Case Report / Olgu Sunumu
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Oral Focal Mucinosis of the Edentulous Area of the Maxilla: A Rare Case Report

Maksillanın Dişsiz Bölgesinde Oral Fokal Müsinozis: Nadir Bir Olgu Sunumu

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ABSTRACT

Oral focal mucinosis (OFM) is a relatively uncommon benign connective tissue lesion of unknown etiology, primarily affecting the gingiva. Clinically, OFM has no specific appearance; it resembles more specific conditions like fibroepithelial hyperplasia and other reactive lesions. Histologically, it is characterized by loose myxoid connective tissue stroma with slightly enlarged fibroblasts. This case report aimed to describe clinical, histological, and immunohistochemical features of an OFM in a 71-year-old edentulous male patient affecting the right maxillary alveolar mucosa. The lesion presented as a painless, dome-shaped, sessile nodule. Histopathological examination revealed a circumscribed area of increased mucin deposition within the lamina propria, devoid of inflammatory cells. This case highlights the importance of considering OFM in the differential diagnosis of soft tissue lesions of the oral cavity, even in edentulous patients, and underscores the diagnostic role of histopathology.
Keywords: Oral focal mucinosis; myxoid lesion; oral pathology; gingiva; mucin.

ÖZ

Oral fokal müsinozis (OFM), etiyolojisi bilinmeyen, nispeten nadir görülen iyi huylu bir bağ dokusu lezyonudur ve öncelikli olarak dişetini etkiler. Klinik olarak OFM'nin spesifik bir görünümü yoktur; fibroepitelyal hiperplazi ve diğer reaktif lezyonlar gibi daha spesifik durumlara benzerlik gösterebilir. Histolojik olarak, hafif büyümüş fibroblastlar içeren gevşek miksoid bağ dokusu stroması ile karakterizedir. Bu olgu sunumunun amacı, 71 yaşında dişsiz bir erkek hastada sağ maksiller alveolar mukozayı etkileyen bir OFM'nin klinik, histolojik ve immünohistokimyasal özelliklerini tanımlamaktır. Lezyon ağrısız, kubbemsi şekilde, sesil bir nodül olarak izlenmiştir. Histopatolojik incelemede, lamina propriada inflamatuvar hücre içermeyen, sınırlı bir alanda artmış müsin birikimi gözlenmiştir. Bu olgu, oral kavite yumuşak doku lezyonlarının ayırıcı tanısında, dişsiz hastalarda dahi, OFM'nin göz önünde bulundurulması gerektiğinin öneminin altını çizmekte ve histopatolojinin tanıdaki rolünü vurgulamaktadır.
Anahtar kelimeler: Oral fokal müsinozis; miksoid lezyon; oral patoloji; dişeti; müsin.

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INTRODUCTION

Oral focal mucinosis (OFM), also known as oral myxoma, is a rare, benign connective tissue lesion characterized by localized deposits of mucin in the lamina propria of the oral mucosa (1). First described by Tompkins and Nasif in 1985 (2), it is considered the oral counterpart of cutaneous focal mucinosis. While the exact etiology remains unknown, theories involve localized overproduction of hyaluronic acid by fibroblasts (3). OFM typically presents as a solitary, painless, slow-growing,

dome-shaped nodule, with a smooth surface and normal coloration (4). It is most commonly found on the gingiva, followed by the palate, tongue, and buccal mucosa (5). OFM rarely affects edentulous areas.

The aim of this case report was to present an unusual occurrence of OFM on the right maxillary alveolar mucosa of a 71-year-old edentulous male, providing a detailed description of the clinical presentation, histological findings, and differential diagnosis.

CASE REPORT

A 71-year-old edentulous male patient reported to the dental clinic for a routine oral examination. His medical history was unremarkable, and he was not taking any medications known to be associated with oral lesions. Extraoral examination revealed no abnormalities. Intraoral examination revealed a firm, non-tender, dome-shaped nodule on the right maxillary alveolar mucosa. The lesion measured approximately 2×2 cm in diameter and was sessile (Figure 1A). The overlying mucosa was normal in color and texture. The patient reported that the lesion had been present for several months and had been slowly increasing in size. He denied any history of trauma to the area. Palpation revealed a slightly resilient consistency. Based on the clinical appearance, a provisional diagnosis of fibroma was given. An excisional biopsy was performed under local anesthesia (Figure 1B). The tissue was fixed in 10% formalin, embedded in paraffin, sectioned, and stained with hematoxylin and eosin (H&E) for histopathological examination. Histological examination revealed a well-circumscribed, unencapsulated lesion within the lamina propria. The lesion was characterized by a diffuse accumulation of amorphous, pale-staining myxoid material, consistent with mucin. The mucin contained sparsely distributed, bland-appearing fibroblasts with elongated nuclei. No inflammatory cell infiltrate was observed (Figure 2A). The overlying epithelium was normal in appearance (Figure 2B). Alcian blue staining at pH 2.5 highlighted the presence of acidic mucosubstances within the lesion (Figure 3). To further characterize the lesion, immunohistochemical staining was performed using antibodies against S-100 protein and smooth muscle actin (SMA). The lesion was negative for S-100 protein, ruling out its neural origin (Figure 4). Based on the clinical presentation, histopathological findings, and immunohistochemical staining results, a diagnosis of OFM was made.

