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Onset of Bisphosphonate-related Osteonecrosis of the Jaw Varies According to Type and Duration of Therapy

Background: Osteonecrosis of the jaw (ONJ) is a serious adverse effect of bisphosphonates (BP) that are commonly used to treat osteoporosis, metastatic bone cancer, and other conditions that cause bone thinning or fragility. As noted by the authors of this study, ONJ occurs in up to 7% of patients with cancer who receive intravenous BP and about 0.1% of patients having osteoporosis who take oral BP. Although it is known that risk factors for ONJ among patients who take BP include surgical procedures of the jaw, including tooth extraction, and dosage and duration of drug therapy, there is little precise information about the time to onset (TTO) of ONJ after BP therapy. The purpose of this study was to estimate the TTO and associated risk factors for ONJ among patients who take BP.

Methods: The investigators conducted a retrospective study of data from 22 health care centers in 7 countries. They identified 349 patients who developed BP-related ONJ between 2004 and 2012 and used their medical records to look for risk factors that may have contributed to development of ONJ.

Results: The authors reported that 63% of their sample took the BP drug zoledronate and 25% took the BP drug alendronate. They also reported that the median TTO for ONJ was 6.0 years (95% confidence interval [CI], 5.3 to 6.4) for patients taking alendronate and 2.2 years (95% CI, 2.1 to 2.6) for patients taking zoledronate. The investigators found that ONJ developed faster in patients treated for cancer than those treated for osteoporosis

and that the TTO of ONJ among cancer patients was highest for those having metastatic prostate cancer. A history of dentoalveolar surgery was inversely associated with the TTO of ONJ, and the use of anti-angiogenic agents was directly associated with the TTO of ONJ.

Why is this study

important?: Although this study was limited by its retrospective design and inherent potential bias, it used a strict definition of TTO and is the largest and longest

study to of TTO of ONJ. The finding that BP treatment for osteoporosis was associated with a much longer TTO of ONJ than treatment for cancer confirms other reports, but the finding of an inverse relationship between dentoalveolar surgery and ONJ among these patients is surprising. According to the authors, it is unclear why ONJ developed earlier in patients who had not undergone this surgery. Despite the large sample of patients who had dentoalveolar surgery (n=186), the

DENTAL FUN FACT

DID YOU KNOW...

60 % OF PEOPLE DON'T KNOW THAT A SORE JAW, WHEN COMBINED WITH CHEST PAIN, CAN SIGNAL A HEART ATTACK— ESPECIALLY IN WOMEN.

(<http://www.obteam.com/Fun-Facts.aspx>)

NEWS YOU CAN USE

The Face Bow is Irrelevant for Making Protheses and Planning Orthognathic Surgery

Evidence indicates that the face bow has nothing to do with speech, the fit and comfort of the protheses, ridge morphology, facial contours, the colors of teeth and denture bases, the arrangement of the artificial teeth, chewing efficiency stability, and the psychological aspects of prosthodontic treatment. The cine-fluorographic example showed that there was no condylar access of rotation during functional activities, a sawing action of the mandibular incisors during the incising of toast and mandible moving in a back and forth, rocking chair-like movement during functional activities. Patients expect their physicians and dentist to perform only treatment procedures that are essential.

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authors suggested that the fairly wide 95% CI for the inverse hazard ratio (0.71; 95% CI, 0.56 to 0.91) indicated a need for larger sample sizes to obtain more precise TTO estimates. It

should also be noted that the type of dentoalveolar surgery was not considered in this study and that more extensive surgical procedures or those involving specific areas of the mandible or

maxilla may have different risks for the TTO of ONJ.

1. Kuhl S, Walter C, Acham S, Pfeffer R, Lambrecht JT. Bisphosphonate related osteonecrosis of the jaws: a review. Oral Oncol. 2012;48(10):938-947

Dr. Brian Simpson
announces the thirty third meeting of the
NANUET IMPLANT STUDY GROUP

Speaker: Brian Golden, M.D.
Endocrinologist
Diabetes & Endocrinology Consultants, West Nyack NY

“Osteoporosis and ONJ”

Thursday, March 15, 2018
Dinner: 6:30 Presentation: 7:00 — 9:00 pm

Hudson House 134 Main Street Nyack, NY

2 CE credits awarded by the Ninth District Dental Association
Cost: \$50.00

To register, please call: 845-623-3497
or email office@drbriansimpson.com

*“Two things are infinite: The universe and human stupidity;
and I’m not sure about the universe.”
-Albert Einstein*