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.

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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 partialvolume 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.

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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, sclerosed 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

lead to disfigurement and loss or altered mandibular function, if not treated.

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THE BEATEN-COPPER PATTERN ON CONE BEAM COMPUTED TOMOGRAPHY.

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Background: Convolutional markings are inner-table indentations that conform to the cerebral surface of growing brain in infants. If they are pronounced over the more anterior parts of the skull, this is referred to as a *beaten-copper skull* (BCS). The significance of BCS has been debated, and is generally considered a normal finding in children. However, a diffuse beaten-copper pattern has been shown to be associated with raised intracranial pressure (ICP).

Objective(s): The aim of this study was to increase awareness of the features of BCS on cone beam computed tomography (CBCT).

Results: A CBCT study of a 4-year-old male was referred for interpretation of radiolucent spots in his head and skull. Findings included diffuse scalloping of the inner table of the anterior and posterior cranial compartments, with localized thinning of the diploe in over 50% of the visualized portions of the frontal, parietal, and occipital bones. No sellar erosion or suture diastases were present. The sagittal suture was not included in the field of view; however, coronal, lambdoidal, frontosphenoidal, frontonasal, sphenosquamous, sphenoparietal, occipitomastoid sutures, and the spheno-occipital synchondrosis were visualized and perceive as not fused.

Discussion/Conclusions: The appearance of BCS is age dependent in both normal children and those with craniosynostoses. Clinically, children with craniosynostoses should be managed by a multispecialty team providing interdisciplinary care; they have unique oral health and craniofacial growth problems and may require CBCT. The wormian bones are considered abnormal or clinically significant when radiolucencies are greater than 10 in number, measuring over 6×4 mm, and presenting with a general mosaic pattern. The majority of patients with craniosynostoses who have elevated ICP have no related symptoms. The associated finding of BCS using CBCT may be incidental; however, physician referral to further evaluate patients for ICP may be warranted in addition to follow-up over a period of time.

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THE ROLE OF MONITORS IN THE VISUALIZATION AND ASSESSMENT OF THE INFERIOR ALVEOLAR CANAL.

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Background: The inferior alveolar canal (IAC) is a familiar landmark for dentists. Clear visualization of the IAC and its relationship with developing or impacted mandibular third molars is especially important. Cone beam computed tomography (CBCT) has improved the ability for more accurate assessment of the IAC.

Objective(s): The aim of this study was to determine if there is a difference in the ability to appropriately assess the third molar−IAC relationship between 3 different monitor types.

Study Design: In all,105 scans were randomized and evaluated by 2 calibrated and masked evaluators. Evaluation was performed on 3 different monitors: BARCO 3 MP medical-grade monitor, a prototype BARCO 2 MP monitor, and DELL ultrasharp monitor. Evaluations were completed in a dimly lit area. The luminance and ambient light were measured using a light meter. All 3 monitors were placed in same position for the evaluators and were adjusted such that the luminance was the same. The gold standard was established by 2 board-certified oral and maxillofacial radiologists and 1 oral and maxillofacial radiology resident, who assessed the data sets after the evaluation was completed and reached a consensus on the location of the IAC.

Results: The medical 3 MP monitor demonstrated the best interrater reliability with a percent agreement of 87% and a kappa value of 0.83. Accuracy was significantly greater with the medical-grade 3 MP compared with the consumer-grade display monitor, with an average increase in accuracy of 10.1%. A significantly higher accuracy (7.2%) was also obtained for the medical-grade 3 MP in comparison with the medical-grade 2 MP by 1 observer.

Discussion/Conclusions: This study found that the IAC can be well visualized and with a higher degree of accuracy on medical-grade display (3 MP) monitors compared with consumer-grade display monitors. The 2 MP prototype medical monitor showed a higher degree of accuracy compared with the consumer-grade monitor, although the differences were not statistically significant.

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