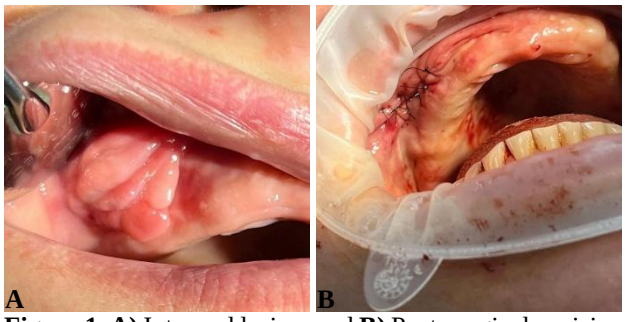


Figure 1. A) Intraoral lesion, and **B)** Post-surgical excision

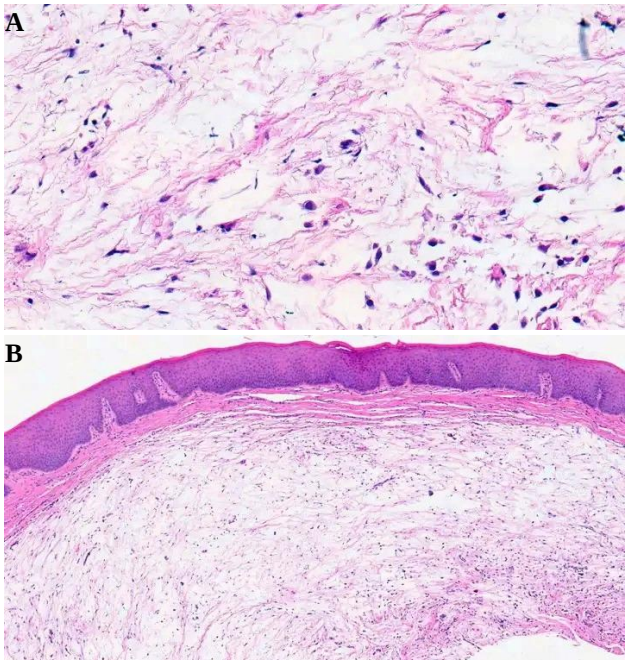


Figure 2. A) Myxoid tissue with numerous spindle-shaped fibroblasts (H&E, x40), and **B)** well-encapsulated lesion with normal overlying epithelium and myxoid areas in the lamina propria (H&E, x10)

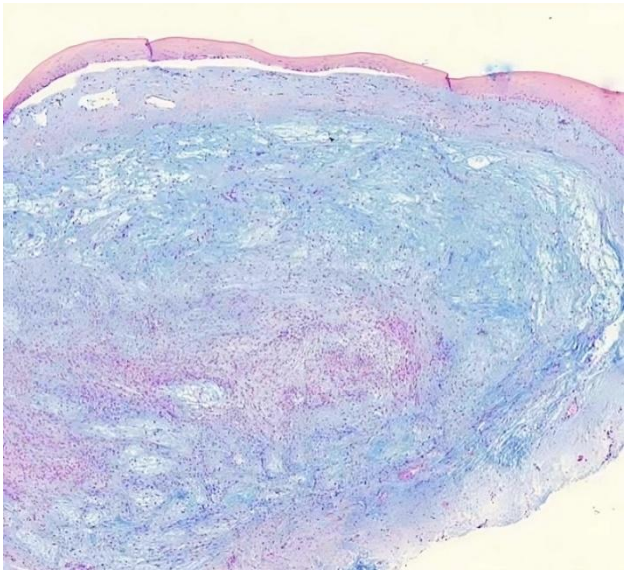


Figure 3. Encapsulated lesion with myxoid areas staining positive for acidic mucosubstances (Alcian Blue, x10)

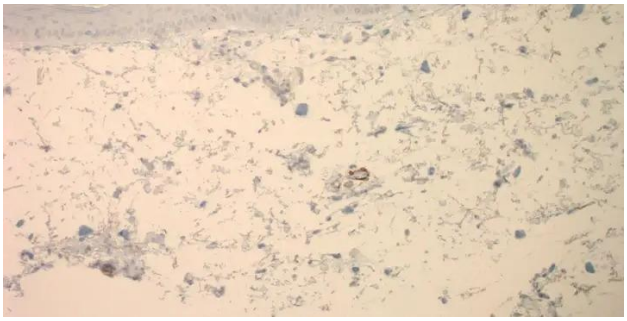


Figure 4. Lesion negative for S-100 protein (x10)

DISCUSSION

OFM is a relatively rare benign myxoid lesion of the oral mucosa (6). While the etiology is not entirely clear, it is hypothesized to be related to localized overproduction of hyaluronic acid by fibroblasts, potentially in response to minor trauma or irritation (3). The predilection for the gingiva may support this theory (5). However, the occurrence of OFM in an edentulous area, as in the present case, suggests that factors other than tooth-related irritation may also play a role.

