Glucocorticoids Alter Bone Care Dramatically

BY KERRI WACHTER

DENVER — People on long-term glucocorticoids have a significant risk for fracture at relatively high bone mineral density T scores. As a result, physicians need to rethink their management of this population.

"In glucocorticoid osteoporosis, the fracture risk seems to take off quite dramatically somewhere around T scores of –1.5," Dr. Philip Sambrook said during a clinical roundtable session on glucocorticoid-induced osteoporosis at the annual meeting of the American Society for Bone and Mineral Research. "Most of the guidelines around the world are now suggesting that the intervention threshold [for those on glucocorticoids] should be [a T score of] about –1.5."

Patients on glucocorticoids typically have midline fractures of the vertebrae, where the bone just collapses in the middle of the vertebra. "This is different from the anterior wedge fracture that occurs most commonly in postmenopausal women with osteoporosis," noted Dr. Nancy Lane, who also participated in the roundtable session. This is because there are some differences in how bones become fragile in the presence of glucocorticoids, said Dr. Lane, who is the director of the center for healthy aging at the University of California, Davis.

Dr. Sambrook, who heads the bone and joint group at the Kolling Institute of Medical Research of Royal North Shore Hospital in Sydney, presented cases that "really illustrate the type of patients that we often struggle with."

Patient No. 1

A 66-year-old woman was recently diagnosed with polymyalgia rheumatica. She had been started on 25 mg/day prednisone and the disease activity lessened in response. Her history included chronic atopic dermatitis and hypothyroidism. She had no other medical problems. There was no family history of hip fracture. She did not smoke or drink. She had a slightly early menopause but had not used hormone therapy. She reported consuming one or two servings of dairy products daily. She also considered herself to be physically active, although she had no formal exercise program.

As part of her work-up, she had a spine x-ray, which showed a vertebral deformity (compression). BMD measurements showed modest osteopenia (T scores of –1.5 at the spine and –1.6 at the hip). She had normal levels of calcium and parathyroid hormone (PTH). Her vitamin D level was equivocal, however. Her thyroid function was normal.

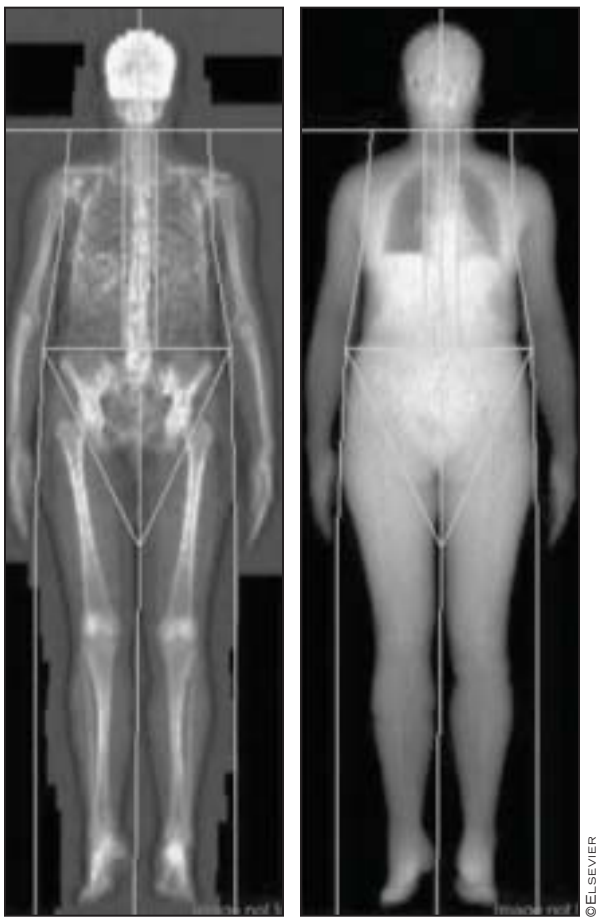
This patient had modest osteopenia at the time of her diagnosis. Once she was started on glucocorticoids, her T scores could have fallen rapidly and then stabilized over time, without treatment for bone loss, said Dr. Sambrook. "As she becomes established on glucocorticoids, she will perhaps not lose that much bone," but she's at risk of fracture.

So, when clinical trial data are interpreted, it's important to keep two clinical scenarios in mind: prevention (when initial rapid loss of bone is to be avoided) and treatment (when the patient is on chronic glucocorticoids and may not be losing a lot of bone but is still at risk for fracture).

"Most of us would believe that vitamin D [plus] calcium is an adjunctive therapy," said Dr. Sambrook. The data appear to back that up. In a 1996 trial, patients with glucocorticoid osteoporosis were randomized to 50,000 U/week of vitamin D plus 1,000 mg/day of calcium, or placebo. Both groups lost bone at the spine quite rapidly, although there was a trend for patients on vitamin D and calcium to do slightly better (J. Rheumatol. 1996;23:995-1000).

