BONE UP/date

OREGON OSTEOPOROSIS CENTER

Special Edition: *Bisphosphonates and Unusual Fractures*

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There have been recent reports in medical literature and in newspapers of unusual fractures occurring in patients on long-term treatment with bisphosphonates, particularly alendronate (Fosamax®). Most of these fractures have occurred in the middle of the femur (thigh bone). Because these breaks occur straight across the bone, they are often referred to as "chalk stick fractures." These are not the type of fracture normally seen in patients with osteoporosis. Many of the patients have had pain in their thigh or these groin regions for some time before the fractures occur.

Exactly what the relationship is with the osteoporosis drug treatment is not known. In most cases, patients have been receiving the osteoporosis treatment for several years. In reports where bone mineral density (BMD) has been reported, the values are often normal or even high in the hip area. Since alendronate is usually prescribed for patients with osteoporosis, exactly why these patients were taking the drug is unclear.

It seems that these fractures occur very rarely. Only about 100 cases have been reported from around the world. In patients with osteoporosis, one hip fracture and one to five spine fractures are prevented with alendronate therapy over three years among 100 patients receiving treatment. This means that the chance of alendronate treatment preventing a fracture from occurring is far greater than the chance of having one of these unusual fractures.

I met with a group of experts from around the country earlier this summer, and we made plans to learn more about how often these unusual fractures occur. We will also try to learn whether we can identify a special or certain group of patients who might be more likely to experience these fractures. The unusual fractures are similar to those seen in rare cases of a genetic disorder called osteopetrosis, the "brittle bone disease" of adults. These patients have a deficiency in the number of or activity of osteoclasts (bone dissolving cells) and are unable to dissolve away old, damaged bone. It is very probable that a small number of otherwise healthy people have a very mild but undetected form of this problem. These patients would be very much more likely to develop the unusual fractures

Advice: for patients taking a bisphosphonate drug for osteoporosis:

1. If you have taken alendronate, risedronate (Actonel®), or ibandronate (Boniva®) for more than five years, talk to your doctor to see whether it is reasonable for you to continue taking the medication. Patients thought to be at high risk for fractures should probably continue treatment, while alendronate is often stopped after five years in those at moderate or low risk for fracture. It is not known what happens to bone health after stopping risedronate or ibandronate treatment.

2. If you are taking any of these drugs and experience new pain in your leg or hip region that lasts for several days, stop the medicine and talk to your doctor about your symptoms. X-rays or other tests may be needed to know whether the symptoms are due to stress fractures of the femur bone.

Conclusion: We may learn that these unusual fractures really are the consequence of long-term treatment with alendronate and other drugs of that class. Because these fractures seems to occur so infrequently and only after treatment for several years, it is my opinion that concern about these unusual fractures should not be a reason to avoid treatment with alendronate or other bisphosphonates in adults with osteoporosis and who are at moderate or high risk of fracture.

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