

Objective(s): The aim of this study was to evaluate the radiographic changes in the jaws of patients with MM who developed MRONJ compared with those in whom MRONJ did not develop.

Study Design: A retrospective study was performed for MM patients who were referred to the oral medicine clinic at the University of Florida College of Dentistry from 2006 to 2018. The patient information and radiographs (panoramic and intraoral radiographs) were retrieved from their dental chart (axiUm). For evaluating the cortical border, the mental index (MI), panoramic mandibular index (PMI), and mandibular cortical index (MCI) were measured. The bone density ratio was measured by using Image J 1.51 j8 (NIH, Bethesda, MD) in 5 locations in the bone and 1 in the dentin.

Results: Of 87 patients with MM who were examined, 48 were females (56%), and 38 were males (44%). The mean age was 63.97 years. In total, 29 were diagnosed with MRONJ. Our study indicated that patients with MRONJ had denser bone compared with patients without MRONJ (t test $P < .0001$). In addition, classifying the cortical border with the MCI showed that the association between MRONJ and the thickness and the sharpness of the cortical border is considered to be statistically significant (Fisher's test, $P = .0003$). The MI and PMI differences between the 2 groups were not statically significant.

Discussion/Conclusions: The increase of radiographic bone density was significantly related to the development of MRONJ in patients with MM. The cortical border thickness and sharpness should be evaluated as prognostic factors for development of MRONJ in patients on antiresorptive medications.

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RADIOLOGIC EVALUATIONS IN HISTOPATHOLOGICAL GRAY ZONES. H.I. VREBURG, S. MALLYA. UNIVERSITY OF CALIFORNIA AT LOS ANGELES, LOS ANGELES, CA

Background: Generally, histopathologic examination provides the final diagnosis of osseous lesions in the jaws. Occasionally, the histopathology of such lesions may be equivocal. In these situations, analysis of the radiographic features become the dominant source of information on the nature of the lesion and can tip the scales of diagnostic possibilities. We illustrate this scenario with a case of a patient presenting with a maxillary swelling 18 years post-radiation therapy, and with radiographic features that were characteristic of osteosarcoma. However, histopathologic examination yielded no evidence of malignancy, posing important challenges to therapeutic decision making.

Discussion/Conclusions: A 69-year-old male presented with progressive bony growth in the posterior maxilla and recent

onset of numbness. Eighteen years ago the patient received 60 Gy of radiation to treat a mucoepidermoid carcinoma. Radiologic evaluation, including panoramic radiography and cone beam computed tomography (CBCT), showed a progressive, fast-growing bony lesion with expansile, invasive, and sclerotic changes that were highly suspicious of osteosarcoma, which is a radiation-induced neoplasm. In contrast, multiple biopsies showed chronically inflamed cellular infiltrates with atypical bony trabeculation, but no evidence of malignancy. Based on this information, a diagnosis of idiopathic reactive bone growth was adopted, and resulted in conservative management of the patient.

This case illustrates a scenario where the radiographic and histopathological features are contradictory. We discuss the contributions of the oral and maxillofacial radiologist, including identification of potential biopsy sites that may be representative of the lesion, and recommend an appropriate radiographic follow-up examination with careful monitoring of the radiologic features that could change the diagnostic or treatment planning decision process.

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SEQUENTIAL CHANGES POST-SCLEROTHERAPY OF A LARGE MANDIBULAR INTRAOSSEOUS HEMANGIOMA. K.M.

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Background: Intraosseous hemangiomas of the jaws are rare entities, for which the origin is still being debated. Some believe them to be hamartomatous lesions derived from mesodermal cells that undergo endothelial differentiation, while others believe they are true neoplasms. Clinical features reported are swelling, facial asymmetry, mobile teeth, and audible bruits. Patients may report pain, paresthesia, or a sensation of pulsation. The majority of the reported cases in the literature have been treated with en block resection. In this case presentation sclerotherapy was implemented as the primary treatment for a large, albeit low-flow, lesion, in part because of the patient's objection to extensive surgery.

