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CASE REPORT

Myxofibroma of the maxilla, current concepts, and differential diagnosis

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Abstract Odontogenic myxomas represent a small portion of all odontogenic tumors. A myxoma of the bone is a rare lesion that occurs almost exclusively in the jaws. An odontogenic myxoma has a variable clinical and radiological appearance, and it should be considered in the differential diagnosis of radiolucent and mixed radiolucent–radiopaque lesions of both jaws in all age groups. Myxomas consist of an accumulation of mucoid ground substance with little collagen, the amount of which determines whether it is called a myxofibroma. This paper presents the case of a 39-year-old male with a solid whitish red, nonulcerative, nontender expansion of both the buccal and palatal sides of the right upper alveolar bone. Results of a radiological examination revealed a unilocular radiolucency with cortical expansion and displacement of both the right upper second premolar and the first molar. The lesion was totally excised, and the histopathological examination showed a myxofibroma. Healing was uneventful, and there was no recurrence 12 months after surgical excision. Complete removal of the tumor, leaving no remnants attached to the soft tissue or bone, should be considered because of the well-known potential of myxofibromas to recur.

Introduction

Myxomas are tumors usually seen in the left atrium of the heart, skin, subcutaneous tissues, and centrally in the bones.[1] According to the histological classification of odontogenic tumors by Pindborg and Kramer, myxomas and myxofibromas are benign tumors that infiltrate and consist

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wholly or partly of a myxoid stroma containing loosely arranged fusiform and stellate cells with more or less long anastomosing processes.[2] The World Health Organization classifies these tumors as benign odontogenic neoplasms consisting of rounded and angular cells lying in an abundant myxoid stroma.[3]

Myxomas represent 3–6% of all odontogenic tumors. These slow-growing tumors consist of an accumulation of mucoid ground substance with little collagen, the amount of which determines whether they are called myxofibromas. A myxofibroma of the bone is a rare lesion, which occurs almost exclusively in the jaws.[3,4] In some cases, a myxoma is an aggressive tumor capable of extensive local infiltration and bone destruction, and it can spread into adjacent soft tissues. Although the mandible and maxilla are the two most common sites of head and neck myxomas, they have also been reported in the parotid glands, nasal cavity, paranasal sinuses, nasopharynx, and eyelids. The mandible is involved more often than the maxilla, and most reports show a slight predilection for females.[5,6] The angle of the jaw, ramus, and adjacent molar region are most commonly affected. The anterior mandible is involved less frequently than the posterior mandible and ramus.[4] Myxomas usually occur in the 2^{nd}–4^{th} decades of life, with a peak in the 3^{rd} decade. Because they are benign tumors with a slowly progressive course, surgical options vary from conservative approaches, such as curettage or enucleation, to more aggressive lesions requiring a local anesthetic or *en bloc* resection.

This article presents a case of a myxofibroma, briefly reviews the pertinent literature, and suggests possible steps for the differential diagnosis.

Case presentation

A 39-year-old male was referred to the Department of Oral and Maxillofacial Surgery, Faculty of Dentistry, Istanbul University, Istanbul, Turkey, for evaluation of an expansion in the posterior right maxilla. The mass was slowly growing, and the patient was referred to our hospital by a private dentist.

The clinical examination revealed a solid, whitish red, nonulcerative, nontender fixed swelling that had a hard consistency and measured 2 cm × 2 cm. The swelling was located in the right posterior maxilla, and involved a part of the buccal mucosa that approached both the buccal and palatal sides of the alveolar bone. The texture and color of the overlying skin were normal. The patient could recall no pertinent traumatic or medical history.

A radiological examination showed a well-defined pear-shaped unilocular radiolucency with cortical expansion and displacement of both the premolar and the molar. The radiolucency had clearly defined borders. The superior surface was slightly scalloped and had displaced the floor of the sinus (Fig. 1). No destruction of the root of the premolar or the molar was seen. An axial computed tomographic examination showed both buccal and palatal expansion of the lesion extending from the first premolar to the second molar and the exact borders (Fig. 2). The regional lymph nodes were not palpable.

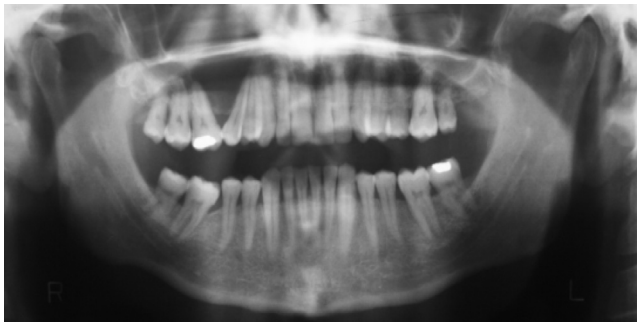

Figure 1 Preoperative panoramic view of the lesion showing a typically well-circumscribed, unilocular radiolucency that caused displacement of the adjacent tooth roots.

Under a local anesthesia, the lesion was removed with a margin of healthy tissue. Both the second premolar and the molar were extracted. Healing was uneventful, and there was no recurrence after 12 months (Fig. 3).

The gross pathologic examination revealed an unencapsulated mass with the surrounding condensed tissue often mistaken for a capsule. The resected tumor was a smooth, glistening, mucoid, or gelatinous lobulated mass. Its color varied from whitish white to yellow.

A microscopic examination showed a myxomatous tissue structure composed of loosely arranged spindle cells and small hyperchromatic stellate cells surrounded and separated by an abundant myxomatous ground substance (Fig. 4). The tumor contained islands of cytokeratin (CK 1–3)-positive odontogenic epithelium (Fig. 5). The histopathological diagnosis was a myxofibroma.

Discussion

When a myxofibroma is seen in the jaw, it is presumed to be associated with the dental anlage because of its close similarity to the mesenchymal portion of the tooth germ (i.e., the dental follicle, papillae, or periodontal ligament).

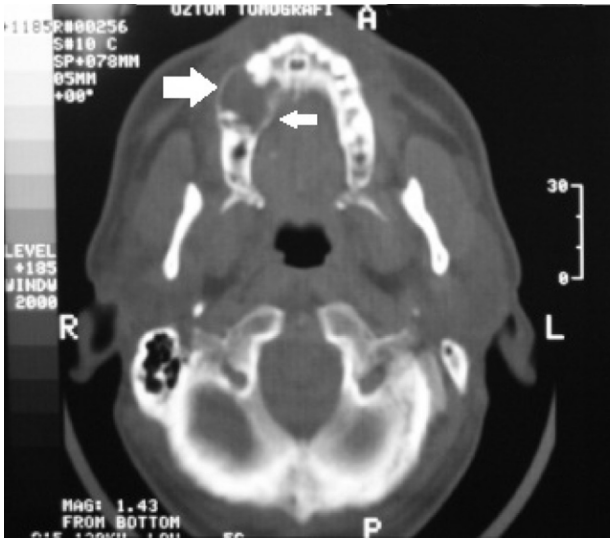

Figure 2 Axial computed tomographic scan of the lesion showing buccal and palatal expansion.

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