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Drug treatment to prevent hip fracture is neither viable nor cost effective

Current strategy is inefficient and associated with considerable harms, say experts

The current focus on drugs to prevent hip fractures is neither viable as a public health strategy nor cost effective, argue an international team of researchers in **The BMJ** this week.

Professor Teppo Järvinen and colleagues say drug treatment “can achieve at best a marginal reduction in hip fractures at the cost of unnecessary harms and considerable waste of monetary resources.” The article is part of The BMJ’s Too Much Medicine campaign - to highlight the threat to human health and the waste of resources caused by unnecessary care.

Worldwide, about 1.5 million hip fractures occur each year. They impose an enormous burden on healthcare resources and, with a growing elderly population, their incidence is predicted to rise.

Before the late 1980’s, osteoporosis was diagnosed after a bone fracture. But in 1994, a new definition - based on low bone mineral density - was introduced to identify people at increased fracture risk who were likely to benefit from bone building drugs.

Fracture risk calculators now classify 72% of US white women aged over 65 years and 93% of those aged over 75 years as candidates for long term drug treatment. Yet rates of hip fracture have fallen steadily in most Western countries, regardless of access to drugs, say the authors.

Most hip fractures, they say, have little to do with osteoporosis, but rather are caused by falls in frail older adults.

Evidence on cost effectiveness of drug treatment is completely lacking, they add, while the focus on drug treatment means that feasible alternative strategies, such as physical activity, are overlooked.

They also point to the harms from overdiagnosis and treatment, including the psychological burden associated with a disease label, and adverse effects of drug treatment such as nausea, vomiting, and serious bone complications (osteonecrosis of the jaw and drug-induced pathological fractures of the thigh bone).

Recent evidence also challenges the justification for the general use of calcium and vitamin D supplements to prevent fractures, they write.

The dominant approach to hip fracture prevention “is neither viable as a public health strategy nor cost effective,” conclude the authors.

“Pharmacotherapy can achieve at best a marginal reduction in hip fractures at the cost of unnecessary psychological harms, serious medical adverse events, and forgone opportunities to have greater impacts on the health of older people,” they add. “As such, it is an intellectual fallacy we will live to regret.”

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Analysis: Overdiagnosis of bone fragility in the quest to prevent hip fracture

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