Clinically, OFM typically presents as a solitary, painless, slow-growing nodule. The lesion is usually covered by normal-appearing or slightly pale mucosa. The clinical differential diagnosis includes lesions such as fibroma, lipoma, neurofibroma, and schwannoma. Histologically, OFM is characterized by a localized accumulation of mucin in the lamina propria. The mucin is typically pale-staining with H&E and stains positively with Alcian blue and other mucin stains. Fibroblasts are sparsely distributed within the mucinous matrix. Inflammatory cells are usually absent (7).

The histological differential diagnosis includes myxoid liposarcoma, myxoma, low-grade mucoepidermoid carcinoma, nerve sheath myxoma, and peripheral odontogenic myxoma. Myxoid liposarcoma is rare in the oral cavity but can be distinguished from OFM by the presence of lipoblasts and a characteristic vascular pattern (8). Myxoma is a benign mesenchymal neoplasm that histologically can resemble OFM; however, myxomas are typically larger, more infiltrative, and extremely rare in the oral cavity (9). Low-grade mucoepidermoid carcinoma can also exhibit myxoid features but will have evidence of epithelial differentiation, such as mucous cells, intermediate cells, and squamous cells (10). Nerve sheath myxoma is a variant of neurofibroma, is included in the differential diagnoses of mucinosis. It is characterized by fibrous septa between multiple myxoid nodules and shows positivity for S-100 (11). Peripheral odontogenic myxoma is a soft tissue counterpart of jaw odontogenic myxoma, characterized by mucoid-rich stroma, stellate-shaped fibroblasts, and nests/islands of odontogenic epithelium (12).

Immunohistochemical staining can be helpful in differentiating OFM from other lesions. OFM is typically negative for S-100 protein, ruling out neural tumors. Treatment for OFM is typically conservative surgical excision. Recurrence is rare (5). In this case, the lesion was completely excised, and the patient has been followed up for 6 months with no evidence of recurrence.

CONCLUSION

This case report describes an unusual presentation of OFM on the right maxillary alveolar mucosa of a 71-year-old edentulous male. It highlights the importance of considering OFM in the differential diagnosis of soft tissue lesions of the oral cavity, even in edentulous patients. Accurate diagnosis relies on a combination of clinical examination, histopathological evaluation, and, in some cases, immunohistochemical staining. Surgical excision is the treatment of choice, and prognosis is excellent.

Informed Consent: Written informed consent was obtained from the patient for publication and accompanying images.

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REFERENCES

1. Gonzaga AK, de Oliveira DH, Lopes ML, Filho TJ, Queiroz LM, da Silveira ÉJ. Clinicopathological study of oral focal mucinosis: a retrospective case series. Med Oral Patol Oral Cir Bucal. 2018;23(4):e401-5.
2. Dill Fuchs L, Borges Kirschnick L, de Farias Gabriel A, Martins Silveira F, Ajudarte Lopes M, Petersen Wagner V, et al. Oral focal mucinosis: A systematic review. Br J Oral Maxillofac Surg. 2024;62(8):669-75.
3. Tomich CE. Oral focal mucinosis. A clinicopathologic and histochemical study of eight cases. Oral Surg Oral Med Oral Pathol. 1974;38(5):714-24.
4. Tonkaboni A, Hafezi Motlagh K, Derakhshan S. Oral focal mucinosis in an adolescent: A rare entity. Clin Case Rep. 2022;10(11):e6594.
5. Ko A, Hyun CL, Lim GC. A submucosal tumor at the base of the tongue. Eur Ann Otorhinolaryngol Head Neck Dis. 2019;136(2):143-5.
6. Bajpai M, Pardhe N. A simplified working classification proposed for myxoid tumors of Oral cavity. Iran J Pathol. 2017;12(4):413-4.
7. Cameron A, Webster JEN, Wicks CE, Colbert SD. Oral focal mucinosis of the palate: a rare disease entity. BMJ Case Rep. 2020;13(3):e230233.
8. Fusetti M, Silvagni L, Eibenstein A, Chiti-Batelli S, Hueck S, Fusetti M. Myxoid liposarcoma of the oral cavity: case report and review of the literature. Acta Otolaryngol. 2001;121(6):759-62.
9. Bajpai M, Pardhe N, Vijay P. Superficial angiomyxoma of palate. J Coll Physicians Surg Pak. 2017;27(12):794.
10. Chandolia B, Bajpai M, Arora M. Mucoepidermoid carcinoma in a 62-year female. J Coll Physicians Surg Pak. 2017;27(12):793.
11. Xu F, Jin Y, Li Q, Dong F, Lu L, Cui Q, et al. Intradural extramedullary nerve sheath myxoma of the cervical spine: a case report and review of literature. Front Surg. 2022;8:722254.
12. Bajpai M, Pardhe N. Extra-osseous odontogenic myxoma of maxillary gingiva. J Coll Physicians Surg Pak. 2017;27(3):S28-9.