



Massive enlargement of the anterior mandible

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A 49-year-old African-American woman was referred to the University of North Carolina (UNC)—Chapel Hill Oral and Maxillofacial Surgery (OMFS) clinic for evaluation and treatment of an enlargement of the anterior mandible. The patient was aware of the lesion for “a long time” but stated it began notably increasing in size over the past 5 years. She denied paresthesia, pain, and mobile or shifting teeth. Her mother, who was present at the appointment, reported a recent change in her daughter’s speech.

The patient’s medical history was significant for lobular carcinoma in situ of the breast. This condition was diagnosed in 2013 after lumpectomy and treated with an ongoing tamoxifen regimen.

An obvious mass of the mental region, extending submentally and asymmetrically to the left, was visible on extraoral examination (Figure 1). The mass was bony-hard and nontender to palpation. Nerve sensation to the region was normal. Intraoral examination revealed a bony expansion of the mandible extending from the molar region of the left mandible to the molar region of the right. Expansion of both lingual and buccal surfaces was apparent to palpation, with the lingual aspect most dramatically involved. The floor of mouth was raised to the level of the cingula of the mandibular incisors, reducing the tongue space (Figure 2). Posterior open bite and mandibular anterior crowding were noted. Intact mucosa surfaced the lesion.

RADIOGRAPHIC INTERPRETATION

A cone beam computed tomography volume indicated a markedly expansile mass of the anterior mandible, spanning from first molar to first molar in width and from the level of the mandibular occlusal plane to the level of the thyroid cartilage (Figure 3). The borders were well defined and corticated. The lesion appeared to be expanding concentrically, thinning the cortical plates without perforation. No soft tissue capsule was evident. The shape was ellipsoid to round, with the epicenter apical to the mandibular incisors.

The density of the lesion was mixed radiolucent and radiopaque. Scattered throughout were internal radiopaque contents that ranged from small, granular flecks to large, coalescing bodies. Given the variation in size and shape of the internal contents, these radiopacities were interpreted as products of the lesion rather than residual bone.

DIFFERENTIAL DIAGNOSIS

Mixed radiolucent/radiopaque masses of the mandible can be grouped into categories of odontogenic cysts and tumors, benign fibro-osseous lesions, and osseous neoplasms. Although the size of the lesion was remarkable, the long-standing history and lack of systemic symptoms did not favor an aggressive malignancy. The well-defined radiographic presentation coupled with a respect of anatomic borders, bony cortices, and surrounding teeth also supported a benign process.

Odontogenic lesions

Of the odontogenic mixed radiolucent/radiopaque lesions, calcifying epithelial odontogenic tumor (CEOT) was considered most likely. CEOT is rare tumor that most commonly presents as a painless, gradually enlarging mass in patients in their third to fifth decade.^{1,2} There is no gender predilection, and these lesions tend to occur in the premolar to molar region of the mandible.¹⁻³ The reported incidence of CEOT association with an impacted tooth ranges but is commonly stated as approximately 50%.¹⁻³ The “driven snow” radiographic appearance associated with it is variably seen, and increased radiographic calcification is expected in long-standing lesions.² Furthermore, these tumors can cause notable expansion.^{1,2} CEOT was high on the differential list because of its

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Fig. 1. (A-C) Extraoral clinical presentation. A large mass is noted at the anterior mandible.

consistency with the demographic, radiographic, and clinical presentation of our case.

A second odontogenic lesion considered was the rare odontoameloblastoma (OA). As the name implies, this lesion has histologic features of an odontoma and ameloblastoma but with locally aggressive behavior more consistent with an ameloblastoma.^{3,4} Fewer than 50 cases are reported in the literature, thus the lesional characteristics are not completely defined. Some reports find the lesion to occur with equal frequency in the maxilla and mandible, while others state a mandibular predilection.³⁻⁵ Cases are reported in both posterior and anterior regions, with most diagnosed in patients younger than 30 years of age.^{4,5} Although the age

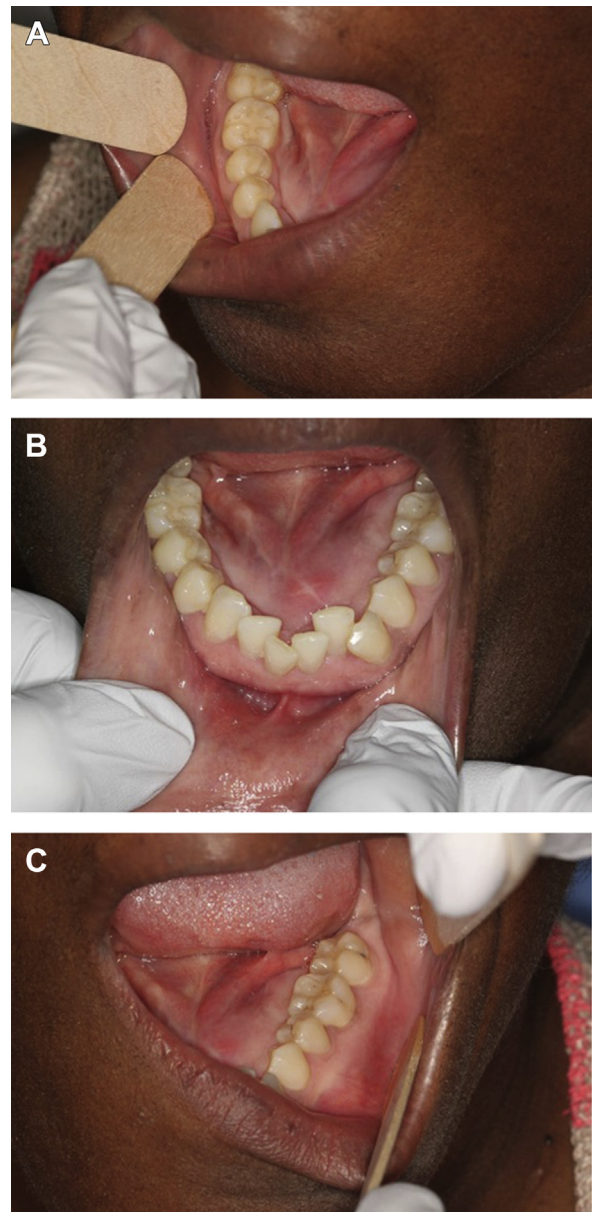


Fig. 2. (A-C) Intraoral clinical presentation. The mandibular lesion extends from molar to molar. Expansion is most apparent at the lingual aspect where the floor of mouth is significantly elevated. Overlying mucosa is intact.

predilection did not fit our patient, the size of the lesion and radiographic features of cortical expansion, internal calcifications, and displacement of teeth were congruous with OA. Because of the rarity, this diagnosis was not likely, but it warranted consideration based on the size and supportive radiographic features.

Benign fibro-osseous lesions

Benign fibro-osseous lesions (BFOLs), including central ossifying fibroma (COF), fibrous dysplasia (FD),

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