

Review Article

Fibrolipoma of the oral mucosa: A review of literatureMohsin Ghanchi¹, Vikas Bhakar², Kartikay Saxena³, Dhaval Jani⁴¹Professor & HOD, ²Senior lecturer, ^{3,4}Reader, Dept of Oral Pathology & Microbiology, College of Dental Science & Hospital, Amargadh, Bhavnagar - 364210, Gujarat, India***Corresponding author**

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Abstract: Lipoma is a most common mesenchymal tumor of fat cells, but it is uncommon in the oral cavity and oropharynx. Lipoma at the intraoral locations consists of 1 to 5 % of all neoplasms of the oral cavity. The bland pathologic appearance and recurrence absence supports the benign nature of the lipomas. Fibrolipoma is a rare histological variant of the lipoma. Clinicians must be aware of such rare lesions as a wide array of lesions comes into differential diagnosis of these lesions.

Keywords: Benign mesenchymal tumor, Fibrolipoma, Lipoma

INTRODUCTION:

Lipoma are benign mesenchymal tumors can develop at any location where fat is present. This is the most common benign mesenchymal tumor. Lipomas affect the region of the trunk, shoulders, neck, and axilla[1]. It is rare in the oral cavity. In the intraoral locations most common site is buccal mucosa, followed by tongue, floor of mouth, buccal sulcus, palate, lips and gingiva. Lipoma consists of 4–5% of all benign tumors in the body. Intraoral lipomas are 2.2% of all lipomas and 2.4% of all benign tumors of oral cavity[2]. They are best called a ubiquitous or universal tumor, because of its wide distribution in the human body[3].

Intraoral lipomas most commonly develop in the subcutaneous tissue location, but can also develop into deeper tissues. Intraoral lipomas are slow-growing asymptomatic lesions with a characteristic yellow color and soft, doughy feel. Most commonly it is seen in the 4th and 5th decades, and generally has no gender predilection. Though benign in nature, progressive growth of intraoral lipomas may cause interference with speech and mastication due to tumor's dimension[4,5].

They are different varieties of intraoral lipomas based on histological characteristics.

Fibrolipomas is one of the histological variant which is rare in the oral cavity. The present article reviews this rare fibrolipomas of the intraoral locations.

DISCUSSION:

Lipomas are slowly growing benign neoplasm consisting of mature fat cells separated into lobules by fibrous connective tissue septae[6,7].

Depending upon its morphology, intraoral lipomas are classified by Rajendran et al into 3 types[8,9]

- Diffuse form affecting deeper tissues.
- Superficial form.
- Encapsulated form.

In 1848, Roux provided the first description of oral lipoma in a review of alveolar masses which referred by him as a “yellow epulis”[10].

Histological types of lipoma:

There are a number of microscopic variants of lipoma. Fibrolipoma is one of the variant of these, showing a significant fibrous component intermixed with the lobules of fat cells[5,11]. (Table 1)

Table 1: Histopathological variants of lipoma

Histological variant	Histopathology
Fibrolipoma	Lipomas with predominant fibrous tissue between fat cells.
Intramuscular lipoma	Infiltrate into surrounding tissue, producing thin extensions of adipose tissue radiating from tumor mass.
Angiolipoma	Exhibits number of small vascular channels.
Spindle cell lipoma	Uniform spindle shaped cells interspersed among normal adipocytes.
Myolipoma	If spindle cells are of smooth muscle origin.
Myxolipoma	Lipomas with myxoid background stroma.
Perineural lipoma	Lipomas associated with nerve tissue.
Adenolipoma	Ductal and tubular adnexal structures scattered throughout the fat lobules.
Pleomorphic lipoma	When spindle cells appear somewhat dysplastic or mixed with pleomorphic giant cells with or without hyperchromatic enlarged nuclei.
Chondroid and osteo lipoma	Lipomas showing chondroid or osseous metaplasia.
Lipomatosis	Extensive involvement of a wide area of fibrovascular or stromal tissues by adipose tissue

Adapted from Naik R et al[11].

