



American Association of Oral and Maxillofacial Surgeons

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New Technique Shows Patients taking Brittle Bone Prevention Drugs at Risk for Jaw Necrosis

[Rosemont, IL, May 1, 2016] Medication-related osteonecrosis of the jaw (MRONJ) is a serious side effect of certain medications used to prevent bone loss in women at high risk of fractures resulting from osteoporosis (brittle bones). The drugs work by decreasing bone breakdown and increasing bone strength and density. Showing which of these patients is at a higher risk for this problem would be a major scientific finding since it would help guide their therapy.

Researchers at New York University Medical Center conducted a study to determine the predictive value of a new medical imaging technique on healing outcomes in patients who had undergone surgery for MRONJ of the lower jaw. Fluorodeoxyglucose (FDG) positron emission tomography with computed tomography, or FDG PET-CT, combines PET and CT scans to yield more accurate and earlier detection of infection and disease than MRI or CT scans alone. While CT identifies where bone destruction has occurred, FDG PET-CT can identify changes in bone before bone destruction is visible clinically; this finding will help surgeons needing to operate in the lower jaw.

In an article featured in the May issue of the *Journal of Oral and Maxillofacial Surgery*, the authors hypothesized that FDG would identify affected bone that, if treated, would result in improved healing as compared to identified, untreated bone. Thirty-three patients with mandibular lesions who had undergone surgery based on FDG PET-CT imaging results participated in the study. These included 22 low-risk patients with lesions limited to certain areas of the mandible (Type A) and 11 high-risk patients with more lesions in another area of the mandible (Type B).

Successful treatment of MRONJ lesions in the low-risk group was significantly higher than for treatment in the high-risk group, which experienced a greater than 50% failure rate. These results demonstrated that FDG PET-CT findings predicted successful healing with surgery in low-risk patients. The study's authors suggested that further research is needed to identify high-risk patients who are most likely to benefit from a conservative treatment protocol.

Read the complete study findings at *J Oral Maxillofac Surg.* 2013; 74:945-958.
<http://dx.doi.org/10.1016/j.joms.2015.10.025>.

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