Lipoma; a rarity in the oral cavity: a case report

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Abstract

Lipomas are rare, benign tumours of mesenchymal origin, representing 1 – 5% of all benign oral tumors. Clinically, intraoral lipomas present as slow growing, soft, asymptomatic mass. Histopathologically, they are composed predominantly of mature adipocytes admixed with collagenous tissue and may be surrounded by a thin fibrous capsule. Their diagnostic importance lies in the distinction from other benign connective tissue lesions, salivary gland neoplasms and liposarcomas. Complete surgical excision is the treatment of choice and recurrence is rare. Here we report a case of intraoral lipoma in the buccal mucosa.

Key words: Intraoral lipoma, Buccal mucosa, Benign neoplasm, Mature adipocytes, Lymphoepithelial cyst.
Key Messages: Lipomas are benign mesenchymal neoplasms composed of mature adipocytes. Only 2.2% of all lipomas occur in the oral cavity. Clinicians must be able to recognize these rare entities clinically and differentiate them from other connective tissue, salivary gland neoplasms and malignant adipocytic neoplasms so that adequate treatment can be done.

Access this article online	
Quick Response Code:	Website: www.innovativepublication.com
	DOI: 10.5958/2395-6194.2016.00023.0

Introduction

Lipomas are benign mesenchymal neoplasms composed of mature adipocytes, usually surrounded by a thin fibrous capsule.[1] About 20% of these tumors occur in the head and neck region, with oral cavity being involved in 1 - 4% of the cases.[2] Oral lipomas represent 1 to 5% of all benign oral cavity neoplasms.[3] The clinical features may vary according to site of the lesion. The most common site for oral lipomas is the buccal mucosa followed by the tongue, lips and floor of the mouth, palate, and gingiva. This pattern corresponds to the quantity of fat deposits in the oral cavity.[4] Usually they are seen as asymptomatic, long-standing, well – circumscribed, painless, soft nodular swellings covered by normal mucosa, that may be superficially or deeply located. In majority of the cases, the size of lesion is less than 3 cms but may increase upto 5 – 6 cms and can interfere with speech and mastication. The diagnosis is mainly based on clinical findings, but histopathology and imaging studies can help to rule out other lesions. Multiple head and neck lipomas have been observed in neurofibromatosis, Gardner syndrome, encephalocraniocutaneous lipomatosis, multiple familial lipomatosis and Proteus syndrome.[4]

Case Report

A 67 year old female patient reported to our department with a chief complaint of a swelling in the right cheek region since 6 months. The swelling was small at the time of her initial observation which gradually increased and attained the present size. Patient complained of discomfort and feeling of heaviness with no associated pain, discharge or bleeding. No abnormalities were noted on general physical examination.

Intra oral examination showed a well-defined sessile oval swelling measuring 1.5x1.5 cms present in the right buccal mucosa adjacent to edentulous mandibular ridge. The mucosa overlying the swelling appeared normal, uniformly smooth with no secondary changes.[Fig. 1] Palpatory findings revealed that the swelling was non-tender soft in consistency, with the margins slipping under the palpating finger. The underlying yellowish colour of the swelling was apparent when the overlying mucosa was stretched.

Based on the clinical findings a provisional diagnosis of intraoral lipoma was given. A differential diagnosis of soft tissue fibroma, lymphoepithelial cyst, mucocele, minor salivary gland adenoma, chronic soft tissue abscess and liposarcoma were considered.

Patient was further subjected to orthopantomograph which ruled out the involvement of bone. All the haematological parameters were within normal limits. This was followed by excisional biopsy of the growth under local anesthesia. The excised specimen was dissected; the mucous membrane was undermined exposing an oval, encapsulated, and lobulated pale yellow mass measuring 1.9 × 1.6cm.[Fig. 2] Histopathological examination of excised specimen revealed parakeratinized, stratified, squamous epithelium and subepithelial connective tissue, having

large round to oval vacuolated cells with peripheral flat nuclei, resembling adipocytes.[Fig. 3] The histopathological findings were consistent with the diagnosis of intraoral lipoma. There was no recurrence on regular follow-up of the patient.

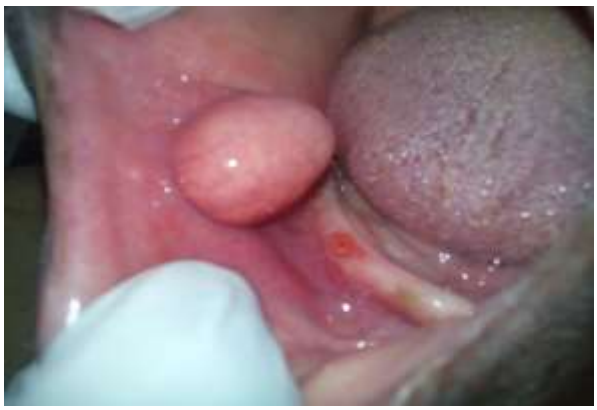

Fig. 1: A well-defined, sessile swelling in the right buccal mucosa

Fig. 2: (A) Gross appearance of the excised lipoma measuring 1.6×1.9cm in size. (b) Excised specimen floating in distilled water suggesting fat content