Discussion/Conclusions: A 59-year-old female was referred to our clinic for treatment of a histopathologically confirmed intraosseous vascular malformation diagnosed 5 years earlier. She presented with mild swelling of the left mandible, pain on chewing, and paresthesia in that region. A pantomograph revealed a large, partially loculated, radiolucent area in the left mandible; the lesion had approximately doubled in size since her initial visit. Multidetector computed tomography (MDCT) revealed an expansile lesion with effacement of the buccal cortex. Root resorption of multiple associated teeth was present. Spiral computed tomography (CT) angiography demonstrated an

expansile, hypervascular soft tissue mass with no evidence of arteriovenous malformation, consistent with focal hemangioma. In this case, the goal was to resolve or at least greatly reduce the size of the lesion; thus, if surgical intervention was deemed necessary, it would be more conservative. Sequential sclerotherapy was performed and resulted in the return of nonvascular stroma, although with delayed significant reossification. It appears the patient's resistance to surgery was rewarded and likely resulted in a more aesthetic outcome. Because of the risk for recurrence, periodic long-term follow-up is scheduled.

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SPONTANEOUS HEALING OF A BUCCAL BIFURCATION CYST: A CASE REPORT. J.P. CASTRO CUELLAR, S. ANAMALI. UNIVERSITY OF IOWA, IOWA CITY, IA

Background: The buccal bifurcation cyst is an uncommon odontogenic cyst that is associated with mandibular permanent molars. Histopathologic features are not distinctive, making diagnosis dependent on clinical and radiographic findings. Molar vitality and buccal tilting of the crown are evident in most cases. Radiographically, the lesion usually presents as a radiolucency on the buccal aspect of the tooth. The apices of the roots are tilted toward the lingual cortex of the mandible.

A 15-year-old female presented for orthodontic screening. Upon radiographic examination of a pantomograph, a radiolucent lesion was noted on the furcation area of the mandibular left second molar. A 10-mm periodontal pocket on the facial aspect was detected. The tooth was determined to be vital on endodontic examination. A partial-volume cone beam computed tomography (CBCT) scan was performed and showed a well-defined, corticated, round, radiolucent entity in the furcation area of the mandibular left second molar, with lingual tilting of the roots. A diagnosis of buccal bifurcation cyst was made. The patient decided not to have a biopsy and preferred a periodic follow-up. After 6 months, on clinical examination, all tissues were within normal limits. On radiographic examination of a new partial-volume CBCT scan, the lesion had significantly decreased in size, and there was evidence of bone deposition.

Discussion/Conclusions: As the histopathologic features of the buccal bifurcation cysts are nonspecific, diagnosis of this entity has to be based on its clinical and radiographic characteristics. Over time, treatments for this condition have changed drastically, ranging from tooth extraction and curettage to enucleation and preservation of the tooth. Lately, a new and more conservative approach has been described.

Only a few cases have been reported in which the cyst resolved after periodontal probing or daily irrigation of the buccal pocket with saline. This new approach is described as *micromarsupialization*.

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TEMPOROMANDIBULAR CONDYLAR OSTEOCHONDROMAS: CHARACTERISTICS AND COMPLICATIONS. K. ABRAMOVITCH, E.L. CHRISTIANSEN, S. ROCHE, D.D. RICE. LOMA LINDA UNIVERSITY SCHOOL OF DENTISTRY, LOMA LINDA, CA

Background: Benign, solitary osteochondromas arise in response to an event (e.g., trauma, x-radiation), rather than as true neoplasms. Typically, osteochondromas represent 10% to 15% of all bone tumors and approximately 35% of benign bone tumors. They usually develop during a known age range and at largely predictable anatomic sites, whether the osteochondroma is benign or malignant. The most important piece of clinical information is the patient's age, although exceptions exist. Most osteochondromas occur on the metaphysis of appendicular long bones.

Clinical and Radiographic findings: Three cases are of temporomandibular condylar osteochondromas are presented. All patients were adult males with ages 29, 55, and 56 years. Each tumor arose from the condylar articular surface and developed into abnormal morphologies that followed the outline of adjacent structures.

Definitive Interpretation: The radiographic findings of an exostotic bony tumor with smooth but irregular outlines, sclerotic cortices, and moderately dense trabeculation confined within the joint capsule were consistent with the radiographic appearance of osteochondroma.

Discussion: Radiographically, 2-D imaging is adequate to establish an initial radiographic diagnosis. However, more advanced modalities (computed tomography/magnetic resonance imaging [CT/MRI]) are indicated to better evaluate the orientation of the tumor and assist in the surgical management. The 3-D imaging of the 3 cases presented here emphasize this point. Positron emission tomography/fluorodeoxyglucose (PET/FDG) imaging has also been recommended for specific cases. MRI may overestimate tumor aggressiveness secondary to the influence of bone marrow and soft tissue edema. The recognition of an osteochondroma is significant because it is benign, but it can