



INTRAORAL LIPOMAS: A CASE SERIES

İNTRAORAL LİPOM: VAKA SERİSİ

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ABSTRACT

This report aims to present 5 cases of intraoral lipoma with clinical findings, surgical treatment and histopathological features. Provisional diagnosis of minor salivary gland neoplasm, fibroma and lipoma was made for all of the cases according to clinical examination. Excisional biopsy was performed with blunt dissection. Lobular, yellowish, encapsulated masses were obtained from the patients and excised specimens were sent to pathology laboratory for histopathological analysis. After histopathological examination, all cases were diagnosed with simple lipoma. Successful healing of the oral mucosa was observed in postoperative period. The most important feature of these tumours is that they are asymptomatic. Differential diagnosis is important as it includes malign tumours and some genetic diseases that may be related to tumour.

Key Words: Lipoma, Oral Surgery

ÖZ

Bu çalışmada 5 intraoral lipom olgusunun klinik bulguları, cerrahi tedavisi ve histopatolojik özellikleri sunulmaktadır. Tüm olgularda klinik muayene sonrasında minör tükürük bezi neoplazmı, fibrom ve lipom tanısı düşünülmüştür. Vakaların eksizyonel biyopsileri künt diseksiyon ile yapılmıştır. Eksize edilen örnekler lobüler, sarımsı, kapsül ile çevrili kitleler olarak gözlemlenmiştir ve histopatolojik analiz için patoloji laboratuvarına gönderilmiştir. Histopatolojik inceleme sonrasında tüm olgulara basit lipom tanısı konulmuştur. Postoperatif dönemde oral mukozanın başarılı şekilde iyileştiği görülmüştür. Bu tümörlerin en önemli özelliği, asemptomatik olmalarıdır. Ayırıcı tanı, malign tümörleri ve tümörle ilişkili olabilecek bazı genetik hastalıkları içermesi sebebiyle önemlidir.

Anahtar Kelimeler: Lipom, Oral Cerrahi

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INTRODUCTION

Lipomas are benign mesenchymal neoplasms consisting of mature adipose tissue. They are one of the most common soft tissue tumours in the body and the head and neck regions are affected in 13-20% of all cases.^{1,2} Although being a most common soft tissue tumour, only 1% to 5% of cases occur in the oral cavity.²⁻⁴ They usually occur in the fourth and sixth decades of life with male predilection.^{1,2} Oral lipomas are mainly located in the buccal mucosa followed by the tongue, floor of the mouth, lips, palate and gingival mucosa. Retromolar pad and salivary glands

are less frequently involved sites.⁵⁻⁷ Intraosseous lipomas may also be observed in the body of mandible, ramus or maxilla rarely.^{6,8,9} Clinically oral lipomas usually present as asymptomatic, painless, slow-growing, well-circumscribed, superficial or submucosal lesions covered by normal mucosa. The size of tumor may vary from 2-15 mm but rarely exceeds 25 mm in diameter.^{4,10} Preoperative imaging, including ultrasound, high-resolution computed tomography, and magnetic resonance imaging, can enable a lipoma diagnosis. Nevertheless, histopathology remains as the gold standard for the diagnosis of oral lipomas.^{1,2,11} According to their histopathological features, these



tumours can be classified as simple lipoma, fibrolipoma, angioliipoma, intramuscular or infiltrating lipoma, pleomorphic lipoma, sialolipoma, myxoid lipoma, atypical lipoma, spindle-cell lipoma, osteolipoma or chondrolipoma. Simple lipoma is the most common type.^{12,13} In this report, our aim is to present 5 cases of intraoral lipoma with clinical findings, surgical treatment and histopathological features.

CASE REPORT

The first case was 72-year-old female patient who was referred to our clinic with the complaint of swelling and dysphagia. Her medical history includes hypertension, diabetes and hypercholesterolemia. There was no any sign in extraoral examination. Regional lymph nodes were not palpable. Intraoral examination revealed diffuse sessile swelling in the left lower floor of the mouth covered with normal oral mucosa with a slight yellowish colour. Swelling was mobile and firm on palpation (Figure 1a-e).



Figure 1a. Intraoral appearance of case 1



Figure 1b
Figure 1b-1c. Surgical excision of the tumor

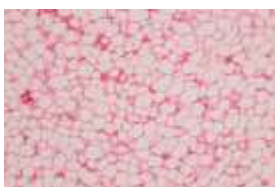


Figure 1d. Histopathological appearance of the tumor (H&E, X10)



Figure 1e. Intraoral appearance after 6 months

The second case was 78-year-old male patient with the complaint of painless swelling at his right buccal area. He had thyroid surgery by the reason of guatr and has been using Levotiron according to his medical history. There was no any asymmetric change extra-orally. Intra-orally, well-defined, sessile, lobuler and mobile mass with the normal color of oral mucosa was observed on palpation (Figure 2a-e).

