

Teriparatide weakens alendronic acid's case in osteoporosis

Teriparatide appears to be more effective than alendronic acid in patients with glucocorticoid-induced osteoporosis who are at high risk for fracture, according to the 18-month results of a 36-month randomised trial.^{1*}

A total of 428 patients with osteoporosis who received glucocorticoids for ≥ 3 months (prednisone equivalent ≥ 5 mg/day) were treated with either teriparatide 20 μ g/day (n = 214) or alendronic acid 10 mg/day.

At 18 months, a significantly greater increase from baseline in bone mineral density (BMD) at the lumbar spine was observed for the teriparatide group, compared with the alendronic acid group (7.2% vs 3.4%); the difference between treatments for this measure was significant from 6 months. The change from baseline in BMD of the total hip also significantly favoured teriparatide over alendronic acid after the first post-baseline measurement at 12 months; at 18 months, the improvement from baseline remained significantly higher in the teriparatide group (3.8% vs 2.4%).

In addition, N-terminal propeptide, C-telopeptide and C-terminal propeptide of type I collagen, and bone-specific alkaline phosphatase levels were increased from baseline with teriparatide, but decreased with alendronic acid. Furthermore, significantly fewer new vertebral fractures were observed in the teriparatide group than in the alendronic acid group (0.6% vs 6.1%).

In an accompanying editorial, Philip N Sambrook from the University of Sydney, Australia, stated that, while adverse events were relatively minor, they "might have accounted for the study's moderately high discontinuation rate of 30%" and that "the persistence of such effects in the ongoing 18-month extension of the study will be of interest".² However, he notes that, for patients with low BMD who are receiving long-term glucocorticoid therapy, the study "suggests that teriparatide should be considered as a potential first-line therapy".

* supported by Eli Lilly

1. Saag KG, et al. Teriparatide or alendronate in glucocorticoid-induced osteoporosis. *New England Journal of Medicine* 357: 2028-2039, No. 20, 15 Nov 2007.

2. Sambrook PN. Anabolic therapy in glucocorticoid-induced osteoporosis. *New England Journal of Medicine* 357: 2084-2086, No. 20, 15 Nov 2007.