In another study, researchers demonstrated that daily alendronate increases bone density in patients who receive glucocorticoid therapy, compared with those on placebo (N. Engl. J. Med. 1998;339:292-9). Similar results have been demonstrated with etidronate, risedronate, and zoledronic acid.

Dr. Sambrook recommended that the patient receive calcium and vitamin D supplementation. Also, "we would primarily give her bisphosphonates until prednisone is discontinued" and possibly beyond, depending on her overall fracture risk after prednisone treatment.



Whole-body dual-energy x-ray absorptiometry can provide information on total and regional BMD (left) and body composition (fat and muscle mass).

Patient No. 2

A 24-year-old woman has had systemic lupus erythematosus for 3 years, and the disease has become severe over that time. Her SLE complications have included encephalitis, vasculitis, renal involvement, and deep vein thrombosis. She had no family history of osteoporosis. She did not consume much dietary calcium, although she claimed to get adequate sun exposure. She had been on an oral contraceptive since the age of 17. Her appetite and weight were average and stable.

At the time of her presentation, she had been on prednisone for 6 months, with dosages averaging 25-50 mg daily. However, the recent onset of renal complications required increasing the dose to 75 mg daily. She was also taking an antimalaria drug. Her vitamin D level was equivocal and needed to be addressed. She had normal calcium and PTH levels and normal thyroid function. However, her spine T score was –1.4 and her hip T score was –1.0.

The concern to Dr. Sambrook was the effect of bisphosphonates on fetal development. Although the patient was not pregnant at the start of therapy, she might have become so intentionally or unintentionally. Bisphosphonates are classified as pregnancy category C drugs by the U.S. Food and Drug Administration, meaning that they are contraindicated in pregnancy.

One approach to managing this patient is to simply watch her and measure BMD in 12 months. Another is to use a bisphosphonate in conjunction with vitamin D and calcium supplementation. Risedronate might be the better choice, given its quicker onset and offset of action, he said.

"As long as she stayed on prednisone, I might not be as aggressive as with postmenopausal women," Dr. Sambrook noted. If the prednisone dose was decreased, he said that he might consider stopping bisphosphonate treatment.

Dr. Lane and Dr. Sambrook both reported financial relationships with several pharmaceutical companies. ■

Management of OA Varies Widely Between Specialties

BY KATE JOHNSON

MONTREAL — Rheumatologists and general practitioners report significant variations in the way they manage patients with knee osteoarthritis, and in addition, their patient populations are also quite different, according to a French study sponsored by Wyeth Pharmaceuticals.

"This study identified variability in key aspects of management of knee OA as a function of medical specialty," reported Dr. Pascal Richette of Hôpital Lariboisière, Paris, and colleagues in a poster at the World Congress on Osteoarthritis.

The study used a cross-sectional survey of 808 general practitioners and 134 rheumatologists, representing 1,570 and 251 patients respectively. Each physician completed a medical questionnaire for their two most recent patients who fulfilled criteria for knee OA as defined by the American College of Rheumatology.

The clinical profiles of patients varied considerably between the specialties, with patients in the care of general practitioners experiencing more pain than did patients under the care of a rheumatologist (49.8 vs. 46.2 on a 0-100 Visual Analog Scale). In addition, general practitioners reported that their patients' pain had been of longer duration than that of patients reported by the rheumatologists (7.9 vs. 6.8 years). Patients of general practitioners were also more likely to have a second joint affected by OA (71.2% vs. 63.7%).

In terms of prescribing practices, general practitioners prescribed symptomatic slow-acting drugs in OA significantly less frequently than did rheumatologists (39% vs. 45% of the time), the authors reported. Instead, general practitioners prescribed more low-dose, oral, and topical NSAIDs. The use of symptomatic slow-acting drugs in OA has been controversial because of conflicting data on the efficacy of these agents. This category of drugs includes nutritional supplements and medications designed to reduce the symptoms of OA over the long term.

In addition, intra-articular injection of steroids or hyaluronic acid was performed significantly less often by general practitioners (7.6% and 2.5% of the time, respectively) than by rheumatologists (31.5% and 46.2% of the time). Rheumatologists performed joint puncture significantly more frequently (18% vs. 4% of the time).

Rehabilitation and weight loss were prescribed more often by general practitioners (in 34% and 65% of cases, respectively) than by rheumatologists (in 22% and 51% of cases, respectively), whereas exercise was prescribed by 47% of rheumatologists vs. 34% of general practitioners.

General practitioners prescribed NSAIDs significantly more frequently and symptomatic slow-acting drugs in OA significantly less frequently than did rheumatologists.

The congress was sponsored by the Osteoarthritis Research Society International. There was no conflict of interest disclosure. ■