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A Case Report on Lipoma Tongue – A Rare Entity

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ABSTRACT
Lipoma, though they are the most common tumors of mesenchymal origin in human body, are rare in oral and maxillofacial regions. The etiology remains unclear. Most cases of intraoral lipoma (IOL) are accidentally diagnosed during a radiographic examination. The signs and symptoms of IOL varies depending on its size, position, evolution, and the growth rate of the lesion. Literatures states various theories that explain the pathogenesis of this adipose tissue tumor and also the histological variants of oral lipoma. This paper highlights on a case report of a 62-year-old patient with a rare case of oral lipoma, summarizing the management of the condition along with the postoperative follow up following the treatment.
Keywords: *Benign soft tissue tumor, oral lipoma, tongue, surgical excision.*

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INTRODUCTION

Lipoma is the most common benign neoplasm originating from the adipose tissue. This condition mostly occurs in adults, commonly associated with the lower and upper extremities. The incidence of this neoplasm in the head and neck region is about 15–20% and only 1–4% in the oral cavity of all benign tumors. Lipoma of tongue is a very rare entity and it occurs only in 0.3% of all tongue. In the oral cavity, they usually present as slow growing asymptomatic lesion with characteristic yellowish color and soft in consistency [1]. Oral lipomas can occur in various anatomical sites including the major salivary glands, buccal mucosa, lip, tongue, palate, vestibule, and the floor of the mouth. Various case reports have described lipomas and its variants in several locations [2].

CASE REPORT

A 62-year-old female patient presented to the Department of Oral and Maxillofacial surgery with history of painless and gradually growing lesion in the right side of the tongue. The patient also complained of discomfort and feeling of heaviness in the area of the swelling. The patient had been previously assessed by a general dentist who referred the patient to a specialist, for a second opinion. A complete history was taken and the examination was performed. The patient had a history of hyperglycemia for past 5 years and was under GLYCOMET (Metformin-250mg). There were no significant adverse habits noted and no significant surgical or dental history reported.

The extra-oral examination showed no anomalies. The Intra oral examination revealed a nodular swelling on the right lateral border of the tongue (figure-1). On macroscopic examination of the lesion was approximately 20mm × 15 mm in diameter and ovoid in shape.

FIGURE-1: Pre – Operative Picture Showing Swelling Over Right Side Of Tongue

On clinical examination the lesion was solitary, sessile, soft in nature and the surface of the tumor was smooth, nontender and cheesy in consistency with a positive slip sign on palpation. There was no significant aspirate and no visible pulsations of the lesion.

On the basis of clinical findings, Provisional diagnosis was made as benign soft tissue tumor and the differential diagnosis of Liposarcoma, ranula, dermoid cyst, thyroglossal duct cyst, ectopic thyroid tissue, pleomorphic adenoma, and mucoepidermoid carcinoma angiolipoma, fibrolipoma, and malignant lymphoma was given.

Surgical excision of the lesion was planned and the patient was admitted to the hospital for intra-oral excision of the lesion under local anesthesia. Routine hematological investigation showed all the values were within normal limits, done prior to the surgery

SURGICAL PROCEDURE

Under local anesthesia, 2% lignocaine with 1: 80000 adrenaline, an elliptical incision was given over the swelling (figure-2). Blunt dissection was done over the lesion and it was found that the lesion was undermined exposing an irregular, poorly encapsulated, and lobulated pale-yellow mass. The lesion was excised completely together with a thin margin of normal muscle tissue and suturing of the tongue was done after excision (figure-3).

FIGURE 2: INCISION OVER THE LESION

FIGURE-3 : BLUNT DISSECTION AROUND THE LESION

The excised specimen was about 4×3 cm in size and was sent for histopathological examination. (FIGURE-4)

FIGURE 4: EXCISED SPECIMEN

A review after 2 weeks showed uneventful healing and the sutures were therefore removed. (FIGURE-5)

FIGURE 5: POST OPERATIVE PICTURE (2 WEEKS)

The histopathological examination of the soft tissue section showed, a mass that was essentially composed of mature normal fat cells, squamous epithelium and an underlying zone shows a lesion enclosed by a thin fibrocollagenous capsule and composed of abundant mature adipocytes arranged in lobules. The lobules are separated by fibrous connective tissue septa. The adipocytes appeared polygonal in shape with clear cytoplasm and eccentrically placed nucleus that was compressed against the cell membrane (figure A and B). There was no presence of Malignant cells.

