

BONE

Antifracture efficacy of growth hormone —confirmation at long last

Growth hormone (GH) treatment reduces the long-term risk of fractures in women with postmenopausal osteoporosis, according to a new study.

The researchers, led by Emily Krantz, report the results of a 10-year follow-up of a double-blind, placebo-controlled trial at Sahlgrenska University Hospital, Gothenburg, Sweden, in which 80 women with postmenopausal osteoporosis who were receiving ongoing hormone-replacement therapy were randomly assigned to receive GH (1.0IU per day or 2.5IU per day) or placebo for 3 years; all women received calcium and vitamin D during the trial and follow-up. 120 age-matched controls were followed in parallel.

At the 10-year follow-up, the incidence of fractures in the whole osteoporosis group decreased from 56% to 28% ($P=0.0003$) while that in the control group increased from 8% to 32% ($P=0.0008$); positive effects on BMD and bone mineral content

were also observed. “To our knowledge, this study is the largest and longest controlled study of GH treatment for postmenopausal osteoporosis,” explains Krantz. “GH treatment had a sustained effect on reducing patients’ fracture risk 7 years after cessation of treatment.”

The findings could renew interest in GH as a therapy for osteoporosis; however, GH treatment is expensive, requires daily injections and monitoring by a specialist clinic. “If GH is to be a realistic treatment as an addition to calcium, vitamin D and bisphosphonates for severe manifest osteoporosis, a long-acting preparation given weekly or monthly is needed,” explains Krantz.

David Holmes

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