The third case was 44 year-old female patient with the complaint of painless swelling at her right buccal area. She had neither any systemic disease nor any extra-oral sign. Well-defined, mobile, sessile mass was observed with a slight yellowish color. Oral mucosa was normal without any ulceration (Figure 3a-e).



Figure 2a. Intraoral appearance of the tumor before surgical excision



Figure 2b. Surgical excision of the tumor



Figure 2c. Excised specimen

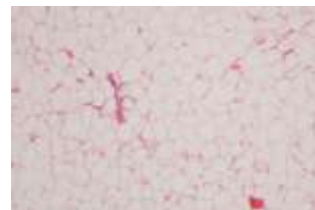


Figure 2d. Histopathological appearance of the tumor (H&E, X10)



Figure 2e. Intraoral appearance after 1 year



Figure 3a. Surgical excision of the tumor



Figure 3b. Excised specimen



Figure 3c. Mature type of adipose tissue in histopathological appearance of the tumor (H-E, X100)



Figure 3d. Fatty tissue cells, filled with lipid, bulging, roundish cytoplasm and small, spindle cores in histopathological appearance of the tumor (H-E, X200)



Figure 3e. Intraoral appearance after 2 years

The fourth case was 40 year-old female patient with the complaint of swelling at her left buccal area. She had no any systemic disease. There was not asymmetric change extra-orally and there was well-defined, mobile, diffuse swelling with normal color of oral mucosa in the left buccal area. (Figure 4a-c).

The fifth case was 14 year-old female patient with the complaint of large swelling at her left buccal

area. There was not any systemic disease in her medical history. Although there were no symptoms during extra-oral examination and palpation of the regional lymph nodes, there was diffuse swelling intraorally in the left buccal area. The swelling was mobile and sessile with a smooth surface and partially pale-yellowish in colour (Figure 5a-d).

Provisional diagnosis of minor salivary gland neoplasm, fibroma and lipoma was made for all of the cases according to clinical examination. Panoramic radiographic examination did not reveal any correlated findings. Excisional biopsy was performed with blunt dissection. Lobular, yellowish, encapsulated masses were obtained from the patients and excised specimens were sent to pathology laboratory for histopathological analysis.



Figure 4a. Surgical excision of the tumor



Figure 4b. Excised specimen



Figure 4c. Intraoral appearance after 5 years



Figure 5a. Intraoral appearance of the tumor



Figure 5b. Surgical excision of the tumor



Figure 5c. Excised specimen



Figure 5d. Intraoral appearance after 4 years

RESULTS

The clinical features and histologic subtypes of the patients are summarized in Table 1. Four of the patients were women and 1 man, with a mean age of 49.6 years. Four of the lesions were in buccal mucosa and one of the lesions was in floor of the mouth. All patients were treated by surgical excision of the tumour.

Table 1. The clinical features and histologic subtypes of the patients (Macroscopic measurements were taken from pathology report.)

Patient's Age	Gender	Site of Tumour	Size of Tumour	Histologic Subtype
72	Female	Floor of mouth	3,5x2x1,5 cm	Simple lipoma
78	Male	Buccal mucosa	5x3x1 cm	Simple lipoma
44	Female	Buccal mucosa	2x1,5x0,7 cm	Simple lipoma
40	Female	Buccal mucosa	3x2x1 cm	Simple lipoma
14	Female	Buccal mucosa	2x1,5x1 cm	Simple lipoma

Lesions were well circumscribed, round, elastic in consistency and presented a yellowish surface. Mature type adipose cells with transparent cytoplasm and small, oval nuclei were observed in the examined

sections. Hyperemic capillary vessels were also observed between the adipose cells.

DISCUSSION

Intra-oral lipoma, a rarely seen tumour at intra-oral region, was first described as "yellow epulis" by Roux in 1848.^{7,8,14} Lesions have a predilection for men and they occur most often in patients older than 40 years.^{13,15} In this study, the number of women was higher and two of the patients were older than 70 years, while two of them were over 40 years of age.

The etiology of intraoral lipoma is unknown, but there are some suggested pathogenic mechanisms. The hypertrophy theory indicates that obesity and inadvertent growth of adipose tissue may be related to formation of these lipomatous lesions. Conversely, there are lesions occurring in areas devoid of preexisting adipose tissue. The metaplasia theory suggests that lipomatous development occurs due to aberrant differentiation of mesenchymal cells into lipoblast. There are other theories including congenital, traumatic, hormonal, infectious, radiative, mechanical factors.^{2,8}

Oral lipomas are commonly observed in the buccal mucosa, followed by the lips, tongue and floor of the mouth.^{2,6} Four of the patients in the presented study have buccal lesions, while one the patients has the lesion in floor of the mouth.

