Proton Pump Inhibitors Are Overused in the Elderly

BY MARY ELLEN SCHNEIDER

New York Bureau

HOLLYWOOD, FLA. — Many patients may enter nursing facilities on an unnecessary proton pump inhibitor, according to research presented at the annual symposium of the American Medical Directors Association.

In a study of 98 consecutive patients admitted to a skilled nursing facility, nearly two-thirds had been prescribed a proton pump inhibitor (PPI) at admission and half had no clear indication for the drug, Dr. Russell J. Rentler and his colleagues at the Lehigh Valley Hospital in Allentown, Pa., wrote in a poster.

The researchers performed a chart review of 98 patients admitted to a skilled nursing facility to determine how many were transferred from the hospital on an appropriately prescribed PPI. They defined an appropriate diagnosis–indicating PPI prescription as patients with gastroesophageal reflux disease (GERD), upper gastrointestinal bleeding, or peptic ulcer disease with or without bleeding, and presumptive treatment for patients with Hemoccult-positive stool or GI bleeding.

Of 98 patients, 63 were women. Most were aged 75 or older. About 48% were between 75 and 84 years, 43% were age 85 and older, and 9% were under age 74.

Of the 60 patients who were taking PPIs upon transfer to the nursing home, only 30 had an appropriate diagnosis under the study criteria. In addition, three patients with a diagnosis of GERD were not prescribed a PPI. Only three patients were prescribed an H_2 receptor blocker. In two of the patients, the researchers determined that the drug was appropriately prescribed.

Although side effects are infrequent on PPIs, the drugs can interact with the absorption of other medications. Studies also have shown a possible link between the use of PPIs for over a year and hip fracture. PPI use also may be a risk factor for *Clostridium difficile*–associated diarrhea, the researchers wrote.

Prescribing unnecessary medications also has a significant cost impact, researchers found. A commonly prescribed PPI, pantoprazole, costs about $116 for a 30-day supply. Eliminating the medication for 30 of 60 patients would result in savings of about $3,480 a month. Even with a less-expensive medication, such as Prilosec OTC, the savings from eliminating the drug among 30 of 60 patients would result in about $771 a month.

Part of the reason physicians prescribe PPIs so frequently may be defensive, Dr. Rentler said in an interview, because it is seen as preventing GI bleeding with few side effects. He suggested more education is needed for attending physicians about the limited benefit in prescribing PPIs as prophylaxis against gastric ulceration.

The researchers concluded that physicians may want to stop the drug and monitor the patient if it is not clear why a PPI was prescribed. ■

Algorithm Cuts Hospitalizations For Pneumonia Among Elderly

BY KATE JOHNSON

Montreal Bureau

MONTREAL — Hospitalization can be reduced by more than half among nursing home residents with pneumonia and other lower respiratory tract infections, with no compromise in morbidity or mortality, Dr. Mark Loeb said at an international conference on community-acquired pneumonia.

"Pneumonia is the most important reason why residents are transferred to hospital, but hospitalization can lead to functional decline, infection with multiresistant organisms, urinary tract infections, and delirium," said Dr. Loeb of the department of pathology and molecular medicine at McMaster University, Hamilton, Ont.

Reducing the rate of hospitalization in this population would not only avoid these potential hazards, but also reduce the overall burden on the health care system, an issue "which has particular relevance for pandemic planning," he noted at the conference, which was sponsored by the International Society for Chemotherapy. "Most pandemic plans tend to ignore the long-term care facilities—they basically focus on the acute care setting—but a very relevant issue is when there's a pandemic, what happens to nursing home residents? Do they get sent to the acute care hospital for management, or do we just manage them on-site?"

A study by Dr. Loeb and his colleagues randomized 680 nursing home residents with pneumonia or other lower respiratory tract infections to either usual care or treatment according to a clinical algorithm designed to encourage on-site care (JAMA 2006;295:2503-10). Patients were eligible to be treated on-site only if they could eat and drink and had stable vital signs; otherwise, they were transferred to a hospital. The clinical algorithm involved the use of oral antimicrobials, portable chest radiographs, oxygen saturation monitoring, rehydration, and close monitoring by a research nurse.

Only 10% of patients randomized to the algorithm were hospitalized, compared with 22% of the usual care patients, Dr. Loeb said at the meeting. Over the 30-day follow-up, there were no significant differences in quality of life scores, functional status, or mortality (8% in the algorithm group vs. 9% in the usual care group), but there was a marked reduction in cost associated with the treatment algorithm.

Although the initial cost was $87 more per resident in the algorithm vs. usual care groups (because of the upfront cost of oxygen and hydration therapy, mobile radiographs, and administration), this was offset by reduced professional billing, transportation, and hospitalization costs, he said.

