

# Discharge to Institution Tied to Mortality Risk

BY DAMIAN McNAMARA

CHICAGO — One in four elderly patients discharged to an institution after undergoing elective surgery died within 6 months, investigators found in a study designed to identify the incidence of and risk factors for postoperative admission to a skilled nursing center, rehabilitation center, or nursing home.

Although 30-day postoperative mortality for the 167 patients was similar (2% of the transferred patients vs. 3% of those discharged to home), the 24% 6-month mortality rate among institutionalized patients was significantly greater than the 5% rate for those discharged, Dr. Arek J. Wiktor said at the annual clinical congress of the American College of Surgeons.

He and his associate, Dr. Thomas N. Robinson, both with the University of Colorado at Denver, studied surgical patients aged 50 years and older (mean age, 63). Most (96%) were men.

Of the 167 patients, 29 (17%) required postoperative institutionalization, and there was a significant difference in institutionalization rates between those aged 70 years or older and younger patients, said Dr. Wiktor.

Operative time and blood loss did not differ significantly between the two groups. Mean operative times were 298 minutes in the facility group vs. 276 minutes in the discharge group; mean blood loss was 561 mL vs. 603 mL, respectively.

Identification of risk factors for institutionalization was a

secondary aim of the study. Patients admitted to a facility after surgery were older (mean age of 70 years vs. 64 years), had a longer ICU stay (11 days vs. 6 days), and had a longer overall hospital stay (20 days vs. 9 days) than those discharged to home.

“Preoperative markers of frailty strongly correlated with institutionalization,” Dr. Wiktor said.

Preoperative cognitive function was assessed on the basis of the Mini-Cognitive Examination. Admitted patients had a mean score of 2.6 vs. 4.0 in those ultimately discharged to home, a significant difference. Similarly, the mean preoperative function score was 88.5 in admitted patients vs. 97.4 in those discharged to home, as measured on the Barthel Index scale. ■

## Stratify Patients' Risks

Modifiable risk factors for poor surgical outcome would be nice to have, but there would also be tremendous value in just being able to risk-stratify elderly patients preoperatively for a higher-quality informed consent discussion.



DR. MICHOTA

It has already been established that patients with dementia who undergo surgery do not fare as well postoperatively as patients without dementia. In this

study, cognitive dysfunction is also linked to poor outcomes.

The more precise we can stratify risk, the better we will be able to identify target groups for interventional studies that may be able to improve outcomes.

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MY TAKE

## Cognitive Function Linked To Brain Hormone Levels

BY MITCHEL L. ZOLER

ORLANDO — High blood levels of a brain natriuretic peptide were associated with poor cognitive function in a study of 950 community-dwelling, healthy, elderly adults.

“This is the first time this [association] has been shown,” Dr. Lori B. Daniels said at the annual scientific sessions of the American Heart Association.

Elevated levels of natriuretic peptide mark the presence of a variety of disease states, especially heart failure, said Dr. Daniels. She suggested several mechanisms that might link production of natriuretic peptide to poor cognitive function, including reduced cardiac output that drops oxygen or nutrient supplies to the brain and atrial fibrillation that creates microemboli.

Another issue is “which comes first, cardiovascular disease or poor cognitive performance,” said Dr. Daniels, a cardiologist at the University of California, San Diego.

Patients analyzed were enrolled in the Rancho Bernardo study in the early 1970s. Of the more than 5,000 community-dwelling adults in the study, 950 underwent a battery of cognitive function tests from 1997 to 1999 and had blood specimens drawn; they were the focus of the new analysis.

The average age of the 950 participants was 77 years; 61% were women. Two-thirds were hypertensive, 4% were current smokers, 49% drank three or more alcoholic drinks per week, and 6% had a history of stroke.

The researchers used three tests to evaluate cognitive function: the Mini-Mental State Exam (MMSE), which assessed features such as orientation, at-

tention, and recall; the Trail-Making Test B, which gauged executive function; and a category fluency test that asked participants to name as many animals as they could in 1 minute.

