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**Background:** Medication-related osteonecrosis of the jaw (MRONJ) is an adverse drug reaction, marked by bone destruction. Most studies have focused on diagnosis and management.

**Objective:** The aim of this review was to explore the role of cone beam computed tomography (CBCT) in MRONJ diagnosis.

**Materials and Methods:** The following databases were searched: PubMed, Scopus, Web of Science, Trip, and Cochrane Library. Search terms were “osteonecrosis,” “medication-related,” “radiography,” “bone resorption,” and “CBCT.” The search from 1972 onward yielded 395 articles (case reports, case series, studies, and systematic reviews), but only 11 articles met our inclusion criteria.

**Results:** Eleven articles with 168 cases were included in a full-text qualitative analysis. Females comprised 66.6% of cases (mean age 58.5 years). CBCT findings included osteolytic lesions, osteosclerosis, sequestra, and sinus mucosal thickening. The most frequent location was the posterior mandible (62.6%). Stage 1 was most often reported (36.4%). The most frequent precipitating event was extraction (75%). Of the included cases, 52.4% were oncologic cases, and 23.8% were osteoporosis cases. Of the patients, 72.7% had taken antiresorptive medications, and 4.5% had taken antiangiogenics. Administration was mostly by the oral route (45%). Several articles included information on management, with 90% reporting antibiotic and chlorhexidine use and 10% reporting surgical intervention.

**Discussion:** CBCT is a reliable tool in the detection and staging of MRONJ. It is reported to offer advantages over multi-detector computed tomography (MDCT) with regard to radiation exposure and is superior to 2-dimensional (2-D) imaging in the detection of MRONJ features.

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## ADAPTIVE CAPABILITIES OF THE TEMPOROMANDIBULAR JOINT: A CONE BEAM COMPUTED TOMOGRAPHY PILOT STUDY

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**Background:** The term *temporomandibular disorders* (TMDs) is a common broad clinical descriptor for a group of clinical signs and symptoms. Morphologic changes may underlie the clinical presentation.

**Objective:** This blinded case-control study aimed to correlate osseous changes of the condylar head in patients presenting to the Orofacial Pain Clinic with TMD-related complaints.

**Materials and Methods:** Institutional review board approval was obtained, and 60 patients (30 study patients and 30 age- and gender-matched controls; age 18–40 years) were enrolled. After a clinical examination, each subject underwent cone beam computed tomography (CBCT) of the temporomandibular joints (TMJs). The Revised Diagnostic Criteria (RDC)/TMD Diagnostic Form was used to record and assess clinical TMJ findings and InVivo v6.0 software to visualize and assess

condylar volume and morphologic changes. The findings were recorded on an Excel spreadsheet.

**Results:** Remodeling was primarily observed in the anteromedial, anterolateral, and posterior condylar surfaces. Clinical findings included disk displacement, temporalis and TMJ headache, and pain in the temporalis and masseter muscles and lateral pole of the TMJ.

Condylar dimensional changes between groups were found to be nonsignificant.

The results demonstrated that reduction in condylar volume correlated significantly with clinical evidence of disk displacement.

**Discussion:** Although osseous changes in older age groups have been well documented, changes seen in younger patients are not well reported in the literature.

## References

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## CONE BEAM COMPUTED TOMOGRAPHY PRESENTATION OF CASES WITH PRE-ERUPTIVE INTRACORONAL RESORPTION: A CASE SERIES AND REVIEW OF THE LITERATURE

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**Background:** Pre-eruptive intracoronar resorption (PEIR) is a rare condition, characterized by the existence of a radiographic radiolucent area inside the coronal dentin before dental eruption. The etiology for PEIR is unknown. However, the following conditions are the proposed etiology for PEIR: being resorptive in nature, local inflammation, ectopic positioning of teeth or teeth with abnormal contact, dental development defects, systemic conditions (herpes zoster infection).

**Objective:** This report presents the cone beam computed tomography (CBCT) images of 3 cases with PEIR and describes the pattern of resorptive defects in these cases.

**Materials and Methods/Clinical and Radiographic Findings:** Cases 1 and 2: A 66-year-old female and a 54-year-old male presented for implant evaluation. CBCT images of the first case showed a radiolucent intracoronar area involving an impacted