Nexium, Prevacid, Prilosec, etc.
Long-Term Use Linked to Hip Fractures

A n increased incidence of hip fracture is associated with long-term use of the top-selling heartburn drugs like Nexium, Prevacid, and Prilosec. People on high doses of these prescription drugs called proton pump inhibitors (PPI) were the most likely to experience a hip fracture if they stayed on them for more than a year. This finding was published at the end of 2006 in the Journal of the American Medical Association.

PPIs are potent drugs that suppress stomach acid. Their long-term use is often advised as a preventive against the gastrointestinal bleeding that can occur with chronic use of drugs like aspirin and other non-steroidal, anti-inflammatory drugs taken regularly by people with arthritis and other chronically painful conditions.

PPIs are also heavily marketed for gastroesophageal reflux disease, otherwise known as frequent or severe heartburn, which occurs when stomach acid flows up into the esophagus causing a burning sensation in the chest and throat. Other PPIs include omeprazole (brand names: Losec, Zegerid), lansoprazole (Zoton, Inhibitol), pantoprazole (Protonix, Pantoloc), and rabeprazole (Rabecid, Aciphex).

For the new study that found a link between hip fracture and long-term PPI therapy, Yu-Xiao Yang, MD, and colleagues at the University of Pennsylvania, drew on the computerized medical record system in the United Kingdom. Their search was confined to the records of people older than 50 years who had been treated by their general practitioners between 1987 and 2003.

Users of PPI drugs and non-users were separated into two groups. There were 13,556 hip fracture cases in the database, which were compared to the medical records of a similar number of older people who did not suffer a hip fracture. The average age of the people in this study was 77 years. The findings confirm those of a similar study conducted in Denmark.

Dr. Yang and colleagues found that the odds of having a hip fracture increased with the duration of PPI therapy. A regular dose of PPI therapy for over one year was associated with a 44% increase in hip fracture risk; the risk of hip fracture among those on high-dose PPI therapy for more than one year was 2.6 times higher compared with those who never took PPIs.

In a telephone interview, Dr. Yang was asked for a rough estimate of what that means to the individual on long-term PPI therapy. “For every 336 people who took high doses of the drugs for more than a year, there was one extra hip fracture a year attributable to the drug,” he responded, stressing that this is just an extrapolation and the frequency would differ according to each person’s baseline risk of having a hip fracture without taking a PPI. It is difficult to be precise, Dr. Yang explained, because people in our study were on widely differing doses.

“PPIs are the best, most potent drugs in controlling [stomach] acid,” said Dr. Yang who is a gastroenterologist and assistant professor of medicine and epidemiology at the University of Pennsylvania. “They have saved people’s lives. People with ulcer disease can die from bleeding ulcers,” he said. “Their risks—hip fracture, pneumonia—can only be teased out after people begin using them for many years, and it has been 15 years since PPI first came on the market.” [A link between PPI use and pneumonia was found in a similar study conducted in The Netherlands.]

Though long-term PPI therapy is often needed, the clinical trials required by the FDA before the drugs went on the market usually last only several months and 6-12 months at the longest. The written information, produced by the drug company with
Nexium, Prevacid, Prilosec, etc. continued

FDA oversight and aimed primarily at physicians, clearly advises short-term use. In the case of Nexium for the “healing of erosive esophagitis,” the drug should be limited to no more than four to eight weeks of treatment. As for the use of Nexium to reduce the risk of drug-induced gastrointestinal damage, “controlled studies do not extend beyond six months,” according to the FDA-required written information. In the case of Prevacid, the FDA-required trial for this usage lasted only 12 weeks.

How can people protect themselves from the adverse effects of long-term PPI therapy? “Determine whether you are benefiting from the drug,” suggested Dr. Yang. “If you can get by with a lower dose, then do it.” But if you need a high dose, say, to prevent gastrointestinal bleeding from regular use of a non-steroidal, anti-inflammatory drugs [e.g., aspirin, ibuprofen and Celebrex], then make sure you’re getting enough calcium in your diet, or with a supplement called calcium carbonate, and vitamin D₃. Take the supplements with a meal because if you take them on an empty stomach, they won’t be absorbed. Calcium malabsorption is what we think is the mechanism [for the increase in hip fracture among the people on long-term PPI therapy].” The men in this study on long-term PPI therapy had about twice the risk of hip fracture as did the women. Dr. Yang and colleagues could only guess at the reason—women are more likely to take regularly calcium supplements once they pass menopause.

The study was funded by the National Institutes of Health and the American Gastroenterological Assn./GlaxoSmithKline Institute for Digestive Health. GSK makes several calcium carbonate products.

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