



Odontogenic myxoma with diffuse calcifications: a case report and review of a rare histologic feature

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Calcifications have been rarely reported in odontogenic myxoma. We describe here an additional case and review all reported cases. A 45-year-old female patient presented with a gingival swelling around a mobile mandibular left second molar. Radiographic investigation revealed a large multilocular radiolucent lesion of the posterior mandible. Microscopic examination revealed an odontogenic myxoma with numerous newly formed trabeculae of bone or cementum-like material present throughout the specimen, reminiscent of those seen in fibro-osseous lesions of the jaws. After total excision, regular follow-up of the patient showed gradual healing of the surgical defect. To our knowledge, only a few documented cases of odontogenic myxoma with calcifications have been reported in the literature. This histopathologic finding is rare but should not lead to the misdiagnosis of a central odontogenic fibroma, cemento-ossifying fibroma, fibro-osseous lesion, or low-grade osteosarcoma. (Oral Surg Oral Med Oral Pathol Oral Radiol 2016;122:e116-e124)

Recently, there have been a number of reports on odontogenic myxomas that show intralesional calcification distinguishable from the commonly seen residual bony trabeculae of the affected area of bone. In this report, we describe an additional case, and review and compare all the previous cases.¹⁻⁶

CASE REPORT

A 45-year-old female patient presented at the Oral Medicine clinic complaining of pain in the temporomandibular joints. Her medical history was significant for hypertension, for which she was under treatment with a beta-blocker. After history taking and examination, she was diagnosed with a nocturnal tooth clenching habit, and a night guard was given to her in December 2013.

On a follow-up visit, the patient complained of a gingival swelling around the mandibular left second molar, which was found to exhibit grade III mobility. A panoramic radiograph revealed an approximately 5 × 3 cm, well-defined, multilocular, radiolucent lesion, extending from the first molar to the beginning of the ramus area, with root resorption of the

first and second molars (Figure 1). Clinically, no bone expansion was noticed, and aspiration was negative. A computed tomography (CT) scan was requested, and the lesion was reported as an “osteolytic lesion mostly representing an invasive process” (Figure 2).

An incisional biopsy with extraction of the second molar was performed. The examined tissue consisted of a fragment of mainly fibrocollagenous connective tissue with a few myxoid areas. Residual bony trabeculae were seen at an area where the lesion had eroded into the soft tissues (Figure 3). Occasional small- and medium-sized trabeculae of mineralized tissue were seen in the myxoid areas (see Figures 3 and 4). The histopathologic diagnosis was “consistent with odontogenic fibromyxoma.”

The lesion was treated with enucleation followed by curettage and peripheral ostectomy under general anesthesia in September 2014. The first molar was removed, but the inferior alveolar nerve was preserved and relocated. The patient has been under regular follow-up, and the surgical defect

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Fig. 1. Cropped panoramic radiograph showing a large, well-defined, multilocular, radiolucent lesion of the left posterior mandible, with root resorption of the first and second molars. Arrows indicate the posterior and superior borders.

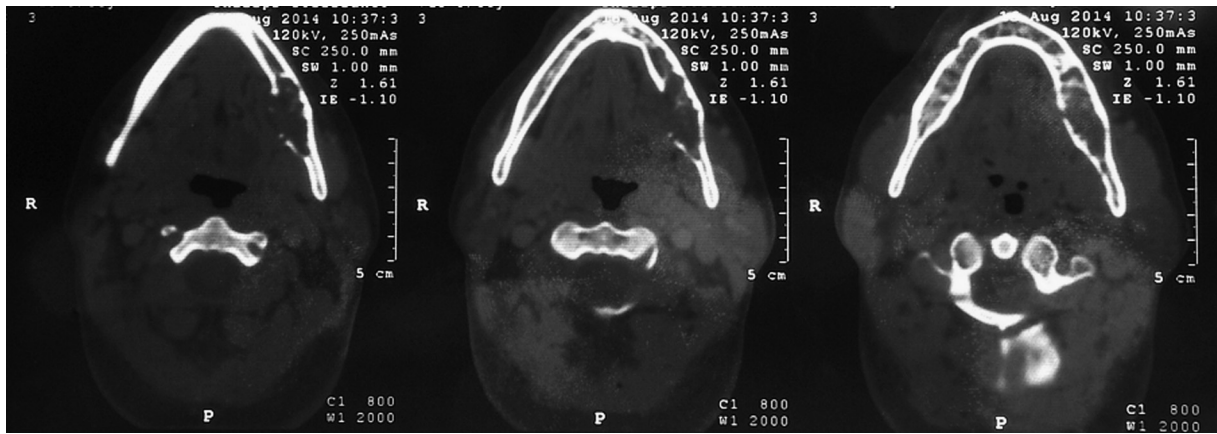


Fig. 2. Part of the computed tomography scan showing an osteolytic lesion of the left posterior mandible, with expansion and resorption of the lingual bone plate.

