

Popular osteoporosis drugs triple risk of bone necrosis

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A University of British Columbia and Vancouver Coastal Health Research Institute study has found that a popular class of osteoporosis drugs nearly triples the risk of developing bone necrosis, a condition that can lead to disfigurement and incapacitating pain.

The research is the largest study of bone necrosis and bisphosphonates, a class of drugs used by millions of women worldwide to help prevent bone fractures due to osteoporosis. It is also the first study to explore the link between bone necrosis and specific brands of bisphosphonates, such as Actonel, Didrocal and Fosamax. Researchers found that all three brands had similar outcomes.

Bone necrosis, a relatively rare disease diagnosed in approximately 1 in 20,000 people per year, leads to permanent loss of blood supply to the bones. Without adequate blood supply, the bone tissue dies and causes the bone to collapse. The disease primarily affects shoulders, knees and hips at the joints, causing severe pain and immobility.

Published online by the *Journal of Rheumatology* today, the findings follow a recent U.S. Food and Drug Administration alert about bisphosphonates that highlighted the possibility of severe and sometimes incapacitating bone, joint and/or muscle pain in patients taking the drugs. (To view the FDA alert, visit: <http://www.fda.gov/cder/drug/infopage/bisphosphonates/default.htm>.)

According to the American Dental Association, more than 190 million

prescriptions have been written for bisphosphonates worldwide. The drugs are promoted in direct-to-consumer advertisements on U.S. television stations.

“The message for women taking these medications is to pay attention to your pain,” said principal investigator Dr. Mahyar Etminan of the Centre for Clinical Epidemiology and Evaluation at UBC and VCHRI. “Given the widespread use of these drugs, it is important that women and their doctors know the risks that come with taking them.”

Etminan cautions that bisphosphonate use may increase in the future as the possible link between estrogen use and breast cancer prompts women to switch from estrogen therapy to bisphosphonate therapy to prevent osteoporotic bone fractures. Another reason may be the availability of new bisphosphonates that come in once-a-month or once-a-year doses.

The epidemiological study, a collaboration between UBC, VCHRI and McGill University, is based on the health records of 88,000 Quebec residents from 1996 to 2003. The team undertook the research after academic papers began linking necrosis of the jaw with the use of bisphosphonates.

“This is particularly important work,” said Dr. John Esdaile, professor and head, Rheumatology, UBC and scientific director, Arthritis Research Centre of Canada located at VCHRI's Centre for Hip Health.

“Although the osteonecrosis side-effect is rare, the use of the bisphosphonates is very common,” Esdaile adds. “People taking bisphosphonates are now hearing about the potential side-effects, and this study result will permit physicians to better inform them what the order of magnitude of the risk may be.”

Source: University of British Columbia

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