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# Myofibroma in the Oral Cavity: A Case Report

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**Abstract**

Myofibroma is a solitary or multicentric benign neoplasm of unknown etiology composed of myofibroblasts; it has a predisposition to the region of the head and neck however it is rarely seen in the oral cavity mostly the mandible as the most common intraoral location, younger patients and children are affected more often with a slight predilection to males. We described a case of myofibroma in the oral cavity as rare presentation.

In this report, it was seen in a 14-years-old healthy male complaining from Right sided painless firm mass for 6 months with no history of trauma. CBCT revealed a presence of a poorly defined bordered hypodense lesion, located in the angle of the mandible causing perforation of the buccal and the lingual cortical plates. Then an incisional biopsy from the mass was submitted to the histopathological analysis which revealed features of a benign spindle cell tumor consistent with myofibroma and it was confirmed by immunohistochemistry.

The current case report is better understand the tumor characteristics clinically and histo-pathologically and the treatment options and the outcome of the tumor. The use of Immunohistochemical examination for the diagnosis confirmation is mandatory.

**Keywords:** myofibroma, myofibroblasts, oral cavity, immunohistochemistry, incisional biopsy

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# Миофиброма полости рта: клинический случай

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**Резюме**

Исследован 14-летний здоровый молодой человек с жалобами на правостороннее безболезненное твердое образование в полости рта, выявленное 6 мес. назад. Согласно анамнестическим сведениям, травм не было. Клинико-инструментальное исследование позволило установить наличие гиподенсивного поражения с нечеткими границами, расположенного в углу нижней челюсти, вызывающего перфорацию щечной и язычной кортикальных пластинок. Биоптаты ткани опухоли были подвергнуты гистопатологическому анализу, который выявил признаки доброкачественной веретеноклеточной опухоли, соответствующей миофиброме, что было подтверждено иммуногистохимическим исследованием.
Выявленный клинический случай позволяет лучше понять клинические и гистопатологические характеристики опухоли, а также варианты лечения и исходы заболевания. Для подтверждения диагноза обязательно проведение иммуногистохимического исследования.
**Ключевые слова:** миофиброма, миофибробласты, ротовая полость, иммуногистохимия, инцизионная биопсия

## ■ INTRODUCTION

Myofibroma is a solitary or multicentric benign neoplasm composed of myofibroblasts and originates from soft tissues, bones, and internal organs and rarely in the intracranial area but there is a predisposition to the head and neck region however it is rarely found in the oral cavity mostly the mandible as the most common oral location followed by the tongue, and in the younger age groups, it shows a predilection for bone involvement [1].

Younger patients and children are affected more often with s slight predilection to males, clinically intraoral myofibroma presented as a painless swelling that grows slowly but sometimes it shows a rapid growth pattern and in such cases, it may be misdiagnosed as a sarcoma [2].

The etiology of this tumor in the head and neck region is uncertain since there were few documented cases of it but it is believed that myofibroma may have a pattern for

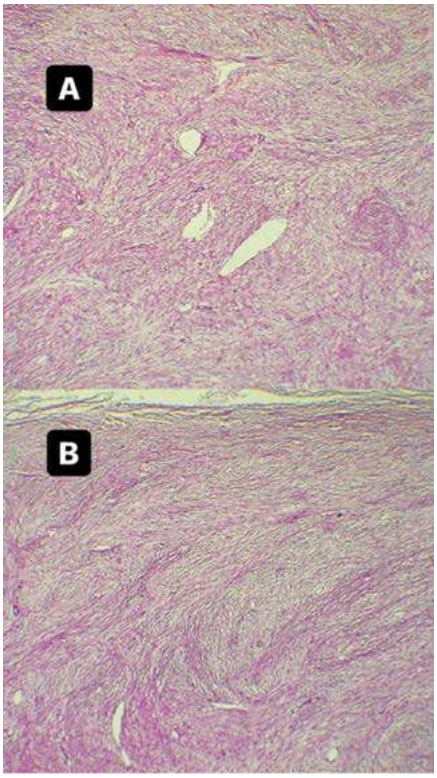
myofibromatosis familial inheritance or it could be caused in response to trauma that stimulates myofibroblasts proliferation [3].

It is rare to find myofibroma in the maxilla and its diagnosis my confused with other mesenchymal lesions or low-grade malignant spindle cell neoplasms; therefore it is essential to perform an accurate diagnosis with the aid of clinical and radiographical data besides the microscopical and immunohistochemical feature [4].

