LIPOMA, A RARE INTRAORAL TUMOR – A CASE REPORT WITH REVIEW OF LITERATURE

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Abstract

The lipoma is a relatively rare intraoral tumor, although it occurs with considerable frequency in other areas, particularly in the subcutaneous tissues of the neck. Lipomas are common benign soft tissue neoplasms of mature adipose tissue. They have been known to grow to large sizes causing mastication and speech difficulties. The usual lesions consist of a well circumscribed, lobulated mass of mature fat cells. In other situations the covering mucosa becomes ulcerated and presents difficulties in diagnosis. It seldom occurs in the younger age group. We present a rare case of lipoma affecting the oral cavity of a 13 year old male patient.

Keywords: Lipoma, intraoral tumor.

Introduction

The first description of oral lipomas was given by Roux [1] in 1848 in a review of alveolar mass; he referred it as a "yellow epulis".

Lipomas are common benign mesenchymal neoplasms that rarely occur in the oral cavity. Oral lipomas can occur in various anatomic sites including the major salivary glands, buccal mucosa, lip, tongue, palate, vestibule, and floor of mouth. Although benign in nature, their progressive growth may cause interference with speech and mastication due to tumour's dimension. In most cases the size of the lesion is less than 3cms, but can increase upto 5-6cms over a period of few years. [2]

It is usually found in adults. The female to male ratio for all lipomas is 2: I, but oral lipomas occur more in men than in women (1.5: 1)[3]

The etiology of lipomas is uncertain and the tumors mainly affect the region of the trunk, shoulders, neck and axilla. Lipoma makes up 4–5% of all benign tumors in the body. Involvement of the oral cavity is rare, with lipomas corresponding to less than 4.4% of all benign oral soft tissue tumors. Intraorally it affects the buccal mucosa and vestibule more commonly compared to tongue and floor of the mouth. Lipomas are usually soft, well circumscribed, mobile, slow growing, and asymptomatic. [4]

Histologically, lipomas can be classified into the following microscopic subtypes: simple lipomas, fibrolipomas, spindle cell lipomas, intramuscular or infiltrating lipomas, salivary gland lipomas, myxoid lipomas, and atypical lipomas. [5]

Multiple head and neck lipomas have been observed in neurofibromatosis, Gardner syndrome, encephalocraniocutaneous lipomatosis, multiple familial lipomatosis and Proteus syndrome.

Case Report

A 13 year old male reported to the Department of Oral & maxillofacial pathology, (Vinayaka Missions Sankarachariyar Dental College – Salem) with a chief complaint of a swelling in

the maxillary anterior region for the past six months which had been gradually increasing. He had no difficulty in mastication, speech and deglutition.

Fig 1 *A diffuse ill-defined swelling was noticed in the midline above the vermillion border of the upper lip*

Fig 2: *Soft fluctuant swelling in the midline involving the maxillary labial frenum extending from the mucogingival junction to the marginal gingiva of the maxillary anteriors.*

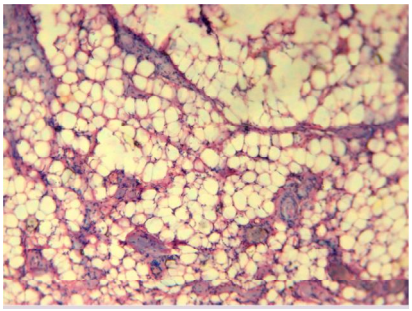

Fig 3: *shows adipocytes in lobules appearing vacuolated with peripherally placed nucleus[.H&E, 10X]*

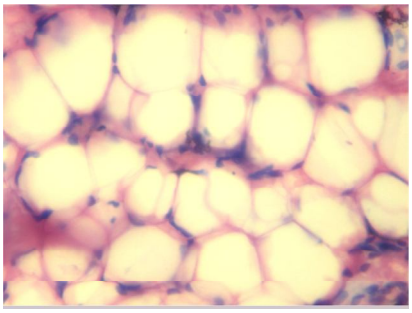

Fig 4: *H & E stain, 40x view showing adipocytes with peripherally placed nucleus.*

Fig 5: *The excised specimen.*

On extra oral examination a diffuse ill-defined swelling was noticed in the midline above the vermillion border of the upper lip. The philtrum was obliterated. The skin over the swelling was stretched.No lymph nodes were palpable. [Fig 1]

Intra oral examination showed a well defined oval swelling measuring 3x3 cms present in the midline involving the maxillary labial frenum extending from the mucogingival junction to the marginal gingiva of the maxillary anteriors. On palpation the swelling was soft, fluctuant, non-tender, mobile and the margins were slippery under the palpating finger. The swelling was non-pulsatile. [Fig 2]

A provisional diagnosis of intraoral lipoma was established. A differential diagnosis of nasolabial cyst and peripheral odontogenic cyst was included. Routine blood examination was found to be normal.
An incisional biopsy was performed under local anesthesia and the biopsy was subjected to histopathological examination at the oral and

maxillofacial pathology department. Microscopically it showed a capsulated lesion with numerous adipocytes with peripherally placed nuclei. Admixed collagenic streaks were seen [Fig 3 & 4]
A diagnosis of intraoral lipoma was established.

