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Case Report

# Odontogenic Myxoma: A Rare Tumor in the Maxillary Sinus

**Ahmet Hamdi Kepekci,[1,2] Ozge Ozdal Zincir,[3] Ali Bestemi Kepekci[4,5]**

[1]Division of Audiometry, Health Occupation High-School, Yeni Yüzyil University, Istanbul, Turkey
[2]Department of Otorhinolaryngology, Private Meltem Hospital, Istanbul, Turkey
[3]Department of Oral Maxillofacial Surgery, Private Meltem Oral and Dental Health Polyclinics, Istanbul, Turkey
[4]Department of Anesthesia, Meltem Hospital, Istanbul, Turkey
[5]Department of Anesthesia, Health Occupation High-School, Yuzyil University, Istanbul, Turkey

## Abstract

Odontogenic myxomas (OMs) are benign neoplasms of the jaws. It is estimated that myxomas comprise 3% to 6% of odontogenic tumors. They are locally invasive benign neoplasms that are most often detected in routine radiographical examinations. OMs typically occur in the mandible, and especially in the molar region. The aim of this case report was to emphasize the clinical presentation of a rare tumor derived from the floor of the left maxillary sinus. A 39-year-old female patient presented at the outpatient clinic for swelling due to an abscess formation around the 27th and 28th teeth on the left maxilla. A solid mass that filled three-quarters of the maxillary sinus was observed on a paranasal sinus scan. The histopathological diagnosis of the tumor was OM. OM is a rare benign tumor of the maxilla that often extends into the maxillary sinus. It can be diagnosed in routine radiographical examinations and surgery is the only treatment option. Since it has a high recurrence rate, close follow-up is important in the postoperative period.

**Keywords:** Odontogenic myxoma, histopathological examination, paranasal sinus tomography

Odontogenicmyxomas (OMs) are benign tumors that originate from the structures of a developing tooth, including the dental follicle, dental papilla, or periodontal ligament.[1] Histologically OMs are described as benign odontogenic tumors of embryonic mesenchymal tissue characterized by a rare composition of round and angularshaped cells in. OM is a slow growing tumor. Its stroma contains different amounts of mucoid and collagen substances. The local invasive character of OMs originates from the accumulation of these substances in the stroma, which promotes tumor growth.[2] It is a painless, slow-growing swelling in the maxillary or mandibular region.[3] CT and MRI imaging is superior to plain radiography. Radiographically OM presents a unilocular or multilocular radiolucency with well-defined borders and fine bony trabeculae within its structure;[4] dental displacement and root resorption on conventional radiographs and panoramic radiographs are relatively common findings.[5] A definite diagnosis is achieved by biopsy.

## Case Report

A 39-year old female patient sought treatment from anoral maxillofacial surgeon for swelling in the left palatal region

**Address for correspondence:** Ahmet Hamdi Kepekci, MD. Health Occupation High-School, Yeni Yuzyil University, Istanbul, Turkey
**Phone:** +90 212 644 22 00 **E-mail:** ahmethamdi.kepekci@yeniyuzyil.edu.tr
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and left maxillary edema due to a tumoral mass and abscess formation around the 27th and 28th tooth; she was referred to the ENT outpatient clinic. On her paranasal sinus scan there was a solid mass that filled ¾ of the maxillary sinus and originated from the bony floor with moderate cortical expansion (Fig. 1). After 1 week of antibiotic therapy,we performed Caldwell-Luc operation under general anesthesia to excise the tumor and conduct a histopathological examination for definite diagnosis. The tumor was greyish white in color and its fibrotic nature and big size did not allow us to pull it out from the surgically opened window at the anterior wall of the maxillary sinus; therefore, we divided it into pieces for excision and conducted curettage of the bony floor of the maxillary sinus. During the same session the oral maxillofacial surgeon extracted the 27th and 28th tooth. The patient was discharged from the hospital 2 days later, the postoperative period was uneventful, and OM was the definite diagnosis on histopathological examination (Fig. 2).

