**ETIDRONATE, CALCIUM, OR BOTH DID NOT REDUCE FRACTURE RATES IN PATIENTS WITH ASTHMA RECEIVING GLUCOCORTICOID TREATMENT**


Clinical impact ratings GP/FP/Primary care ★★★★★★★ IM/Ambulatory care ★★★★★★★ Rheumatology ★★★★★★★ Respirology ★★★★★★★

In patients with asthma receiving long term glucocorticoid treatment, does etidronate, calcium, or both reduce fracture rates?

**METHODS**

**Design:** randomised controlled trial.

**Allocation:** concealed.

**Blinding:** blinded (data analyst)†.

**Follow-up period:** 5 years.

**Setting:** 40 chest clinics in the UK.

**Patients:** 352 men and women 50–70 years of age (mean age 60 y, 58% men) who were outpatients; randomisation was violated in 349 patients. Patients had asthma and had been taking regular oral or inhaled glucocorticoids, or both, for ≥1 year. Only postmenopausal women were included. Women with a hysterectomy were excluded.

**Interventions:** patients were stratified by level of glucocorticoid exposure and allocated to oral etidronate, 400 mg/day for 2 weeks every 3 months (n = 81); calcium carbonate, given as 500 mg/day for 2 weeks every 3 months (n = 85); etidronate plus calcium, given in the same doses except when calcium was omitted for the 2 week etidronate treatment period (n = 88); or no treatment (n = 95).

**Outcomes:** new vertebral and non-vertebral fractures.

**Patient follow up:** 99% (intention to treat analysis).

†See glossary. Information provided by author.

**MAIN RESULTS**

The groups did not differ for mortality (10%, 24%, 16%, and 16% in the etidronate only, calcium only, etidronate plus calcium, and no treatment groups, respectively); symptomatic fractures (6%, 8%, 10%, and 7%, respectively); or symptomatic fractures, semi quantitative vertebral fractures, or both (16%, 18%, 16%, and 20%, respectively). Groups receiving etidronate compared with groups not receiving etidronate, and groups receiving calcium compared with groups not receiving calcium, did not differ for rates of any fractures, respectively (table).

**CONCLUSION**

In patients with asthma receiving long term glucocorticoid treatment, etidronate and calcium used alone or combined did not reduce fracture rates.

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