

OSTEOSCOOP

News on current events in osteoporosis and rheumatology

Association between 5- α reductase inhibition and risk of hip fracture

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For more than 15 years, 5- α reductase inhibitors, which block the conversion of testosterone to dihydrotestosterone, have been used in the treatment of benign prostatic hyperplasia (BPH). Short-term studies show no effects of these agents on bone metabolism, but long-term data are not available. This study [1] aimed to assess the association between use of 5- α reductase inhibitors (eg, finasteride) for BPH and occurrence of hip fracture. It is a population-based case-control study using data from Kaiser Permanente Southern California, a managed care organization with more than 3 million members. Case patients included 7076 men 45 years and older with incident hip fracture from 1997-2006. Control patients were 7076 men without incident hip fracture, optimally matched at a 1:1 ratio to case patients on age and medical center. Electronic information on pharmaceutical use was used to identify use of finasteride from 1991 forward.

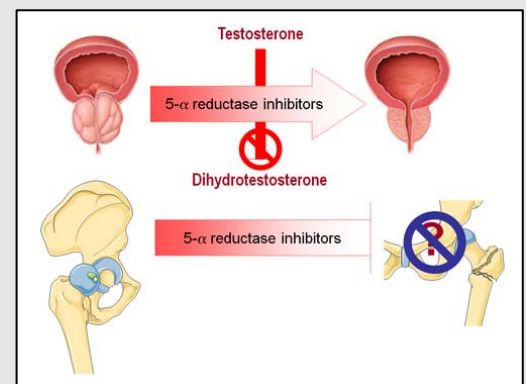
Overall, 2547 (36%) and 2488 (35%) case and control patients, respectively, had a diagnosis of BPH ($P=.30$), and 109 (1.5%) and 141 (2.0%) of case and control patients, respectively, had been exposed to finasteride prior to the index date (matched odds ratio, 0.77; $P=.04$). There was no suggestion of a dose-response relationship between exposure to 5- α reductase inhibitors when the exposure was stratified into tertiles of total exposure ($P=.12$). By contrast, there was a slightly higher prevalence of α -blocker use in case vs control patients (32% vs 30%, respectively; $P=.04$).

In conclusion, exposure to 5- α reductase inhibitors was not associated with increased risk of hip fracture. The reduction in risk observed with exposure to 5- α reductase inhibitors and the modest increase in risk associated with exposure to α -blockers require replication and warrant further investigation.

1. Jacobsen SJ et al. *JAMA*. 2008;300:1660-1664.

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Benign prostate hyperplasia has been treated for a long time with 5 alpha reductase inhibitors which prevent transformation of testosterone into dihydrotestosterone. The question of whether this treatment affects the incidence of hip fracture has been addressed in a population-based case-control study involving more than 14 000 men aged 45 and older. This study clearly shows that this treatment is not associated with an increased risk of hip fracture. On the contrary, a slight reduction of risk was observed, which has to be further studied.



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