Once-monthly ibandronic acid cost effective

Once-monthly ibandronic acid treatment is a "cost-effective intervention", compared with once-weekly alendronic acid for treating postmenopausal osteoporosis, according to a study conducted by a multinational group of researchers, and presented at the 28th Annual Meeting of the American Society for Bone and Mineral Research.[1]

The researchers constructed a Markov model to assess the lifetime cost effectiveness of oral ibandronic acid once per month and oral alendronic acid once per week for the prevention of fractures among women (aged ≥ 50 years) with postmenopausal osteoporosis. Efficacy and cost data were derived from published literature, and therapy persistence data were obtained from the PERSIST* trial; the proportion of patients persistent with therapy at 6 months was 57% with once-monthly ibandronic acid and 39% with once-weekly alendronic acid.

The model showed that, compared with no treatment, more fractures would be avoided, and more quality-adjusted life-years (QALYs) gained, with once-monthly ibandronic acid than once-weekly alendronic acid (10.3 and 4.8 fractures per 1000 women, and 12.5 vs 6 QALYs per 1000 women, respectively). Once-monthly ibandronic acid would have higher per-patient acquisition costs than once-weekly alendronic acid, due to greater persistence with therapy (£310 vs £249 per year),** note the researchers, but this would be offset by lower medical costs for monthly ibandronic acid (£6286 vs £6359). Thus, once-monthly ibandronic acid would have a much lower incremental cost per QALY gained than once-weekly alendronic acid, versus no treatment (£13 691 vs £30 450).

In another study presented at this meeting, US and Canadian investigators found that risedronic acid would have a lower cost-effectiveness ratio than ibandronic acid for treating patients with postmenopausal osteoporosis.[2]

Their 3-year Markov model simulated a cohort of women (aged > 65 years) with postmenopausal osteoporosis and previous vertebral fracture; the cost effectiveness of risedronic acid and ibandronic acid was estimated over a wide range of therapy persistence levels. Annual per-patient drug acquisition costs were $US876 for risedronic acid and $US809 for ibandronic acid.

According to the model, at equal levels of persistence with therapy, and compared with ibandronic acid, risedronic acid would result in fewer total fractures, lower fracture costs and lower total costs associated with fracture treatment. Projected fracture costs would be "consistently lower" for risedronic acid versus ibandronic acid, even at therapy persistence levels of 10% and 100%, respectively, note the investigators; this is due to ibandronic acid's lack of proven efficacy in nonvertebral fractures. Therefore, compared with no therapy, the cost per fracture avoided would be lower for risedronic acid than for ibandronic acid, with cost effectiveness "more dependent on efficacy than persistency", conclude the investigators.

* PERsistence Study of Ibandronate verSus alendronaTe

** All costs were reported in 2004 values; direct health resource costs for fracture states were discounted at a 3.5% annual rate.

1. Earnshaw SR, et al. A comparison of the cost-effectiveness of bisphosphonates using persistence data from a UK prospective RECT. Journal of Bone and Mineral Research 21 (Suppl. 1): 416-417, Sep 2006.
2. Grima DT, et al. Cost-effectiveness of risedronate versus ibandronate: impact of persistence. Journal of Bone and Mineral Research 21 (Suppl. 1): 181, Sep 2006.

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