

Other journals in brief

A selection of abstracts of clinically relevant papers from other journals.
The abstracts on this page have been chosen and edited by Reena Wadia

MRONJ unrelated to bisphosphonates and denosumab

King R, Tanna N, Patel V. Medication-related osteonecrosis of the jaw unrelated to bisphosphonates and denosumab—a review. *Oral Surg Oral Med Oral Pathol Oral Radiol* 2019; **127**: 289–299.

A wide range of medications classified as tyrosine kinase inhibitors, monoclonal antibodies, mammalian target of rapamycin inhibitors, radiopharmaceuticals, selective oestrogen receptor modulators, and immunosuppressants have also been found to be implicated in MRONJ.

The link between medication-related osteonecrosis of the jaw (MRONJ) and bone modulating drugs, such as bisphosphonates and denosumab is well established. The development of novel medications used in the treatment of cancer, as well as autoimmune and bone conditions has led to further cases of MRONJ being reported. However, in addition to this group of medications, increasing numbers of new agents in cancer therapy, such as antiangiogenic agents, have also been implicated in the development of MRONJ. The authors mention that as these newer agents with similar mechanisms are routinely used, the numbers of reported cases will likely rise. A wide range of medications classified as tyrosine kinase inhibitors, monoclonal antibodies, mammalian target of rapamycin inhibitors, radiopharmaceuticals, selective oestrogen receptor modulators, and immunosuppressants have been found to be implicated in MRONJ. The authors emphasised the importance of oral health care providers being aware of these new medications.

DOI: 10.1038/s41415-019-0369-5

Biomarkers and MRONJ

Moraschini V, de Almeida D C F, Figueredo C M, Calasans-Maia M D. Association between biomarkers and medication-related osteonecrosis of the jaws: a systematic review. *Oral Surg Oral Med Oral Pathol Oral Radiol* 2019; pii: S2212-4403(19)30147-6. DOI: 10.1016/j.oooo.2019.02.014. [Epub ahead of print].

Although many biomarkers have been associated with MRONJ, there is scarce clinical evidence supporting the use of these biomarkers for the diagnosis and prognosis of MRONJ.

This systematic review assessed the role of human biomarkers in the diagnosis or prognostication of medication-related osteonecrosis of the jaws (MRONJ). Eligibility criteria included randomised and non-randomised clinical trials, prospective or retrospective cohorts, case controls, and case series. The search and selection process yielded 19 studies (two case series, six case-control studies, nine prospective cohort studies, and two retrospective studies) published between 2008 and 2018. Twenty-four biomarkers collected from serum, saliva, and urine were included. Eleven biomarkers were possibly related to MRONJ; however, no consensus was observed in the literature with regard to the sensitivity and clinical effectiveness of these biomarkers.

DOI: 10.1038/s41415-019-0378-4

Patient perceptions of MRONJ

Sturrock A, Preshaw P, Hayes C, Wilkes S. Perceptions and attitudes of patients towards medication-related osteonecrosis of the jaw (MRONJ): a qualitative study in England. *BMJ Open* 2019; **9**: e024376. DOI: 10.1136/bmjopen-2018-024376.

MRONJ has a significant detrimental impact on quality of life, yet appropriate preventative education is not apparent. Effective inter-professional patient education and prevention to mitigate against the risk of developing MRONJ is required.

This study explored the impact of medication-related osteonecrosis of the jaw (MRONJ) on quality of life and considered the perceptions of patients towards a multidisciplinary approach. Twenty-three patients in primary care general medical practices and secondary care dental services in England were interviewed using qualitative semi-structured interviews. Of those interviewed, six had MRONJ, 13 were taking prescribed bisphosphonates, four had osteoporosis but were not currently taking any medication. Patients felt that MRONJ had a significant negative impact on their quality of life including physical, psychological and social impacts. There was also poor knowledge of the recommended preventive strategies. Patients demonstrated positive attitudes towards a multidisciplinary approach to care; but perceived prescribers as having the key role in articulating risk.

DOI: 10.1038/s41415-019-0376-6

Awareness of MRONJ amongst dentists

Al-Samman A A, Al-Ani R S. A cross-sectional survey on medication-related osteonecrosis of the jaws' knowledge and awareness in a sample of dental society. *J Craniomaxillofac Surg* 2019; pii: S1010-5182(18)30754-6. DOI: 10.1016/j.jcms.2019.02.006. [Epub ahead of print].

There is a need to strengthen MRONJ awareness and knowledge amongst general dentists and dental specialists to identify 'at risk' patients for appropriate advice and management.

Awareness about MRONJ is crucial for all dental practitioners to identify 'at risk' patients for appropriate advice and management. This cross-sectional survey was based in Iraq and aimed to determine MRONJ awareness and knowledge amongst dental professionals. One hundred and seventy-eight dentists completed a questionnaire-based survey. The group consisted of 113 general dental practitioners (GDPs), 33 dental radiologists (DR) and 32 oral and maxillofacial surgeons (OMS). A significant difference existed amongst the groups with a rate of MRONJ's awareness of 34%, 49%, and 84% for GDPs, DRs, and OMSs respectively. Concerning MRONJ knowledge, significantly higher rates were seen in the OMSs set with a score of 49%. In contrast, the score for DRs was 31%, and the GDP group had the lowest score of 17%. The authors commented on the imperative need to strengthen MRONJ awareness and knowledge amongst dental professionals.

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