The MMSE identified poor function in 7%, the trail-making test B identified poor function in 30%, and category fluency identified poor function in 15%.

Natriuretic peptide levels in the blood specimens were measured using a test that detects N-terminal pro-B-type natriuretic peptide (NT-proBNP). Natriuretic peptide measurements were considered low if the level was less than 450 pg/mL, and high if the level was 450 pg/mL or greater. Among the 950 participants, 79% had a low level and 21% had a high level.

People with high levels of NT-proBNP had significantly worse results in all three tests, compared with those who had low levels. In the low level group, poor cognitive scores occurred in 5%, 23%, and 12% of subjects for the three cognitive function tests, respectively. In the high level group, 17%, 54%, and 26% of the subjects scored poorly on the three tests, respectively.

When the results were adjusted for age, education, body mass index, exercise, alcohol use, and smoking, participants with high NT-proBNP levels had significantly worse cognitive function scores on the MMSE and the Trail-Making Test B. Poor scores for category fluency were lower in people with high NT-proBNP in the fully-adjusted model, but the difference fell short of statistical significance relative to those with low NT-proBNP.

Dr. Daniels received research support from Roche Diagnostics, which markets an NT-proBNP assay. ■

## Alcohol and Substance Abuse Trends Upward as Boomers Age

BY RENÉE MATTHEWS

BETHESDA, MD. — Current trends in the increase in the number of Americans aged 65 years and older could have significant implications for managing substance abuse in this population.

By 2030, 20% of the population in the United States will be older than 65 years (currently, that percentage is 13) and in 2 years' time, the first wave of Baby Boomers will be eligible for Social Security. Both trends will place pressure on substance abuse prevention and treatment, Frederic C. Blow, Ph.D., said at the annual meeting of the Association for Medical Education and Research in Substance Abuse. The conference was jointly sponsored by Brown Medical School.

“The number of adults with substance abuse disorders is projected to double from [an annual average of] 2.8 million in 2002-2006 to 5.7 million in 2020,” he said. Elderly adults who abuse alcohol or drugs are more likely to have mental health comorbidities, especially depression, cognitive loss, or anxiety or sleep disorders, as well as other comorbidities such as heart disease, diabetes, or conditions that require treatment for pain.

Dr. Blow of the University of Michigan, Ann Arbor, said aging-related changes make older adults more vulnerable to the adverse effects of alcohol, so that even moderate amounts of alcohol can be riskier for elderly drinkers.

“They are three times more likely to develop a mental disorder with a lifetime diagnosis of alcohol abuse, with common dual diagnoses, including depression [20%-30%], cognitive loss [10%-40%], and anxiety disorders [10%-20%],” said Dr. Blow, who also noted an association between alcohol abuse and suicide.

When it comes to screening for alcohol abuse problems, one should ask direct questions, though in doing so it is preferable to frame the question so that it is linked to a medical condition and avoid using stigmatizing terms such as alcoholic, Dr. Blow advised.

“Every person over 60 should be screened for alcohol and prescription drug abuse as part of the regular physical examination—and screen or rescreen if certain physical symptoms are present or if the older person is undergoing major life transitions,” he added.

Among the tools that can be used for screening and assessing alcohol use in the elderly are the Alcohol-Related Problems Survey and its shorter version, the shARPS; the Computerized Alcohol-Related Problems Survey, which combines screening assessment with health education; and two that are “elder-specific”—the Michigan Alcoholism Screening Test—Geriatric Version and the Short Michigan Alcohol Screening Instrument—Geriatric Version.

In regard to drinking limits, older men should have no more than one drink a day on average, and older women should have less than one a day, Dr. Blow said.

Brief interventions focusing on physician lifestyle guidance or in-home motivational enhancement have both been found to reduce alcohol use in at-risk older adults and alcohol-related harm, and as a result, health care use. When it comes to treatment, however, age-appropriate treatment models are essential. “The current bias toward institution-based services conflicts with expressed preferences and needs of older persons,” said Dr. Blow.

Dr. Blow said that he had no financial disclosures. ■