

# Medication-related osteonecrosis of the jaws (MRONJ) review: what Irish dentists need to know, from international guidelines to current controversies

**Introduction:** Medication-related osteonecrosis of the jaws (MRONJ) is a potentially severe adverse drug reaction, resulting in progressive bone destruction of the jaws. MRONJ is associated with two classes of therapeutic drugs: antiresorptive and anti-angiogenic agents. There are several hypotheses that attempt to explain the aetiology of the process and its unique localisation to the jaws. Dental screening and appropriate treatment are fundamental to reduce the risk of osteonecrosis before patients begin taking these medications. The treatment of MRONJ often presents great difficulty and an optimal therapy strategy is yet to be established. For this reason, prevention occupies a pivotal role in the management of these patients.

**Objective:** To review the scientific literature that supports measures used primarily in the prevention of MRONJ in both nationally and internationally published guidelines.

**Methodology:** A bibliographic search using the PubMed/MEDLINE database was performed by the authors, with no time limitation and restricting the search to the English language. The authors selected key papers and engaged in collaborative data extraction and synthesis of the selected reference material. Practice guideline documents were assessed using the Appraisal of Guidelines for Research & Evaluation (AGREE II) Instrument.

**Conclusion:** Knowledge of the risk factors and aetiology of MRONJ is rapidly expanding, and guidelines for prevention and treatment of this condition are developing as more publications are released. On the basis of the findings of this literature review, the authors highlight important practice points in a concise instruction list, reflective of current high-quality clinical practice guidelines.

**Key words:** Medication-related osteonecrosis of the jaws (MRONJ); osteochemonecrosis; anti-resorptive osteonecrosis of the jaws (ARONJ); bisphosphonate-related osteonecrosis of the jaws (BRONJ); bisphosphonate-related osteonecrosis (BRON); bisphosphonate osteonecrosis (BON); bisphosphonate-associated osteonecrosis of the jaw (BAONJ); dental interventions; tooth extraction.

Journal of the Irish Dental Association 2018; 64 (4): 193-202.



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