

Long-term use of osteoporosis drugs associated with unusual fractures

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(PhysOrg.com) -- Most hip fractures due to osteoporosis follow a pattern: the patient falls, and the bones around the hip joint shatter into pieces. But 2 to 3 years ago, orthopedic surgeons began seeing an increase in unusual breaks that snapped the thighbone in two, often with no warning.

Such "atypical femur fractures" are associated with long-term use of a widely prescribed class of drugs for osteoporosis, an expert panel led by Elizabeth Shane, MD, professor of medicine at the College of Physicians and Surgeons, has now found. In the most comprehensive scientific report to date on the topic, the task force, convened by the American Society of Bone and Mineral Research, reviewed all available case reports of "atypical femur fractures" in the United States and found that 94 percent of patients (291 out of 310 cases) had taken the drugs, most for more than five years.

The finding, as well as other data from a large U.S. healthcare system, indicates a strong association between the drugs, called bisphosphonates, and atypical fractures, Dr. Shane says, though she emphasizes that the fractures are rare.

"Less than 1 percent of hip and thigh fractures are atypical, and millions of people have taken bisphosphonates and have not had these fractures," Dr. Shane says. "We don't want people to be afraid and stop taking their medications. For people with [osteoporosis](#), the drugs' benefits in preventing common, but equally devastating, fractures far outweigh the risk of a rare, atypical one."

Health professionals and patients should be alert to the possibility of atypical femur fractures, though, and the ASBMR task force calls for changes in the drugs' labels to raise awareness about the fractures and list their warning signs.

"A dull or aching pain in the groin or thigh, especially in a patient who has taken

bisphosphonates for five years or more, should raise concern for an impending atypical femur fracture," Dr. Shane says. Among the cases reviewed by the task force, more than half of patients reported groin or thigh pain for weeks or months before the fracture occurred. More than a quarter of patients with one break also later suffered a fracture in their other leg. Therefore, it is crucial for physicians to X-ray both femurs when a patient breaks a leg or shows signs of an impending fracture.

The task force also is calling for a change in the labeling for bisphosphonates to reflect the association with atypical fractures and their warning signs, better diagnostic codes to improve the quality of case reports, and an international registry of patients to track cases and facilitate future research.

Though the association between [bisphosphonates](#) and atypical fractures is strong, Dr. Shane says it is not certain that the drugs directly cause the breaks. The drugs may make the bone more brittle with long-term use, or other drugs taken concurrently may contribute in some patients. More research is needed to determine what causes the breaks and who is at highest risk.

The task force's full report was published online in the *Journal of Bone and Mineral Research*.

Provided by Columbia University

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