Medication therapy for attention deficit/hyperactivity disorder is associated with lower risk of fracture: a retrospective cohort study.

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Abstract
The impact of pharmacotherapy for attention deficit/hyperactivity disorder on fracture risk has not been well studied. In this retrospective cohort study, medication therapy was associated with lower fracture incidence. Further studies are needed to better characterize the short-term and long-term effects of these medications on bone health and fracture risk.

INTRODUCTION:
Attention deficit/hyperactivity disorder (ADHD) is associated with increased risk of bone fractures. The impact of pharmacotherapy with either stimulant or non-stimulant medications on fracture risk has not been well characterized. We performed a study to compare fracture incidence in ADHD patients treated with stimulant or non-stimulant medications vs. no pharmacotherapy.

METHODS:
In this retrospective cohort study, data were extracted from a large electronic medical record. A total of 10,066 subjects with ADHD, 40 years or younger, were included. We extracted data regarding stimulant and non-stimulant ADHD medications, corticosteroids, fracture data, demographic data, and diabetes history.

RESULTS:
A total of 1015 patients (10 %) sustained fractures. Multivariable Cox proportional hazard analysis indicated that compared to those with two or more prescriptions for an ADHD medication, individuals without documented medication therapy had a significantly increased hazard of fracture (hazard ratio [HR] 3.9, 95 % confidence interval [CI] 2.6-5.9). However, the hazard ratio for stimulant vs. non-stimulant medication (HR 0.92, 95 % CI 0.60-1.4) was not statistically significant.

CONCLUSIONS:
Three times as many patients with no documented ADHD medication prescriptions suffer a fracture compared to patients with a history of two or more prescriptions for an ADHD medication. Treatment and adherence are thus important to prevent fracture in this population.