OC Counters Bone Loss in Anorexic Teenagers

BY JANE SALODOF MacNEIL
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L O S A N G E L E S — The oral contraceptive Ortho Tri-Cyclen may help teenage girls with anorexia nervosa build bone mass as a defense against osteoporosis later in life.

Compared with placebo, it produced significantly greater increases in mean bone mineral density (BMD) of the lumbar spine during a 123-patient, double-blind, randomized trial reported at the annual meeting of the Society for Gynecologic Investigation.

This advantage was significant in 88 teens who completed the 13-cycle trial, but did not endure beyond 6 months in 112 girls who made up an intent-to-treat population. Increases in hip BMD were not significantly different at 6 months or 1 year.

“Treatment of adolescent females with anorexia nervosa may improve lumbar spine but not total hip [BMD] in subjects anorexia nervosa may improve lumbar spine during a 123-patient, double-blind, randomized trial reported at the annual meeting of the Society for Gynecologic Investigation.

Among the subjects who completed the trial, average lumbar spine BMD increased 3.1% at 6 months and 4.9% at 1 year for those on the contraceptive. BMD only increased 1.1% and 2.8%, respectively, in the placebo group. All subjects received calcium and vitamin D, and both groups gained weight during the trial. Safety data for the 123 enrollees showed adverse events to be similar for both cohorts, except for worsening anorexia nervosa. Eleven girls on placebo and 3 on Ortho Tri-Cyclen were hospitalized for relapses.

“To treat the whole patient, [oral contraceptive] is not a substitute for counsel- ing and other types of therapy, but it serves as an important adjunct to improve their [BMD] and maximize their peak bone mass,” Dr. Friedman said in an interview.

High-Resolution CT Accurately Assesses Bone Microarchitecture

BY JEFF EVANS
Senior Writer

B E T H E S D A, M D. — High-resolution peripheral quantitative CT is a promising technology for identifying osteoporosis-related changes in bone microarchitecture, according to results of a prospective study.

Data from the noninvasive technique suggests that the imaging procedure will provide new insight into the degradation of bone mineral architecture that occurs in osteoporosis, Stéphanie Boutroy, Ph.D., said at a meeting on bone quality.

Dr. Bourtroy of France’s National Institute of Health and Medical Research, Lyon, described her findings from an investigation of the scanning technique in 108 healthy premenopausal women (aged 19-45 years), 109 osteopenic, postmenopausal women (aged 52-88 years), and 33 osteoporotic, postmenopausal women (aged 61-84 years). The women were classified as osteopenic or osteoporotic based on bone mineral density (BMD) measures taken by dual x-ray absorptiometry at the femoral neck and spine.

Initially, eight healthy women under- went three separate scanning sessions within 1 month to determine the short-term reproducibility of the density and architec- tural parameters of the scanning protocol. In the three sessions, trabecular and cortical volumetric BMD measurements varied by only 0.3%-1.3% in each of those eight patients. Similarly, trabecular archi- tecture values varied by 0.9%-3.1% for each patient between sessions.

When Dr. Bourtroy examined the rela- tionship between volumetric BMD and architectural parameters, she found that total density, as expected, was strongly corre- lated to trabecular and cortical density. Trabecular and cortical density were strongly correlated to trabecular architecture and cortical thickness.

At the distal radius, osteoporotic women had significantly lower total volumetric BMD and cortical thickness compared with osteopenic women. Osteoporotic women also had comparatively lower trabecular density, number, thickness, and separation. No differences were found in cortical den- sity or the distribution of trabeculae be- tween the groups. Dr. Bourtroy said at the meeting, sponsored by the National Insti- tute of Arthritis and Musculoskeletal and Skin Diseases and the American Society for Bone and Mineral Research.

At the tibia, osteoporotic women had significantly lower measurements on all parameters (total volumetric BMD, cortical and trabecular density, and trabecular number, thickness, and separation) than osteopenic women.

Dr. Bourtroy said she has no financial inter- est in the companies that manufacture high-resolution peripheral quantitative CT devices.