Clinical features of Fibrolipoma:

Fibrolipoma is histological variant of the classic lipoma. Most patients are 40-years of age or older[12]. Depending upon the depth of tumor and quantity and distribution of fibrous tissue the consistency of fibrolipoma varies from soft to firm. In oral cavity fibrolipomas are noted in frequently. The most common site of occurrence is buccal mucosa and buccal vestibule. Other sites are lips, palate, tongue, floor of mouth and retromolar area. It shows slight female predominance[5,12].

Extraoral fibrolipoma:

The extra-oral sites of fibrolipomas are esophagus, colon, pharynx, trachea, larynx and other locations. Extraoral fibrolipomas are well-circumscribed, long standing, slow-growing, painless soft tissue tumors which can be deeply or superficially located and covered by normal mucosa[12].

Microscopic features of fibrolipoma:

Microscopically, the fibrolipoma generally shows lobules of “chicken-wire” appearing; benign adipocytes intermixed with broad bands of dense collagen. It is most commonly well circumscribed and can be thinly encapsulated such as those seen in the classic lipoma. Differential diagnosis commonly includes various benign mesenchymal tumors like simple lipomas, fibromas, and minor salivary gland tumors either benign or malignant. Magnetic resonance imaging is a very helpful tool for the diagnosis of all kind of lipomas. The surgical excision is the treatment of choice for fibrolipoma which is associated with rare recurrence. Malignant transformations in the oral and maxillofacial regions are rare[13,14].

Associated pathological conditions with fibrolipoma:

The various pathological conditions associated with lipoma including fibrolipoma can be neurofibromatosis, encephalo-cranio-cutaneous

lipomatosis, Gardner syndrome, multiple familial lipomatosis, Cowden’s syndrome, Proteus syndrome, multiple hamartoma syndrome, and Dercum’s disease[14].

Etiology and pathogenesis:

The etiology and pathogenesis of lipoma is still uncertain. Oral lipomas has varied pathogenesis theories like hereditary, hormonal basis, fatty degeneration, trauma, infarction, infection, and chronic irritation to elucidate the pattern of a lipoma[5].

The metabolism of lipoma is completely independent to that of the normal body fat. It is also however not dependent on the calorie intake, although normal body fat may be lost. Thus a person having starvation diet can lose fat from normal fat reserve in the body, but not from lipoma. Also the fatty acid precursors are incorporated at a more rapid rate into lipoma fat than into normal fat while lipoprotein lipase activity is reduced. The etiology of lipoma varies from the differentiation of multipotent mesenchymal cells into the fat tissue, cartilage, and bone to metaplasia of a pre-existing lipoma. Systemic and local influences modify the mesenchymal cells that range from local trauma to prolonged ischaemia. Other possible etiologies postulated are metaphase of muscles cells, hormone alteration and embryonic cell nest in origin. Most of the lipomas have chromosomal aberrations like translocation involving 12q13–15, rearrangement involving 6p21–23 and interstitial deletion of 13q, and Chop gene is involved in adipocytic differentiation[11,15].

Imaging modalities and Diagnostics:

In oral and maxillofacial regions superficial lipomas including fibrolipoma can be diagnosed clinically by inspection. Palpation of the intraoral lipoma reveals painless, soft mobile, slowly growing mass.

Deeper lipomas are not palpable usually and distinguishing between the lesional mass and adjacent tissue is difficult, especially when the lesion is adherent to salivary glands or muscles. Other diagnostic imaging methods like ultrasonography or fine needle aspiration biopsy may be necessary. The aspiration reveals oil-like yellow aspirate. Ultrasound imaging reveals tissues to be hypoechoic or Hyperechoic[15].

Treatment:

The usual treatment of choice for lipomas including fibrolipoma is surgical excision. Lipomas can be life threatening because of obstruction of upper airway due to its size as sudden asphyxia death has been reported in a case of esophageal fibrolipoma. 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[5,6].

CONCLUSION:

Fibrolipoma of the oral cavity must be considered in the differential diagnosis of the oral soft tissue tumors. A soft slow growing tumor, painless, either pedunculated or sessile, with well-defined margins and smooth surface should be considered for the diagnosis of a lipoma. Chances of malignant transformation are rare, yet there is always a possibility. Hence prompt treatment in the form of surgical excision followed by a histopathological diagnosis is usually advised.

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