primary studies - published RCT

Randomised double blind placebo controlled trial investigating the effect of calcium and vitamin D supplementation on bone mineral density and bone metabolism in adult patients with cystic fibrosis.

Code: PM15698940 **Year:** 2004 **Date:** 2004 **Author:** Haworth CS

Study design (if review, criteria of inclusion for studies)

RCT

Participants

Patients were invited to participate if they had a BMD Z score of -1 or less in the lumbar spine, proximal femur or distal forearm. 15 CF patients and 15 controls

Interventions

calcium 1 g+vitamin D 800 IU or placebo daily, in addition to their regular vitamin D supplements (900 IU/day).

Outcome measures

BMD and bone biochemical markers were measured before and after 1 year of treatment.

Main results

After 12 months, the treatment group showed a reduced rate of bone loss compared with the control group in the lumbar spine (mean difference 1.9% [CI -0.9% to 4.6%]), total hip (mean difference 0.7% [CI -2.2% to 3.5%]) and distal forearm (mean difference 1.7% [CI -2.2% to 5.5%]), but these changes did not reach statistical significance. There was also a trend towards a reduction in bone turnover in the treatment group.

Authors' conclusions

Calcium and vitamin D supplementation reduced the rate of bone turnover and bone loss in adult patients with cystic fibrosis, but these changes did not reach statistical significance. These data suggest that a longer term trial of this simple intervention would be justified.

http://dx.doi.org/10.1016/j.jcf.2004.08.002

See also

J Cyst Fibros. 2004 Dec;3(4):233-6.

Keywords

Adolescent; Adult; Bone Density Conservation Agents; Bone Diseases; Calcium; Oral; pharmacological_intervention; placebo; Supplementation; vitamins; Vitamin D; Vitamins; Minerals;