Atypical Femur Fractures and Osteoporosis Medications

A recent study has renewed worries among doctors and their patients about a rare but serious thigh fracture (called atypical femur fracture or AFF). Unlike osteoporotic or other low trauma fractures, researchers are connecting AFFs with long term use of certain osteoporosis drugs. This treatment “backfire” is preventable if you know the reasons and early signs.

Now more than ever, taking an osteoporosis drug for many years to reduce the risk of certain fractures must be weighed against its possible risks.

WHAT IS AN AFF?
An atypical femur fracture (AFF) is called “atypical” because of the location and conditions of the break. AFFs start as a weakening of the outer rim of the femur below the hip area. The tiny crack that occurs is a kind of stress fracture, but unlike stress fractures in people who overdo exercise training, this fracture occurs with regular life activities. An AFF is also different from common osteoporosis fractures that happen after a single injury – like a fall; AFFs develop slowly from repeated, normal life activities. In about 2 of the 3 people who get an AFF, there are warning signals over many weeks to months--- typically aching pains in the groin or thigh. If nothing is done about the early warning signs, the crack continues to grow and eventually the thigh bone breaks in two.

HOW ARE OSTEOPOROSIS DRUGS RELATED TO AFF?
AFFs have been reported in people using certain osteoporosis (OP) drugs that reduce bone turnover. The list includes alendronate (Fosamax), risedronate (Actonel, Atelvia), ibandronate (Boniva), zoledronate (Reclast), and denosumab (Prolia). Although some people get an AFF without ever taking one of these OP drugs, there are signs that long term use of these drugs is a major cause of the problem. In nearly 85% of AFF cases, an OP drug was being used, usually for longer than 4 years. Also, the AFF risk seems to double for every extra year of OP drug use. However, when people stop using the OP drug, the risk is cut in half for each following year.

In particular, Asian women seem to be at higher risk of an AFF when they take an OP drug.

What should you do?
For women at high risk of having an osteoporotic fracture, there is a net benefit of using an OP drug. You should speak with your doctor about a “drug holiday” after 4-5 years of

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1 2014-09-04 Schilcher_Risk of Atypical Femoral Fracture during after Bisphosphonate Use_NEJM 371(10) 974-976.pdf
For women at low risk of having an osteoporotic fracture, harm is likely to outweigh benefit. This is because AFFs typically occur in younger, healthy women, who are not likely to break a bone from osteoporosis in the near future.

The biggest challenge is for women who are at moderate risk of having an osteoporotic fracture. Some might benefit from therapy and some may not. There are many factors that need to be weighed and are best discussed with a health care provider.

How do you reduce your risks from treatments?
In almost all of the reported AFF cases, the patients took the OP drug for four or more years. Because of the strong link to long term use, the FDA has said that OP drugs should not be taken for more than 4-5 years, unless there is a strong reason to continue. Anyone at high risk of breaking a bone should continue.

Summary: osteoporosis treatment benefits versus risks
- All women should take steps to lower fracture risks without a drug, including reducing fall risk, maintaining a healthy activity level and optimal vitamin D level, and getting adequate nutrition.
- Women at high risk of fracture should start or keep taking a drug for osteoporosis.
- Women at moderate risk need to discuss their particular health situation with your health care provider before making a treatment decision.
- Women at low risk should probably NOT be treated with OP drugs.
- Experts currently recommend stopping bisphosphonates after 3-5 years of use for a “holiday” that can last 1-or-more years (depending on the bisphosphonate used). Speak with your health care provider about your fracture risk before stopping any drug.
- Are you having an aching pain in your thigh or groin? If you are taking an OP drug, call your doctor to schedule an MRI or CT of the femur shaft (thigh bone). Most women who eventually have an AFF will have signs of a stress fracture that may show up on X-ray, but is best detected on CT or MRI well before the bone breaks completely.

Know your fracture risk?
Learning your fracture risk can help you weigh the risks of treatment versus the benefits and can also help you understand factors that you may be able to control that can lower your risk without OP drugs.