Osteonecrosis in 1% of IV Bisphosphonate Users

BY SHARON WORCESTER
Southeast Bureau

ATLANTA — A retrospective analysis of data from nearly 4,000 patients treated with intravenous bisphosphonates suggests that osteonecrosis of the jaw in patients with metastatic cancer is an important but rare event in these patients, Dr. Ana O. Hoff reported in a poster at the annual meeting of the American Society of Clinical Oncology.

Reports of an association between bisphosphonate treatment and osteonecrosis of the jaw (ONJ) in patients with metastatic bone disease prompted this study examining the frequency of and risk factors for ONJ, explained Dr. Hoff of the University of Texas M.D. Anderson Cancer Center, Houston.

The cohort that was studied included patients treated from September 1996 to February 2004. The most common diagnoses were breast cancer (in more than 1,300 patients) and multiple myeloma (in 550 patients), and the indications for intravenous bisphosphonate treatment included metastatic bone disease, hypercalcemia, and osteoporosis. ONJ, which developed in 29 patients (0.73% overall, including about 1% of breast cancer patients and 2% of multiple myeloma patients), was defined as exposed nonhealing bone of at least 3 months' duration.

Mean cumulative doses of the bisphosphonates used (pamidronate and zoledronate) were significantly higher, and duration of disease and follow-up were significantly longer, in ONJ patients than in those who didn't develop ONJ.

Dental extractions, estrogen-receptor–positive tumors, and treatment with pamidronate and zoledronate were shown to be significant risk factors for ONJ in breast cancer patients. In multiple myeloma patients, significant risk factors were dental extractions, periodontal disease, and osteoporosis.

About 70% of ONJ patients reported no pain with bone exposure, Dr. Hoff noted.

Management of patients with ONJ included aggressive oral hygiene, oral rinses, debridement of necrotic bone, and antibiotic therapy. ■

ONJ Rate Higher In White Patients

White cancer patients on intravenous bisphosphonate therapy for bone metastases may be at higher risk for osteonecrosis of the jaw (ONJ), Dr. Tamer Aiti reported in a poster at the ASCO meeting. (See story above.)

A retrospective study by Dr. Aiti and colleagues at John H. Stroger Jr. Cook County Hospital, Chicago, found that 6 (3.7%) of 161 patients with metastatic breast cancer developed ONJ. Five of the six patients were white, yet whites accounted for less than a third of the population reviewed. All but 29 patients were nonwhite.

The investigators calculated that white patients had significantly more bisphosphonate infusions, 21 on average, compared with a mean of 13.5 infusions in nonwhite patients. Logistic regression analysis established that significantly more whites developed ONJ even after the study investigators controlled for dose (odds ratio 45.7).

The patients were treated with zoledronic acid and/or pamidronate between Jan. 1, 2001, and Oct. 30, 2005. None had prior glucocorticosteroid therapy.

As of Dec. 30, 2005, only two patients had resolution of their ONJ. Three patients had exposed bone—two with intermittent pain and one with chronic pain. The lone African American patient with the complication developed sepsis and died.

Dr. Aiti, of the department of surgical oncology at the University of Illinois at Chicago, called for larger studies to consider not only race but also confounding variables such as type of bisphosphonate therapy and cumulative dose, as well as other possible risk factors. Dr. Aiti and his colleagues also urged prospective imaging of high-risk patients, doing oral surgery before bisphosphonate treatment, and surveillance for ONJ.

—Jane Salodof MacNeil