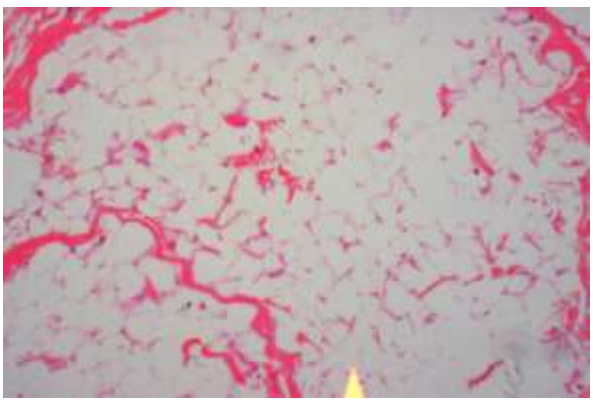

Fig. 3: Histopathological picture showing subepithelial connective tissue stroma, having large round to oval vacuolated cells with peripheral flat nuclei, resembling adipocytes

Discussion

Lipomas are relatively rare intraoral, benign slow growing soft tissue neoplasm of mature fat cells. The first description of intraoral lipoma was provided by Roux in 1848, in a review of alveolar masses which he referred to as "yellow epulis".[5]

The etiology of intraoral lipoma remains unclear, but the suggested pathogenic mechanisms include hereditary, fatty degeneration, hormonal basis, trauma, infection, infarction and chronic irritation.[6] Fornage and Tassin reported that the peak incidence of these tumors occurs in the fifth or sixth decade of life as observed in our case. This benign tumour occurs predominantly in females.[7]

Usually lipomas manifest as slow growing, sessile round to ovoid submucosal nodules. The yellowish colour of the tumour appearing through the overlying thin mucosa could aid in the diagnosis of this rare intraoral tumor. The size varies from 0.2 to 1.5 cm in diameter, although tumours as large as 5 cm have been reported in the cheek. Usually they are asymptomatic but patients may have a feeling of fullness and discomfort. Rarely, large sublingual lipomas may lead to functional problems like difficulty in swallowing, speech and mastication.[8]

Occasionally, Lipomas are confused with oral lymphoepithelial cysts (LECs) which can present with similar clinical findings and yellowish hue. Although oral LECs present as movable, painless submucosal nodules, they are typically white or yellow and contain creamy or cheesy keratinous material in the lumen. They usually occur in the first to third decade of life. and are often less than 1 cm in diameter, firm to soft on palpation with smooth and non – ulcerated overlying mucosa.[3] Mucoceles can be differentiated from lipomas based on their obviously cystic, hemispherical, fluctuant clinical presentation and bluish hue. Because an oral lipoma can occasionally present as a deep nodule with normal surface colour, salivary gland tumours and benign mesenchymal neoplasms should also be included in the differential diagnosis.[3] Liposarcoma should also be considered in the differential diagnosis of their benign counterpart as it also appears to be well circumscribed or encapsulated. However, they are extremely rare in the oral cavity and spread relentlessly into adjacent tissues.[9]

The diagnosis of intraoral lipomas is mainly based on clinical findings. However, computed tomography and magnetic resonance imaging provide an early diagnosis in cases where it is difficult to identify the mass from adjacent tissues. Inspite of availability of all these techniques, histopathology remains the gold standard for definitive diagnosis of lipoma. Microscopic examination usually shows adult fat tissue cells embedded in the stroma of connective tissue and surrounded by a fibrous capsule.[9] However it shall be noted that due to 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 sending a surgical specimen for microscopic analysis must provide the oral pathologist with all available clinical and surgical information.[3]

Immunohistochemistry aids in diagnosis of lipoma by distinguishing white fat in lipoma from brown fat in hibernoma, as adipose cells in lipomas are positive for S-100α and S-100β. Tumour cells in hibernoma show intense positive staining for CD31 characterising distinct vascular network of brown fat whereas it is negative in neoplastic cells of lipoma.[10]

Complete surgical excision is the treatment of choice for Intraoral lipomas. No recurrence has been described after local excision, but infiltrative lipomas tend to recur after inadequate excision due to the fact that they are not encapsulated like simple lipomas. However, there is no reported incidence of malignant transformation.[9]

Conclusion

Lipomas found in oral and maxillofacial region are rare slow growing lesions which may be noticed only during routine dental examination. Most of them seldom cause pain, resulting in delay to seek treatment. The patient's concern regarding esthetics or discomfort may prompt them to seek treatment. Clinicians must be able to recognize these rare entities clinically and differentiate them from other connective tissue, salivary gland neoplasms and malignant adipocytic neoplasms, so that adequate surgical excisions can be done, in order to reduce the recurrence rate and to thereby ensure that the patients get comfort and quality of life.

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