Atypical Fractures and Bisphosphonates – Information for Patients

There have been a number of news reports on “atypical” femoral fractures in the past few months suggesting that some osteoporosis medications are causing fractures rather than preventing them.

The major problem in osteoporosis is fractures (broken bones). Without proper treatment, patients with osteoporosis are more likely to fracture. The most common osteoporotic fractures are those of the hip, spine, wrist and shoulder. Hip fractures occur in the upper part of the thigh bone - a bone which is called the femur. So a hip fracture is also called a femoral fracture. Femoral (or hip) fractures are commonly associated with osteoporosis and often occur before any treatment has been started. In fact, the occurrence of a hip fracture is one of the ways in which osteoporosis can be diagnosed.

What are “typical” femoral fractures?

A “typical” femoral fracture:

1. Occurs in a person who has osteoporosis.
2. Usually occurs after a fall when the hip breaks as a result of hitting the ground.
3. Some patients with osteoporosis may break one hip and some time later, may fall again and break the other hip.
4. Has no advance warning signs – the hip doesn’t hurt before it breaks.
5. Occurs very high up on the femoral bone, very close to the hip joint.
6. May happen to a patient before or after he/she starts taking osteoporosis medications. Some patients break a hip because they have undiagnosed (and untreated) osteoporosis. Others are on treatment for their osteoporosis, but we do not have perfect drugs so sometimes the medication fails to prevent the hip from breaking when the person falls.
What are “atypical” femoral fractures?

An “atypical” femoral fracture:

1. The fracture can occur without a fall. The femur can just snap and then the person falls.
2. Pain is often a warning sign. In one study, seventy percent of the patients who suffered “atypical” femoral fractures reported pain in the thigh or in the groin which had been present for weeks or months before the fracture.
3. The fracture occurs lower down from the hip, closer to the middle of the femur.
4. Sometimes, x-ray findings can be seen even before the femur breaks. In about 25% of cases, both of the femurs show x-ray changes suggestive of developing “atypical” femoral fractures.
5. In most of the “atypical” fracture cases that have been seen, the patients are on bisphosphonate medications (usually for longer than 5 years). This is what first made doctors suspect that there may be a connection between bisphosphonates and “atypical” femoral fractures.

Bisphosphonates are a very common family of medications used to treat osteoporosis. They include alendronate (Fosamax/Fosavance), risedronate (Actonel) and zoledronic acid (Aclasta).

How does an “atypical” femoral fracture happen?

Try to think of an “atypical” femoral fracture as a crack in your windshield. It starts off as a little tiny crack and then very slowly works its way across. That little crack can cause pain. Slowly, the crack makes its way around the bone and when it reaches a certain point – SNAP – the weakened bone breaks for no apparent reason.

Currently, we don’t understand why these fractures are happening in some patients. Is it due to their osteoporosis? Is it related to the treatment and, in particular, to bisphosphonates, especially when used for many years? We don’t know. We also don’t know why the “atypical” fractures occur only in the femoral bone.

I’m on a bisphosphonate. So what do I do now?

Before you throw away your osteoporosis medication, you need to know ALL the facts. “Typical” femoral fractures due to osteoporosis are very common. The great majority of hip fractures are of the “typical” kind. “Atypical” femoral fractures, on the other hand, are rare events and account for less than 1% of all femoral fractures.

If you have osteoporosis and are at high risk for fracture, you are much more likely to suffer a “typical” femoral fracture if you are not treated than you are of ever getting one of these rare “atypical” femoral fractures if you are on medication. The bottom line is, if you have an
increased risk of fracture, the benefits of bisphosphonates far outweigh the risks. In other words, bisphosphonates still remain very good medications for those who need them.

It is always wise to monitor your own health. If you are on a bisphosphonate because you are at increased risk of fracture, you should be aware of the warning signs of a possible “atypical” fracture. If you develop pain in your thigh or groin that is persistent for weeks, make sure you mention this to your doctor. Some simple tests (regular x-rays or a special type of bone scan) may show whether or not you are developing one of these “atypical” femoral fractures. Sometimes the problem can be diagnosed before the bone breaks.

While there are many unanswered questions about “atypical” femoral fractures, we can still draw several conclusions:

- “Atypical” fractures of the femur are rare
- Bisphosphonates are still an effective treatment for osteoporosis.
- The benefits of taking these medications far outweigh the risks in most patients with osteoporosis.
- If you have concerns, you should discuss them with your health care provider(s).
- More research is needed in this area.

You can count on Osteoporosis Canada to bring you scientifically credible, objective news about any new developments in the field of osteoporosis. Finally, please remember to talk to your doctor before making any changes in your medication.