Role of Bisphosphonates in ONJ Called Unclear

BY FRAN LOWRY

CHICAGO — Many people who currently take or who have taken bisphosphonates are being denied essential dental procedures because of undue fears about bisphosphonate-induced osteonecrosis of the jaw, according to a specialist in oral pathology.

"The phenomenon of ONJ seen in patients who happen to be on a bisphosphonate can also be seen in patients who have never had a bisphosphonate, but whether the bisphosphonate is directly responsible for this occurrence has not been scientifically [proved]," said Ellen Eisenberg, D.M.D., head of oral and maxillofacial pathology at the University of Connecticut Health Center in Farmington.

Dr. Eisenberg said that as a pathologist, she is unable to tell the difference between osteonecrosis of the jaw that has occurred in patients treated with radiation for head and neck cancer, in patients treated with intravenous or long-term oral bisphosphonates, or in patients who have not received either treatment.

The definitive diagnosis of bisphosphonate-associated ONJ requires exposed bone in the jaw for 8 weeks or longer. Although most cases involve a history of a surgical procedure in the mouth, most typically a tooth extraction, 40% of cases report sudden exposure of bone for no reason.

"The jaw is a very high traffic area that is subject to extreme forces, and therefore it is very likely that a patient may not recall a particularly traumatic event. Nevertheless, that trauma occurred, and that preceded the exposure of the bone," Dr. Eisenberg said at the annual Chicago Supportive Oncology Conference.

Dr. Eisenberg emphasized that the pathogenesis of ONJ is presumptive, based on the presumed alteration in the dynamic inhibition, resorption, and apposition of bone. "However, we do not know with any scientific certainty that this [presumed alteration] is, indeed, the cause," she said.

Until results from definitive studies show that bisphosphonates, whether oral or intravenous, are indeed the cause of ONJ, it is imperative that any patient about to embark on bisphosphonate therapy get a thorough dental examination so that any potential sites of infection or inflammatory disease can be eliminated, Dr. Eisenberg said.

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DR. EISENBERG

Patients who develop ONJ have a host of comorbidities that may be cofactors. Right now, it is not scientifically sound to focus on just bisphosphonates as the cause, since there may be other reasons for developing ONJ, she maintained.

"There is a host of cofactors that cannot be dismissed. These patients have cancer, and when they have something like metastatic breast cancer or multiple myeloma, they are suffering from widespread disease, with all of its implications," Dr. Eisenberg said.

Even older age can predispose an individual to develop ONJ, she added.

Dr. Eisenberg also suggested a genetic polymorphism may predispose individuals to develop bisphosphonate-associated ONJ. "It is purely conjecture, but I think that there is a subset of individuals who may be susceptible because their genetic profile predisposes them to the complication," she said.

She added that bisphosphonates are extremely useful medications, and that harm would be done to patients if the drugs were to be discontinued out of premature fears of ONJ.

Dr. Eisenberg disclosed that she is a consultant for Novartis, which markets three intravenous bisphosphonates: Aredia (pamidronate sodium), Reclast (zoledronic acid), and Zometa (zoledronic acid).

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