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Dental Implants in Breast Cancer Patients Receiving Bisphosphonate Therapy

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Abstract : Objectives: The aim of this review article is to assess the success of dental implants in breast cancer patients receiving bisphosphonate therapy and to evaluate the risk of developing bisphosphonate-related osteonecrosis of the jaw following dental implant surgery. Materials and Methods: A thorough search was conducted, with no time or language restriction, using: PubMed, PubMed Central, Web of Science, and ResearchGate electronic databases. Medical Subject Headings (MeSH) terms such as "bisphosphonate", "dental implant", "bisphosphonate-related osteonecrosis of the jaw (BRONJ)", "osteonecrosis", "breast cancer, MRONJ", and their related entry terms were used. Eligibility criteria included studies and clinical trials that evaluated the impact of bisphosphonates on dental implants. Conclusion: Breast cancer patients undergoing bisphosphonate therapy may receive dental implants. However, the risk of developing BRONJ and implant failure is high. Risk factors such as the type of BP received, the route of administration, and the length of treatment prior to surgery should be considered. More randomized controlled trials with long-term follow-ups are needed to draw more evidence-based conclusions.

Keywords: dental implants, breast cancer, bisphosphonates, osteonecrosis, bisphosphonate-related osteonecrosis of the jaw

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