Clinically oral lipomas are painless, slow growing, well-circumscribed, yellowish, submucosal or superficial soft mobile masses with a smooth surface developing for several years. Rarely, lesions can increase in size up to 3-5 cm. Although they are asymptomatic, they can interfere with functions such as speech and chewing in advanced cases.^{15,16} Lesions may also cause a feeling of discomfort. They may be single or multiple, encapsulated or unencapsulated.^{8,15,16} In this study, all lesions were found to be compatible with the general clinical features.

Histological examination without immunohistochemistry is decent for the diagnosis of the tumor. Histologically, lipomas are benign mesenchymal neoplasms composed of fat cells surrounded by a thin fibrous capsule.^{5,10,13} In the literature, there are some reports showing that lipomas and fibrolipomas have similar incidences,^{17,18} or that most cases are simple lipomas.^{13,19} In this study, all cases were diagnosed as simple lipoma.

Differential diagnosis of lipoma includes dermoid and epidermoid cysts, lymphoepithelial cysts,

lymphoma, ranula, ectopic thyroid tissue, mucocele, pleomorphic adenoma, granular cell tumor, fibroma, neurofibroma, traumatic fibroma and mucoepidermoid carcinoma.^{2,3,15,20} Especially in cases that present as a fluctuant nodule, oral dermoid and epidermoid cysts and oral lymphoepithelial cysts can be considered in the differential diagnosis of oral lipomas.² Although oral lymphoepithelial cysts present as yellowish, movable, painless submucosal masses, they differ from oral lipomas in that the nodules are usually small at the time of diagnosis. Besides, oral lymphoepithelial cysts are generally located in the floor of the mouth, soft palate and the pharyngeal tonsil which are uncommon sites for oral lipomas.²¹ Oral dermoid and epidermoid cysts are also submucous nodules but they occur on the midline of the floor of the mouth.²² Differential diagnosis of spindle cell lipoma includes schwannoma, neurofibroma, leiomyoma, solitary fibrous tumour, liposarcoma and dermatofibrosarcoma tuberosans.¹² Odontogenic cyst, ameloblastoma, osteoblastoma, chondrosarcoma, liposarcoma, hemangioma, arteriovenous malformation, simple bone cyst, aneurysmal bone cyst and central giant cell granuloma must be considered in the differential diagnosis of intraosseous lipomas.^{2,6}

Multiple lipomas can be seen in the presence of hereditary diseases such as familial multiple lipomatosis, benign symmetrical lipomatosis, Cowden syndrome (Multiple Hamartoma Syndrome), Adiposis dolorosa (Dercum's disease), Proteus syndrome. This type of lipomas are usually located in the buccal mucosa and salivary glands. Lesions can be observed in various organs, such as the skin, oral mucous membrane, thyroid, breast, ovaries and central nervous system.^{8,14,15}

Because of the histologic similarity between normal adipose tissue and lipoma, accurate clinical and surgical information is very important in making a definitive diagnosis. Thus, a clinician must provide all available clinical and surgical information with surgical specimen to oral pathologist for microscopic analysis. Simple lipomas are the most frequent histologic subtype,^{13,23,24} as we observed in the current study. But other authors have found equal incidences of lipomas and fibrolipomas.¹⁷

Xeroradiography and echography may be used to determine the anatomical extent of lesions. CT and MRI may also be used for the diagnosis of these tumours. Despite all these imaging techniques, histopathology remains the gold standard in the

diagnosis of intraoral lipoma.^{8,13,14}

Although it has not been reported in oral lipomas, the risk of malignant transformation should be taken into consideration as it is rarely reported especially in intraosseous lipomas of the other parts of the body⁶. Simple surgical excision is the treatment for all the histologic variants of oral lipomas. During the procedure, anatomical pitfalls (e.g., Stensen's duct in buccal lesions¹⁰, hypoglossal nerve in lesions of the floor of mouth⁵) should be prevented.¹ Currently, steroid injections have also been used in the treatment. They cause local fat atrophy resulting with shrinking of the tumour size.^{2,8} There is usually no recurrence after surgical excision.¹⁵ However, low recurrence rate is also reported.²⁵ In this study, recurrence did not observed after surgical excision concordantly.

CONCLUSION

Oral lipomas are rare tumours which may usually be recognized during routine dental examinations. The most important feature of these tumours is that they are asymptomatic. Differential diagnosis is important as it includes malign tumours and some genetic diseases that may be related to tumour. It is crucial for a clinician to diagnose oral lipomas and treat them conservatively. The ideal treatment is total surgical excision.

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