The present case report purpose to better understand the tumor characteristics clinically and histopathologically, and also discuss the treatment options and the prognosis of this tumor. And the use of immunohistochemical examination for the diagnosis confirmation.

## ■ A CASE REPORT

A 14-years-old healthy male has been referred to the department of oral medicine at the College of Dentistry, University of Basrah. He had a chief complaint of right sided painless firm mass extend from midline to the angle of mandible for 6 months duration with no history of a trauma and covered with normal mucosa, the mass causing displacement of teeth, the extraoral examination showed no palpable lymph nodes.




**The histopathological examination from the mass: A – Fascicles of bland looking spindle cell proliferation arranged in hyper and hypo cellular areas; B – Irregularly branching blood vessels similar in appearance to those associated with hemangiopericytoma and areas of ulcerated overlying epithelium**

Radiographic evaluation was made by panoramic radiograph and confirmed by Cone-beam computed tomography (CT). The radiograph shows missing of lower 1st and 2nd molar and super eruption of opposing teeth, a unilocular lesion was evident on lower right mandible extending from 2nd premolar to 3rd molar region, the radiodensity of the lesion gives a hint about the presence of a mass rather than having a cystic cavity, The lesion on C.B.CT exhibit buccal and lingual expansion, having some osseous discontinuity on the area of alveolar crest. The shadow of inferior dental nerve was completely obliterated by the lesion which possibly justifies the paresthesia reported by the patient; no cortication was evident on the radiograph which suggests a rapid growth of the lesion.

An incisional biopsy from the mass was submitted to histopathological analysis, reveals features of benign spindle cell tumor consistent with Myofibroma which was confirmed by immunohistochemistry. The histopathological examination reveals fascicles of bland looking spindle cell proliferation arranged in hyper and hypo cellular areas with irregularly branching blood vessels similar in appearance to those associated with hemangiopericytoma and areas of ulcerated overlying epithelium (Figure). Immunohistochemical Examination: For tumor cells. Positive Stains for Vimentin, and pan-actin. Negative stains for S100, CD117, beta-Catenin, desmin, and CD34.

Then treated by wide surgical excision with safe margin to prevent recurrence in which on gross examination revealed part of mandible with tooth and mass surround the body and angle of the mandible measure (10×8×6 cm), the mass firm in consistency on cut sections gray white in color.

## ■ DISCUSSION

The purpose of this report was to present a case of Myofibroma in the 14 years old male which is rare case in Basrah city with lack of reports regard it.

Myofibroma is a mesenchymal tumor that rarely impact tissues and organs but occur more commonly in the head and neck region, it is composed of proliferating benign myofibroblasts [5].

It is of unknown etiology but trauma can be a provoking agent or inherited as an autosomal dominant [6], but in this case the patient has no history of trauma, this indicates the genetic nature of the lesion.

Clinically in this case Myofibroma presented as a painless firm mass extend from midline to the angle of mandible in the right side with displacement of the teeth, so the diagnosis was challenging since it is similar to other bony lesions but the symptoms were mentioned in many other reports of Myofibroma in the mandible as described by many authors [4, 7].

Cone-beam computed tomography revealed the presence of a poorly defined borders hypodense lesion, located in the angle of mandible causing perforation of buccal and lingual cortical plates, that direct the provisional diagnosis toward the sarcomas and incisional biopsy was taken to confirm the correct diagnosis.

The differential diagnosis of Myofibroma histopathologically must include all the tumors of muscular, neural origin and certain tumors like desmoplastic fibroma, fibromatosis, and low-grade fibrosarcoma, the immunopositivity with S100 lesions aids in exclusion of the neural origin since it is absent in Myofibroma, moreover the reactivity for desmin of leiomyoma and leiomyosarcoma is beneficial in this situation beside these lesions are rare in bone, also leiomyosarcomas possess considerably more cellular

pleomorphism and higher mitotic rate [7]. Our case the Histopathological examination showed fascicles of bland looking spindle cell proliferation arranged in hyper and hypo cellular areas and Immunohistochemical Examination for tumor cells was positive to Vimentin, and pan-actin. And negative for S100, CD117, beta-Catenin, desmin, and CD34, this confirms the diagnosis of Myofibroma.

## ■ CONCLUSION

Myofibroma is a rare spindle cell neoplasm and in this case report it presented as a solitary lesion in 14 years old healthy male involving the mandible with no history of trauma and it considered rare case in Basrah city with lack of reports regard it, histopathological diagnosis confirmed by immunohistochemistry which differentiate it from other benign spindle cell neoplasm and treated by surgical excision.

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