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BREAST CANCER

Risedronate reduces bone loss

Results have been published from a substudy of the IBIS-II international, double-blind, randomized, placebo-controlled trial of the aromatase inhibitor anastrozole in postmenopausal women at high risk of breast cancer. The substudy demonstrated that, compared with placebo, anastrozole induced loss of bone mineral density (BMD), which was counteracted by co-treatment with the bisphosphonate risedronate.

Aromatase inhibitors block the synthesis of oestrogen, and reduce the risk of breast cancer in postmenopausal women. However, reducing oestrogen levels increases bone loss and the risk of osteoporosis. Conversely, bisphosphonates increase BMD by inhibition of osteoclasts.

The bone substudy enrolled 1,410 women, who were stratified by T score (comparison of BMD to a healthy reference mean) into normal, osteopenic and osteoporotic groups. Osteopenic women were randomly allocated to receive risedronate or placebo for 5 years; all osteoporotic women received risedronate, whereas women in the normal group were monitored only.

After 3 years of treatment, in the normal group and the osteopenic patients who did not receive risedronate, the decrease in BMD was significantly greater in the 310 women allocated to anastrozole than in the 342 women in the placebo group, at both the lumbar spine and total hip. Among the osteopenic women who received anastrozole, the decrease in BMD was significantly greater in the 73 women in the substudy placebo arm than in the 77 women in the risedronate arm.

This substudy provides the first placebo-controlled demonstration of the benefits of bisphosphonates in women taking anastrozole to prevent breast cancer. A planned further update will show whether these benefits are maintained after 5 years of treatment.

Robert Phillips

Original article Sestak, I. *et al*. Changes in bone mineral density at 3 years in postmenopausal women receiving anastrozole and risedronate in the IBIS-II bone substudy: an international, double-blind, randomised, placebo-controlled trial. *Lancet Oncol*. doi:10.1016/S1470-2045(14)71035-6