The entire lesion was excised, no recurrence has been observed and the patient is under follow-up. [Fig 5]

Discussion

Lipomas of the oral cavity are relatively rare adipose mesenchymal neoplasms. Fregnani et al. [6] reported 46 cases of lipomas of the oral cavity, which corresponded to 0.5% of all tumors diagnosed over a period of 31 years (1970 to 2001) at the Department of Oral Pathology, University of Campinas Dental School.

Most patients with lipoma are above 40 years of age or older, lipomas are uncommon in children. [7] Our case has occurred in a 13 year old male.

Lipoma is a benign slow growing neoplasm composed of mature fat cells. Lipomas in the oral cavity are rare. The most common locations of lipoma in the oral cavity have been reported to be in the buccal mucosa, a region abundant in fatty tissue, followed by tongue. The hard palate has very little fatty tissue and the incidence of a lesion here is quite low. [8]
Lipoma differs metabolically from the normal fat cells even though they are histologically similar. It has been shown that the fat of lipoma is not used for energy production during starvation period, as it happens with normal adipose tissue, their lipid is not available for metabolism. Adipose tissue is present in two basic forms white fat and brown fat.

The clinical features of lipoma's vary according to their rate of growth, size, and location. The usual complaint is of a painless palpable mass, and there is seldom dysfunction of an involved muscle. A characteristic feature is a change in consistency and form of many of these lesions during contraction of involved muscle. The tumor is soft and flat when the muscle is relaxed and becomes firm and more spherical when muscle contracts.

The etiology varies from the differentiation of multipotent mesenchymal cells in fat tissue, cartilage, and bone to metaplasia of a pre-existing lipoma. Mesenchymal cells are modified by systemic and local influences that range from local trauma to prolonged ischemia. [9]

Occasionally, the lipoma may invade muscles or grow between them: the so-called infiltrating lipoma. Infiltrating lipoma is an uncommon mesenchymal neoplasm that characteristically infiltrates adjacent tissues and tends to recur after excision. This type of lipoma is extremely rare in the head and neck region, and its congenital type is rare. [10]

Lipomas consist of mature fat cells arranged into lobules that are separated by septa of fibrous connective tissue. Liposarcoma is important in the differential diagnosis, because well differentiated liposarcoma often contains many areas of lipomatous tissue. These sarcomas characterized by areas of lipoblastic proliferation, myxoid differentiation, cellular pleomorphism, increased vasularity, and mitosis. [11]

Despite the close histological similarity to normal adipose tissue, lipomas, usually, have chromosomal aberrations such as translocations involving 12q13-15, locus interstitial deletions of 13q, and rearrangements involving 8q11-13 locus. [12]

The clinical differential diagnosis includes ranula, dermoid cyst, thyroglossal duct cyst, ectopic thyroid tissue, pleomorphic adenoma and mucoepidermoid carcinoma, angiolipoma, fibrolipoma and malignant lymphoma. The definitive diagnosis is made by means of microscopic examination which shows adult fat tissue cells embedded in a stroma of connective tissue and surrounded by a fibrous capsule.

On some occasions lipoma of the buccal mucosa cannot be distinguished from a herniated buccal fat pad, except by the lack of a history of sudden onset after trauma. Lesions outside the oral cavity could show greater recurrence rates after surgical excision, but intraoral intramuscular lipomas, although not well-limited, rarely show recurrence if completely excised as seen in our case.

Conclusion

To conclude lipomas found in the oral and maxillofacial region are usually slow growing lesions. The clinical course is usually asymptomatic until they get larger in size. Most of lipomas develop in the subcutaneous tissues but deeper tissues may be involved as well, the oral cavity is not commonly affected. Surgical resection is the main treatment for lipoma. The complete resection should be emphasized during the first surgical operation, which is the key factor in order to avoid recurrence. Well encapsulated lipomas, as the present case, easily shell out with no possibility of recurrence or damage to the surrounding structures.

Acknowledgements

We would like to thank Dept. of Oral Medicine & Radiology and Prof. Dr. Thiruneervannan (Principal, Vinayaka Missions Sankarachariyar Dental College) for his guidance and encouragement.

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Source of Support: Nil, **Conflict of Interest**: None declared