Overall, the algorithm resulted in a saving of $1,016 (in U.S. dollars) per patient, based on the Canadian health care costs. Using U.S. prices, the saving was $1,517 (in U.S. dollars). The researchers estimated that the clinical algorithm could save $831 million annually among the approximately 1.5 million elderly residents in U.S. nursing homes.

Dr. Loeb and his coauthors acknowledged that health care funding in the United States could pose a barrier to the implementation of such an algorithm because, unlike in Canada, the costs of implementation would be shouldered by the nursing home, while the resulting savings would be realized by the hospital. ■

Previous Fall History and Age Over 80 Years Predict Future Falls

BY KERRI WACHTER

Senior Writer

WASHINGTON — Postmenopausal women with a prior fall or those 80 years or older have a significantly greater risk of a subsequent fall, according to data presented at an international symposium sponsored by the National Osteoporosis Foundation.

Specifically, investigators found that women with a prior fall had an odds ratio of 2.7 and those 80 years or older had a OR of 1.5 for a future fall, based on a analysis of potential risk factors among 66,134 women in the National Osteoporosis Risk Assessment (NORA) study, said Dr. Elizabeth Barrett-Connor, chief of epidemiology in the department of family and preventive medicine at the University of California at San Diego.

The NORA study enrolled over 200,000 community-dwelling, postmenopausal women between 1997 and 1999. Women had to be at least 50 years old without osteoporosis. They also could not have had a bone mineral density measurement in the previous year or be taking an osteoporosis drug. At baseline, BMD was measured at the heel, forearm, or finger. The women were followed up at 1, 3, and 6 years with surveys asking about fractures in the previous 12 months. At baseline, average age was 63 years. Most (91%) were white. The average T score was –0.78. In all, 38% reported at least one fall in the past year.

"History of a fall in the year before a query was a strong predictor for falls," said Dr. Barrett-Connor.

Potential risk factors included age, body mass index, a self-rating of health as being poor/fair, functional limitations, smoking, alcohol use, early menopause, height loss, peripheral T score, history of fracture after age 45, maternal history of fracture and/or osteoporosis, first-degree relatives with a history of fracture, estrogen therapy, calcium supplementation, use of medications (oral corticosteroids, thyroid medication, osteoporosis-specific drugs), history of depression, osteoporosis self-knowledge, and self-report of a fall within the previous 12 months at the year 1 survey. They also included arthritis, coronary artery disease, hypertension, diabetes, kidney/liver disease, cancers, memory problems, stroke, hyperthyroidism, hypothyroidism, epilepsy, poor vision, and poor hearing.

History of depression and history of stroke increased fall risk by more than 40%. An additional nine factors were identified that significantly increased fall risk by 9%-23%. The number of baseline risk factors was linearly associated with a risk of falling.

The study has several limitations. First, participants were volunteers and may not be a representative sample. Second, falls were self-reported and limited to a 12-month recall. That likely means that falls were underreported. Longitudinal attrition resulted in a slightly

Highest Risk of Falls at Age 80 Years or Older

Age (years)

Age (years)	Percent
50-54	38%
55-59	37%
60-64	36%
65-69	37%
70-74	41%
75-79	43%
≥80	49%
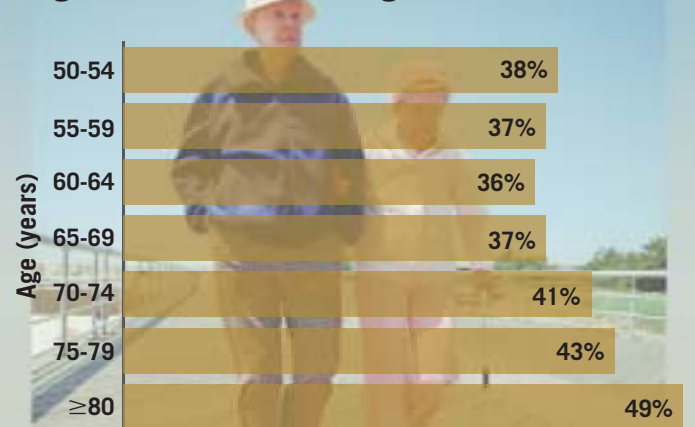
Note: Based on data from 66,134 women enrolled in the NORA study.
Source: Dr. Barrett-Connor

JULIE KELLER/ELSEVIER GLOBAL MEDICAL NEWS

younger and healthier analytic sample, which may mean falls were underestimated for the whole cohort. No data were collected on factors known to be tied to falls, such as prescription medications, environment, gait, balance, and strength. Lastly, the cause of falls was not known.

Dr. Barrett-Connor disclosed research support from several pharmaceutical companies. She consults for Merck & Co. Two collaborators are employees of Merck. ■