Hip Fractures Constant Despite Tranquilizer Cuts

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Contributing Writer

Reduced use of benzodiazepines in elderly patients does not necessarily result in a lower incidence of hip fracture, according to a study by Anita Wagner, Pharm.D., of the department of ambulatory care and prevention at Harvard Medical School, Boston, and her colleagues.

The researchers found no significant difference in the incidence of hip fracture over a 3-year period between elderly Medicaid recipients in New York, where benzodiazepine use decreased sharply during the study period, and in New Jersey, where benzodiazepine use remained constant.

"Benzodiazepines may not actually be associated with hip fractures, or at least not to the extent reported in some studies," Dr. Wagner and her colleagues wrote (Ann. Intern. Med. 2007;146:96-103).

The Prescription Drug Improvement and Modernization Act that went into effect in January 2006 further restricted benzodiazepine prescription coverage for Medicare recipients. Federal policy makers may have expected that reduced benzodiazepine access would decrease hip fracture risk and thereby improve quality of life in the elderly.

"According to our analyses, this expectation may not be justified," Dr. Wagner and her associates concluded.

Earlier studies had suggested that benzodiazepine use might increase the risk of hip fracture in elderly patients, with postural imbalance associated with benzodiazepine use possibly leading to more falls and hip fractures in a population already at risk for hip fracture. But studies seeking to document a direct link have yielded conflicting results.

Since 1989, physicians in New York have been required to use serially numbered, triplicate forms for benzodiazepine prescriptions, with the third copy to be forwarded by the pharmacy to the state health authorities.

The study compared the risk of hip fractures in 1988 cohorts of 51,529 elderly Medicaid recipients in New York and 42,029 in New Jersey, where the prescription policy was unchanged.

In New York, the change in prescription policy led to an abrupt decline in benzodiazepine use, decreasing from about 40% of Medicaid enrollees each month in the 12-month period before the policy change to about 15% during the 21 months after the policy change. Benzodiazepine use among New Jersey Medicaid enrollees did not change significantly.

The most likely explanation for the lack of decrease in hip fractures is simply that benzodiazepine use does not increase the risk of hip fracture in the elderly.

In New York, a total of 199 hip fractures occurred in female benzodiazepine recipients over the 33-month study period, with an increase in hazard rate from 53 per 100,000 enrollees before the policy change to 72 per 100,000 enrollees after the policy change.

In New Jersey, 135 hip fractures occurred in female benzodiazepine recipients in the study period, with a similar increase in hazard rate from 42 per 100,000 enrollees to 58 per 100,000 enrollees. A total of 30 hip fractures in male benzodiazepine recipients in New York occurred over the study period, with the hazard rate increasing from 38 per 100,000 enrollees before the policy change to 54 per 100,000 enrollees after the policy change. New Jersey results were similar, with a total of 27 hip fractures among male benzodiazepine recipients and an increase in hazard rate from 48 per 100,000 enrollees before the policy change in New York to 52 per 100,000 enrollees. In each case, hazard rates among benzodiazepine nonrecipients were similar.

No evidence suggests that the study results were skewed by disproportionate reductions in benzodiazepine use among different patient subgroups. After the policy change, there was no significant increase in the prevalence of higher-dose benzodiazepine prescriptions, and the increase in nonbenzodiazepine sedatives was modest.

The most likely explanation for the lack of decrease in hip fractures following decreased benzodiazepine use is simply that benzodiazepine use does not increase the risk of hip fracture in the elderly, Dr. Wagner and her colleagues wrote. ■

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