Clinical Capsules

Type 1 Diabetic Women Have Low BMD

Women with type 1 diabetes should be targeted for osteoporosis screening and possible fracture prevention as they transition through menopause, said Elsa S. Strotmeyer, Ph.D., and her associates of the University of Pittsburgh.

Reported fracture rates were higher and bone mineral density (BMD) was lower in 67 premenopausal women aged 35-55 with type 1 diabetes than among 237 nondiabetic women, Dr. Strotmeyer and her associates said (Diabetes Care 2006;29:306-11).

Compared with the nondiabetic women, those with type 1 diabetes were younger (43.1 vs. 45.2 years) and weighed less (69.1 vs. 74.5 kg). One-third of the diabetic women reported having had a fracture after age 20 years, compared with less than a quarter of the nondiabetics.

Type 1 diabetes was associated with a 7.5% lower total hip BMD, 6.1% lower BMD in the femoral neck, 2.9% reduced whole-body BMD, and 15.8% lower calcaneal broadband ultrasound attenuation (BUA). All the differences were significant. Adjusting for age, lean mass, and fat mass reduced but did not eliminate any of the differences, they said.

After adjustment for age, neither duration of diabetes nor hemoglobin A_{1c} levels were significantly associated with BMD or BUA. Blindness (10.6% of the diabetic women vs. 0.4% of the controls) was associated with lower femoral neck and whole-body BMD, and reduced detection of the 10-g monofilament was related to lower femoral neck BMD after adjusting for age and diabetes duration.

The observed differences in BMD at multiple sites approached one standard deviation, which may confer an approximately doubled risk for hip fracture.

The large decrease in calcaneal BUA in the type 1 diabetic women suggests that peripheral bone sites may be even more compromised than other sites, Dr. Strotmeyer and her associates said.

Infections Prolong Elderly Surgery Stay

Elderly patients who developed surgical site infections after undergoing orthopedic surgery had significantly longer hospital stays, Dr. Jeanne Lee wrote in a poster at the annual Interscience Conference on Antimicrobial Agents and Chemotherapy.

Infection was an independent predictor of prolonged stay according to both bivariate and multivariate analyses in the outcomes study, conducted by Dr. Lee and colleagues at Duke University in Durham, N.C.

The study was conducted in eight hospitals between June 1991 and July 2002. The most common procedures were hip arthroplasty in 74 patients (22%), fracture repair in 55 patients (16%), and knee arthroplasty in 40 patients (12%). *Staphylococcus aureus* was the dominant pathogen, associated with 95 infections (56%), and 55% of these pathogens were methicillin resistant.

The mean length of stay was 13 days among 169 infected patients, compared with 4 days among 171 uninfected controls. The patients' mean age was 75 years, 66% were women, and 83% were Caucasian.

Other predictors of prolonged hospital stay included an inability to bathe independently, undergoing procedures of longer duration, postoperative glucose greater than 200 mg/dL, and having procedures on the same day as hospitalization.

The meeting was sponsored by the American Society for Microbiology.

Many Intercarpal Fusions Fail Early

Many patients who undergo intercarpal fusion later require total wrist arthrodesis, Dr. Samuel Koo and his colleagues reported at the annual meeting of the American Association for Hand Surgery.

The conversion rate was 17% in a retrospective analysis of data available on 72 of 90 consecutive patients who had intercarpal fusion from 1990 and 2002 performed by three surgeons.

The initial diagnosis in 80% of patients was posttraumatic arthrosis. The cohort of 54 men and 18 women had an average age of 35 years. Worker's compensation patients comprised about 75% of the cohort.

Midcarpal fusions were significantly more likely to fail than triscaphe, lunotriquetral, and radiocarpal fusions. Conversion to total wrist arthrodesis occurred in 9 of 32 (28%) midcarpal fusions, 2 of 24 (8%) triscaphe fusions, and 1 of 10 (10%) lunotriquetral fusions. None of the six radiocarpal fusions performed subsequently required total wrist arthrodesis. The average follow-up was 37 months.

More than half the conversions occurred within 11 months, and all but one occurred at less than 2 years. The average time from initial surgery to total wrist fusion was 13 months, said Dr. Koo of Northwestern University in Chicago. Age, gender, and worker's compensation status did not influence conversion rates.

Limitations of the study include its retrospective design, small sample size, and possible bias introduced by excluding patients in the initial study group due to incomplete charts, Dr. Koo said.

—From staff reports