Acid Suppression Use Increases Hip Fracture Risk

BY ANN C. LOGUE
Contributing Writer

CHICAGO — Long-term use of proton pump inhibitors, histamine$_2$-receptor antagonists, and other acid suppressors increases the risk of hip fracture, Yu-Xiao Yang, M.D., reported at the annual Digestive Disease Week.

Physicians turning to a combination of NSAIDs and protein pump inhibitors (PPIs) in place of cyclooxygenase-2 (COX-2) inhibitors should be aware of this effect in patients who are at increased risk of osteoporosis, but they should not deny this therapy to patients with appropriate indications, said Dr. Yang of the division of gastroenterology at the University of Pennsylvania, Philadelphia.

PPIs interfere with calcium absorption, leading to an increased risk of hip fracture.

"Do patients with more than 1 year of PPI therapy have more hip fractures? Up until now, there has been no epidemiological study to address this," said Dr. Yang.

His conclusions came from a retrospective cohort study of 518,096 patients older than 40 years who were included in the U.K. General Practice Research Database between May 1987 and April 2002. Of these, 47,631 had more than 1 year of exposure to a PPI; the remaining 470,465 patients had no exposure to either a PPI or histamine$_2$-receptor antagonist (H2RA).

By looking at complete prescription information and validated hip fracture reports, the researchers discovered that taking a PPI long term was associated with an increased risk of hip fracture, with a relative risk of 1.9 associated with at least 1 year of PPI use.

The relationship had both a dose-response effect and a duration-response effect. H2RA use also increased the relative risk of hip fracture, but to a lesser extent, Dr. Yang noted.

In general, the PPI-exposed patients were sicker and took more medications, so

potential confounders were considered and adjusted for if they represented markers of comorbidity status or if they had an effect on the central nervous system that would increase the risk of falling, Dr. Yang noted in his presentation.

After adjustment for potential confounders, there was still a significantly increased risk of hip fracture among long-term PPI users. Significant confounders included antidepressant use and an increased number of office visits.

The study was limited by the assumption of 100% compliance with therapy and the lack of information on use of over-the-counter drugs, Dr. Yang said. ■

Weekly Bisphosphonate Compliance Suboptimal

WASHINGTON — Osteoporosis patients demonstrate greater compliance with weekly bisphosphonate therapy than with daily medication, but the numbers are still suboptimal, Deborah T. Gold, Ph.D., reported in a poster she presented at an international symposium sponsored by the National Osteoporosis Foundation.

Patients often resist taking bisphosphonates because of their inconvenient and complex dosing procedures, explained Dr. Gold of Duke University Medical Center, Durham, N.C.

Dr. Gold and her associates analyzed data on 214,060 women aged 50 years and older who received bisphosphonate therapy; the information had been collected for two health claims and retail pharmacy databases. Overall, weekly doses led to improved compliance after 1 year, compared with daily doses (44%-55% vs. 32%-40%), but 42%-67% of the patients on the weekly regimen had discontinued the medication within a year.

In addition, the level of compliance with either a weekly or daily dose was often too low to benefit many patients. Sufficient compliance was defined as a "medication possession ratio" of at least 80%. At most, only 53% of patients who received weekly medication were deemed compliant enough to derive antifracture benefits from it, which was still significantly better than the up to 40% rate of sufficient compliance among patients who received daily medication. Dr. Gold serves as a consultant for multiple pharmaceutical companies.

—Heidi Splete