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LETTER TO THE EDITOR

The role of dental hygienist in the prevention of osteonecrosis of the jaw in patients wearing dentures

Dear Editor,

We read with considerable interest the review paper by Rayman *et al.* (1) emphasizing the most important aspects of bisphosphonate related osteonecrosis of the jaws (BRON) and the role of dental hygienists in the prevention of the complication.

The authors appropriately note that most surgical procedures performed by oral and maxillofacial surgeons to date, have been counterproductive (1). Hyperbaric oxygen treatment has not demonstrated any commendable results too (1). Furthermore, discontinuation of bisphosphonates (BP) has not provided measurable results either (1), while it may not be justified by presented evidence so far (2). In this context, prevention of the complication is of utmost importance. Primary dental care practitioners need to be aware of the complication and the ways to prevent it from occurring. As dental hygienists mainly apply primary dental care, BRON awareness is mandatory.

Rayman *et al.* (1) very appropriately report an at least 5% incidence rate among intravenous BP users. The previous studies report that, the incidence of BRON ranges from 0.94% to 18.6% (2). As most studies reporting BRON incidence lack a through dental evaluation and many are retrospective chart reviews, underreporting of the true incidence is probable (2). Of note, we have been monitoring for BRON through a longitudinal cohort study design comprising 1621 patients from our institution (3). In the latter study, incidence rates are in accordance with those reported by Rayman *et al.*

Rayman *et al.* (1) note that patients under BP need to maintain optimal dental hygiene and have periodontal pockets eliminated. However, a recent study (4) was not able to detect any statistically significant association between oral hygiene and BRON development. In our cohort study, we also were not able to detect an association between the Community Periodontal Index of Treatment Needs of patients under BP and the risk for BRON development (3). Therefore, maintaining optimal oral hygiene and eliminating periodontal pockets should be appropriate but may not prevent BRON.

A year ago, we reported on the basis of evidence that use of dentures is a risk factor for BRON development (5) and we were able to validate this finding through a second larger study (3). We therefore suggested that patients wearing dentures should receive additional care to avoid gingival trauma caused by their dentures (5). We feel that this important information is missing from the paper by Rayman *et al.* (1). Dental hygienists may prevent a number of BRON cases through regularly checking denture fitting and referring those with ill-fitting ones to dental practitioners to have their dentures retreated.

The recommendation that a dental examination and preventive dentistry should be considered prior to treatment with BP in patients with concomitant risk factors (1) is getting more evidence based as research on BP progresses. Prevention of BRON may be feasible through proper management of evidence-based dental risk factors, namely dental extractions and use of dentures.

A Kyrgidis*
Z Teleioudis
K Vahtsevanos
**Department of Oral and Maxillofacial Surgery*
Theagenio Cancer Hospital
Thessaloniki
Greece
Tel: +306947566727
Fax: +302310546701
E-mail: akyrgidi@gmail.com

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