Fractures, Osteoporosis Common in SLE Patients

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Patients with systemic lupus erythematosus who are under the age of 50 have a high rate of fragility fractures, osteoporosis, and poor bone mineral density, according to new research.

And as expected, steroid use was found to be significantly linked to reduced bone mineral density (BMD), reported C-S Yee of the University of Birmingham and colleagues (Ann. Rheum. Dis. 2005;64:111-113).

Although bisphosphonates are the only class of drugs that have shown efficacy in the treatment and prevention of corticosteroid-induced osteoporosis, their use in premenopausal women poses serious risks of birth defects in the event of an unplanned pregnancy, noted the authors.

The investigation included 242 participants with systemic lupus erythematosus (SLE), 231 (95%) of whom were female.

Study participants were asked to complete a questionnaire about risk factors for osteoporosis, including details about previous fractures and family history of fractures. There were also asked about drug use and in particular about the use of glucocorticoids, oral contraceptives, hormone therapy, calcium and vitamin D supplementation, and bisphosphonates.

Bone mineral densitometry screening was also performed.

Among the women, 126 (54%) were premenopausal, 39 (17%) had experienced premature menopause, and 64 (28%) had experienced normal menopause. The menopausal status of two patients was unknown because they did not fully complete the questionnaire.

A total of 123 patients (51%) had reduced BMD (T score less than –1.0), and 25 were in the osteoporotic range (T score less than –2.5).

Ten of the patients with reduced BMD and 3 in the osteoporotic range were taking bisphosphonates at the time of the scan.

There were 22 patients (9%) who had experienced fragility fractures since their diagnosis of SLE, all of whom were female. Of these, 2 (9%) had normal BMD, while the other 20 (91%) had reduced BMD, with 7 of these women were in the osteoporotic range.

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Most of the patients with fragility fractures (82%) were menopausal, and only 3 were taking bisphosphonates at the time of the scan.

Non–Afro-Caribbean race and exposure to prednisolone (more than 10mg/day) were associated with reduced BMD, while age and menopause were associated with osteoporosis, according to the findings of a regression analysis.

Only low BMD and advanced age predicted fractures. Steroid exposure did not predict fracture rates, noted the authors. However, they noted that "it is likely that the effect of steroids on fractures is mediated predominantly by reduction in bone density in susceptible individuals."

Despite a high prevalence of fractures in this cohort, the authors noted a low prevalence among the premenopausal women (3%).

Because the teratogenic risks of bisphosphonates are most relevant in premenopausal women, "we recommend bisphosphonates only in those premenopausal SLE patients with osteopenia or osteoporosis who require long-term, high-dose steroids. Bisphosphonates with the least evidence of persistence in the skeleton should be used," they said. ■

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