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DENTAL CONSIDERATION AND MANAGEMENT OF CANCER PATIENTS BEFORE INITIATION OF IV BISPHOSPHONATES.

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Purpose: Osteonecrosis of the jaw (ONJ) related to intravenous bisphosphonates (IVBP) is characterized by exposed necrotic bone in the maxillofacial region in patients who have received or are receiving treatment with IVBP and have no history of radiation therapy of the jaws.[1] The risk of complication of using IVBP for oncologic purposes can be reduced with effective management of cancer patients. Therefore, it is imperative for practitioners to follow patient-specific guidelines for the dental management of patients who will be treated with IVBP. The purpose of this article was to provide a patient-specific, individualized approach for the dental management of patients before initiation of IVBP to prevent ONJ. This guideline will focus on 3 separate factors: the cancer, the patient, and the dentition.

Methods: A systematic literature review was conducted via PubMed using the following medical subject headings and terms: "bisphosphonates," "avascular necrosis," "bisphosphonate-related osteonecrosis of the jaw," and "medication-related osteonecrosis of the jaw." We then cross-referenced the same terms with the terms "multiple myeloma (MM)," "breast cancer," "prostate cancer," "jaw disease," and "metastatic cancer" to identify publications that can provide evidence to develop pretreatment dental guidelines in cancer patients treated with IVBP. Articles were reviewed as a result of the PubMed literature search. The cancer types evaluated included breast cancer, prostate cancer, and MM. Relevant studies regarding patient- and dentition-related factors and their relation to IVBP treatment of the said cancers, survival, or comorbidities were evaluated.

Results: Upon review of articles, 137 articles met our inclusion criteria. No association was found between development of ONJ and the primary tumor site. The hazard of developing ONJ was significantly higher in patients who received zoledronic acid alone compared to those who received pamidronate alone or in combination with zoledronic acid. Our review also concluded that time of exposure to IVBP is strongly associated with development of ONJ, with exposure beyond 4 years of IVBP treatment increasing the incidence of ONJ significantly.[2] Our literature search indicated that the risk of development of ONJ after IVBP treatment in cancer patient is also dose dependent, with higher doses being associated with higher risk of ONJ. This suggests that not only does the type of IVBP treatment positively correlate with the likelihood of developing ONJ, the dose and duration of IVBP therapy is also a significant factor. Our analysis identified several unique patient characteristics, including motivation, presence of a support system, socioeconomic status, nutrition, and race, which have all been found to affect the outcomes of IVBP therapy. Dental disease and available supportive dental management was found to significantly impact treatment and quality of life in this patient population.

Conclusion: Complications from IVBP treatment in cancer patients can have a lifelong impact on quality of life. Dentists and oral and maxillofacial surgeons can play a major role in preventing and minimizing these complications. The cancer, the patient, and the dentition should be analyzed thoroughly to assemble an effective pre-IVBP dental treatment plan. A pre-IVBP extraction-based dental treatment plan is warranted for patients with history of noncompliance, limited financial means, lack of motivation, and presence of tooth factors that decrease the prognosis of dentition. Use of zoledronic acid, IVBP for extended period of 4+ years, and dosage of 22.6 doses or higher are associated with significantly higher chance of developing ONJ and a more aggressive dental treatment (e.g., extraction vs restoration) should be utilized in treatment of these patients.

References

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NEW CRITERIA DEMONSTRATE SUCCESSFUL OUTCOMES FOLLOWING TEMPOROMANDIBULAR JOINT (TMJ) ARTHROSCOPY.

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Purpose: Outcomes of temporomandibular joint (TMJ) surgery, including TMJ arthroscopy, use both subjective and objective criteria based on changes in pain and maximum interincisal opening (MIO). TMJ arthroscopy has reported success rates of 80% to 90%.[1,2] Studies have demonstrated an increase in MIO may not be accompanied by reduction in pain, and conversely, reduction in pain may result without an increase in MIO. The purpose of this study was to determine whether the use of a MIO-pain change measurement/index that provides equal weight to objective changes in MIO and subjective changes in pain would more accurately reflect the results of surgery.

Methods: The study included 102 patients with internal derangement and severe inflammatory/degenerative TMJ disease (Wilkes II–V) that failed nonsurgical management and underwent arthroscopy. All patients underwent advanced operative arthroscopy, including removal of adhesions, debridement and biopsy of pathologic tissues, disk mobilization, and injection of steroid medication into inflamed synovium under direct vision. Surgical outcomes (successful vs unsuccessful) were based on a MIO-pain change measurement/index that provided equal weight to objective changes in MIO and subjective changes in pain (visual analogue scale [VAS]). Preoperative pain and MIO changes were compared to postoperative pain