPS
Risperdone	0.5 mg orally twice daily; do not exceed 6 mg/d in elderly patients	Orthostasis, dose-related EPS; use caution in patients at risk for stroke
Quetiapine	25 mg orally twice daily; maximum dose is 800 mg/d	Sedating, orthostasis; eye examination for cataracts recommended every 6 mo; no dose-related EPS
Ziprasidone	20 mg orally twice daily or 10–20 mg IM; maximum dose is 40 mg/d IM or 80 mg/d orally	Associated with cardiac conduction abnormalities; may increase QT interval
Clozapine	Start 12.5 mg orally once to twice daily; maximum dose is 450 mg/d	Less commonly used due to agranulocytosis in 1% to 2% patients

EPS = extrapyramidal symptoms; IM = intramuscularly; IV = intravenously.

Adapted with permission from Geriatrics at your fingertips. 6th ed. Belle Mead (NJ): Excerpta Medica; 2004.

her other medications (ie, calcium supplements, hydrochlorothiazide, alendronate) caused her to develop acute milk-alkali syndrome. Due to her hypercalcemic state, she began to vomit and became severely dehydrated. Unable to continue taking her cardiac medications, she was subtherapeutic on her warfarin and did not have a controlled heart rate.

Upon discharge, the patient's family members set up her medication pillbox each week, and she agreed not to purchase any over-the-counter medications before speaking directly to her physician. Because her Alzheimer's dementia was still in the early stages, she was able to live independently and did well with several lifestyle modifications. These interventions include Meals-On-Wheels, stronger family participation, and a necklace-style ambulance alert system (ie, lifeline) in case she becomes ill again and is unable to care for herself. For elderly patients with moderate to severe dementia, it is likely that caregivers or homemakers would be needed to assist with maintaining them in their own home. **HP**

REFERENCES

1. Cummings JL. Alzheimer's disease. N Engl J Med 2004; 351:56–67.
2. Knopman DS. The initial recognition and diagnosis of dementia. Am J Med 1998;140:2S–12S, 39S–42S.
3. Trzepacz PT, Mulsant BH, Amanda Dew M, et al. Is delirium different when it occurs in dementia? A study using the delirium rating scale. J Neuropsychiatry Clin Neurosci 1998;10:199–204.
4. Inouye SK, van Dyck CH, Alessi CA, et al. Clarifying confusion: the confusion assessment method. A new method for detection of delirium. Ann Intern Med 1990;113:941–8.
5. O'Keeffe S, Lavan J. The prognostic significance of delirium in older hospital patients. J Am Geriatr Soc 1997; 45:174–8.
6. McCusker J, Cole MG, Dendukuri N, et al. Does delirium increase hospital stay? J Am Geriatr Soc 2003;51: 1539–46.
7. Murray AM, Levkoff SE, Wetle TT, et al. Acute delirium and functional decline in the hospitalized elderly patient. J Gerontol 1993;48:M181–6.
8. Francis J, Kapoor WN. Prognosis after hospital discharge of older medical patients with delirium. J Am Geriatr Soc 1992;40:601–6.
9. George J, Bleasdale S, Singleton SJ. Causes and prognosis of delirium in elderly patients admitted to a district general hospital. Age Ageing 1997;26:423–7.
10. Foy A, O'Connell D, Henry D, et al. Benzodiazepine use as a cause of cognitive impairment in elderly hospital inpatients. J Gerontol A Biol Sci Med Sci 1995;50:M99–106.
11. Larson EB, Kukull WA, Buchner D, Reifler BV. Adverse drug reactions associated with global cognitive impairment in elderly persons. Ann Intern Med 1987;107: 169–73.
12. Tune L, Carr S, Hoag E, Cooper T. Anticholinergic effects of drugs commonly prescribed for the elderly: potential means for assessing risk of delirium. Am J Psychiatry 1992;149:1393–4.
13. American Psychiatric Association. Practice guideline for the treatment of patients with delirium. Washington (DC): The Association; 1999.
14. Espino DV, Jules-Bradley AC, Johnston CL, Mouton CP. Diagnostic approach to the confused elderly patient. Am Fam Physician 1998;57:1358–66.
15. Cooke AM. Alkalosis occurring in the alkaline treatment of peptic ulcers. QJM 1932;25:527.
16. Beall DP, Scofield RH. Milk-alkali syndrome associated with calcium carbonate consumption. Report of 7 patients

(continued on page 44)

from page 38

with parathyroid hormone levels and an estimate of prevalence among patients hospitalized with hypercalcemia. Medicine (Baltimore) 1995;74:89–96.
17. Vanpee D, Delgrange E, Gillet JB, Donckier J. Ingestion of antacid tablets (Rennie) and acute confusion. J Emerg Med 2000;19:169–71.
18. Sutton RA, Wong NL, Dirks JH. Effects of metabolic acidosis and alkalosis on sodium and calcium transport in the dog kidney. Kidney Int 1979;15:520–33.
19. Abreo K, Adlakha A, Kilpatrick S, et al. The milk-alkali syndrome. A reversible form of acute renal failure. Arch Intern Med 1993;153:1005–10.
20. Orwoll ES. The milk-alkali syndrome: current concepts. Ann Intern Med 1982;97:242–8.
21. Picolos MK, Sims CR, Mastrobattista JM, et al. Milk-alkali syndrome in pregnancy. Obstet Gynecol 2004;104 (5 Pt 2):1201–4.
22. Dorsch TR. The milk-alkali syndrome, vitamin D, and parathyroid hormone [letter]. Ann Intern Med 1986;105: 800–1.
23. Lindesay J, Rockwood K, Macdonald A, editors. Delirium in old age. Oxford: Oxford University Press; 2002: 123–52.
24. Francis J, Martin D, Kapoor WN. A prospective study of delirium in hospitalized elderly. JAMA 1990;263: 1097–101.
25. Geriatrics at your fingertips. 6th ed. Belle Mead (NJ): Excerpta Medica; 2004.
26. Britton A, Russell R. Multidisciplinary team interventions for delirium in patients with chronic cognitive impairment. Cochrane Database Syst Rev 2004;(2): CD000395.