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New study shows zoledronic acid is not effective for knee osteoarthritis

New research from the University of Tasmania's Menzies Institute for Medical Research has found that a commonly used osteoporosis medication, zoledronic acid, does not alleviate knee osteoarthritis symptoms such as pain nor improve function, and doesn't slow cartilage loss.

The study was led by Professor Graeme Jones, leader of the Musculoskeletal Health and Disease theme at the Menzies Institute. It included researchers from Monash University, the University of Adelaide and the University of Sydney.

Osteoarthritis, the most common form of arthritis, causes pain, reduced mobility and loss of independence and often leads to expensive hip and knee replacement surgery.

The ZAP2 (Zoledronic Acid for Osteoarthritis Knee Pain) trial of 223 participants from four centres around Australia is the largest study in the world to look at whether the commonly used osteoporosis medication, zoledronic acid, can slow cartilage loss in knee osteoarthritis.

Results from this two-year study were published in the prestigious journal *JAMA* (The Journal of the American Medical Association) and found there was little difference between the placebo and zoledronic acid groups.

Associate Professor Dawn Aitken, co-lead author on the paper, said that zoledronic acid is a potent medication that is successfully used to treat other bone-related diseases, including osteoporosis.

"We designed this large trial to test zoledronic acid in a group of osteoarthritis patients who we thought would have the best chance at benefiting from the drug. Disappointingly we found that zoledronic acid was not effective – it did not slow cartilage loss or help to improve patients' pain and function.

"Altogether, our findings do not support the use of zoledronic acid in the treatment of knee osteoarthritis," Associate Professor Aitken said.

The Director of the Menzies Institute, Distinguished Professor Alison Venn, said the ZAP2 trial was an important study for the almost 10% of Australians living with osteoarthritis.

“While it found that this osteoporosis medication did not successfully treat osteoarthritis, the process of elimination takes us a step closer to finding better treatments for people with the condition.”

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