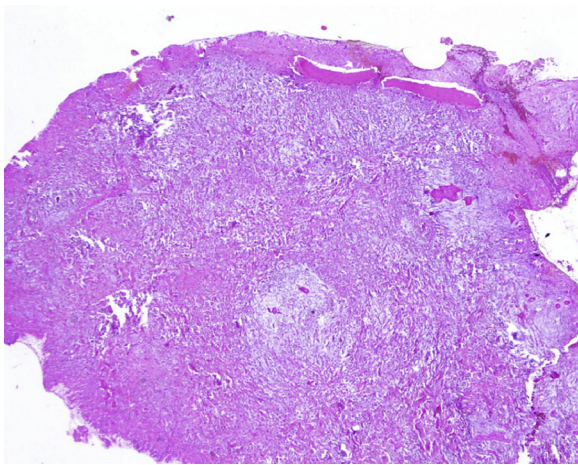


Fig. 3. Incisional biopsy showing fibrocollagenous connective tissue intermixed with myxoid areas. Residual bony trabeculae are seen at the periphery (top) where the lesion had extended into the soft tissues. (Hematoxylin and eosin; magnification $\times 40$). A high-resolution version of this slide for use with the Virtual Microscope is available as eSlide: VM01157.

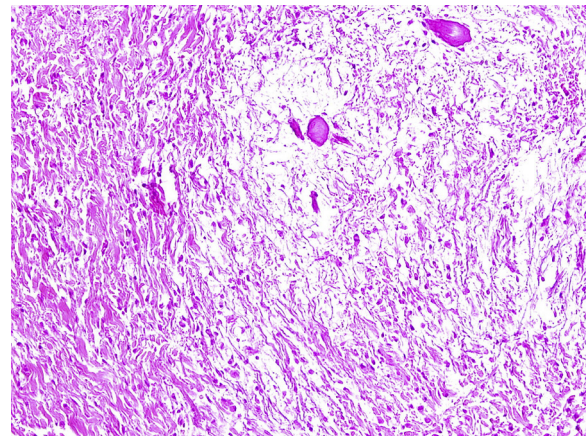


Fig. 4. Incisional biopsy showing trabeculae of mineralized tissue in the myxoid areas. (Hematoxylin and eosin; magnification $\times 100$). A high-resolution version of this slide for use with the Virtual Microscope is available as eSlide: VM01157.

has been healing gradually, with no symptoms of paresthesia. No evidence of recurrence has been observed on the latest radiograph obtained 13 months after excision of the lesion, and normal bone is filling the surgical defect.

HISTOPATHOLOGIC FINDINGS

On microscopic examination, the lesion was found to consist of a poorly circumscribed mass of predominantly loose myxoid connective tissue, with delicate, interspersed collagen fibers, and some areas containing more collagen fibers (Figure 5). The cells varied from spindle-shaped cells to stellate cells, the latter occasionally binucleate, and rounded cells. No mitotic figures or bizarre nuclei were observed (Figure 6).

Scattered within the myxoid areas, numerous trabeculae of calcified tissue resembling cementum were observed, varying from small spherical islands, to larger, irregular trabeculae with rounded margins (Figure 7). Lacunae-containing cells were seen (Figure 8), and the amount of calcification was variable (see Figures 7 and 8). Occasional trabeculae showed collagen fibers radiating from their peripheries (Figure 9).

Near the surface mucosa, the lesion had eroded through bone in a lobular manner, and residual bony trabeculae were seen between lobules (Figure 10). Some areas showed a distinct arrangement of poorly fibrous myxoid foci, with calcified trabeculae at their centers and fibromyxoid tissue at the peripheries (Figure 11). A rare epithelial island was seen near the margin of one section (Figure 12). The final

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