## Discussion

The prevalence of OM in all neoplasms is between 0. 04% and 3. 7% in Asia, Europe, and America.[6] Noffke et al.[5] reported the incidence of OM in an age group of 11-70 years. In another study it was reported that OMwas rarely seen in patients younger than 10 years of age and older than 50.[7] The frequency of OM is much higher in female patients.[8] Our case was a 39-year old female patient;her sex and age are compatible with literature reports. The mandible seems to be more frequently affected than the maxilla in most studies.[8] However, Zimmermann and Dahlin[9] reported that OM could be found in the mandible and maxilla with an equal frequency. Maxillary myxomas often extend into the sinus.[3] In our case OM originated from the upper jaw and extended into the maxillary sinus. There was no cortical bone destruction, but cortical expansion was observed. The management of OM is surgical removal of the lesion. [10] The tumor size, contiguous structure infiltration, biopsy results, and general medical condition of the patient are decisive in the choice of surgical approach: enucleation with curettage and peripheral ostectomy or segmental up to radical resection.[10] In our case, removal of the tumor by enucleation and curettage of the maxillary sinus bony floor and extraction of the 27th and 28th molar tooth were performed. In our literature review, we found that the recurrence rates of OM were about 25%–43%, and were closely relate to the location, the extension and invasion character of the lesions, and the type of surgery.[10] Radical resections can guarantee the complete removal of pathological tissues, while conservative enucleation may not remove lesions thoroughly.[10] Most recurrences were identified in the close follow-up during the first 2 years. [10] The prognosis of our case will be determined in the follow-up period.

OM in the maxillary sinus is a rare case. It is a locally invasive benign tumor that originates from odontogenicmesenchymal tissue and is seen a little more frequently in female patients. The treatment of OM is surgical and the optionsare enucleation with curettage and peripheral ostectomy or segmental up to radical resection. Because of the high recurrence rates of OM, close follow-up is very important in the first 2 years.

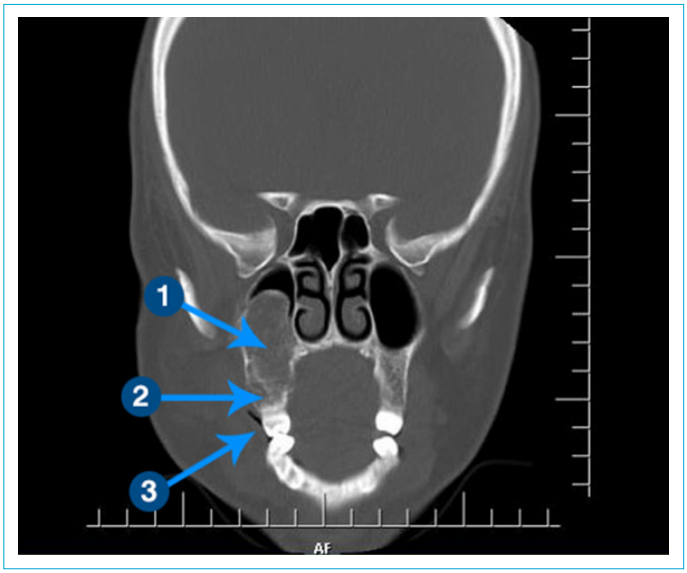


**Figure 1.** A CT view of odontogenicmyxoma in the maxillary sinus. Arrow 1 shows the odontogenicmyxoma with cortical bone expansion; arrow 2 shows the 27th tooth; and arrow 3 shows the 28th tooth.

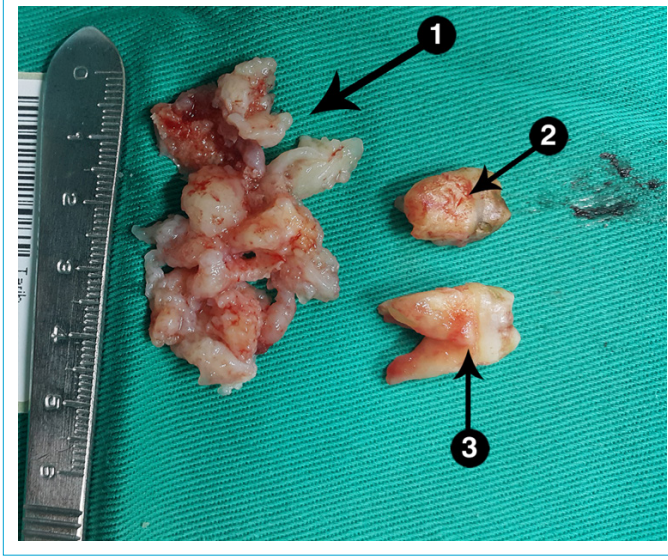


**Figure 2.** OM and the extracted teeth. Arrow 1 shows the excised OM; arrow 2 shows the extracted 27th tooth with root resorption; and arrow 3 shows the extracted 28th tooth.

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**Conflict of Interest:** None declared.

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