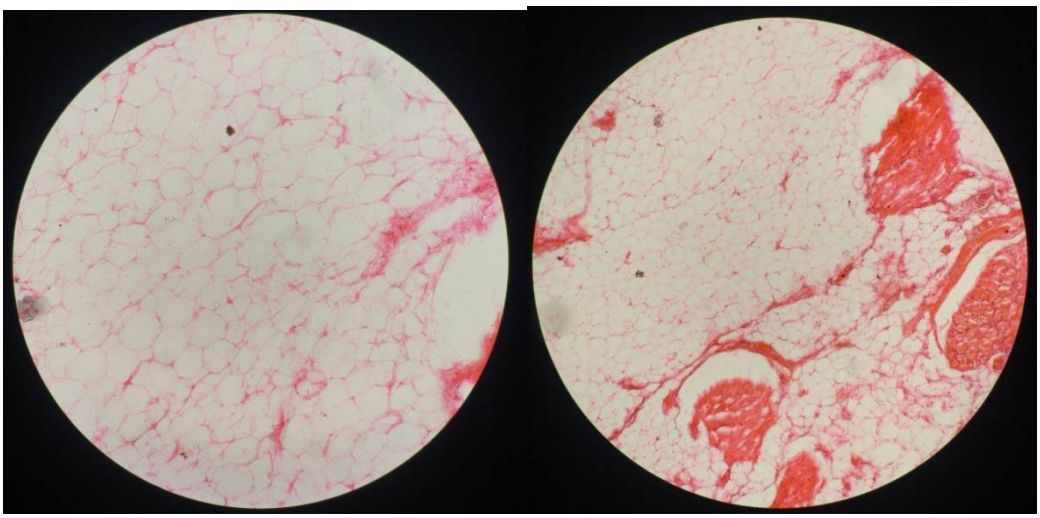

Figure - A Figure - B

Figure A (low magnification) and B (high magnification) shows adipocytes

Considering the above histopathological features, the final diagnosis was made as lipoma.

DISCUSSION

Lipoma is a common condition appearing on lower and upper extremities and trunk. Lipoma of the oral cavity is rare condition, with the prevalence rate of only 1:5000 adults, and only a few cases of lipoma of tongue were reported. In 1848 Lipoma was first entitled as yellow epulis by Roux in his description on Alveolar masses [3] Benign lipoma are the most common mesenchymal tumours of the soft tissue, but are relatively uncommon in the oral and maxillofacial region[4]. Lipoma is reported in about 15% to 20% of cases in the head and neck region with an even rarer onset over the tongue for about 4% of the reported cases[5].

The clinical features usually vary according to the site of the lesion. Usually they manifest as slow growing, sessile, round to ovoid submucosal nodules. The diagnosis of these tumours clinically is difficult, unless the yellow colour of the tumour appears through the overlying thin mucosa. Multiple lipomas have found to be associated with certain syndromes like neurofibromatosis, encephalocraniocutaneous lipomatosis, Gardner's syndrome, painful multiple subcutaneous lipomas and obesity syndrome called Decrum's disease, multiple familial lipomatosis, Proteus syndrome, and Pai syndrome. Lipomas have been classified, according to their morphological features, into simple lipoma, fibrolipoma, myxoid lipoma, atypical lipoma, spindle cells lipoma, myolipoma, angiolipoma, pleomorphic lipoma, and infiltrated lipoma, also termed as intramuscular or intermuscularlipoma characterized by an infiltrative growth pattern and a high recurrence rate [6].

As per Kara Fitzgerald et al , It is essential that histopathologic examination be included inestablishing the definitive diagnosis. Lipoma consists of mature adipocytes of uniform size and possesses minimal vascularization, whereas liposarcoma displays cellular pleomorphism, hyperchromasia, and marked vascularization[7]. Microscopically, it is composed of mature adipocytes; however, in 20% of cases, it demonstrates histological variants (According to Shafer) that include:

- Infiltrating lipoma – especially seen in Intramuscular lipoma

Sometimes the term called as Lipomatosis with extensive involvement of wide area of fibrovascular stroma

- Angiolipoma – surrounded by small vascular channels
- Myxoid lipoma – with a myxomatous background
- Pleomorphic lipoma – which contains floret like cells (Lever)
- Myolipoma – show spindle cells which are smooth muscle cell origin
- Other variants – Fibrolipoma – Excessive fibrosis between fat cells [8]

Intramuscular or infiltrating lipoma is an unusual clinical variant, originating between skeletal muscle bundles and infiltrating through the intramuscular septa. Due to the close relationship between the adipose tissue and the muscular layer, they have a slight predilection for the tongue. Infiltrative lipomas could suggest a false diagnosis of liposarcoma but the absence of cellular pleomorphism, low mitotic activity and nuclear hyperchromatism support the diagnosis of intramuscular lipoma. Moreover, a

distinguishing feature between intramuscular lipoma and liposarcoma is the presence or absence of lipoblasts. This cell stage is absent in lipoma but is recognized as a typical feature of liposarcoma.

The differential diagnosis includes well-differentiated liposarcoma, ranula, dermoid cyst, Thyroglossal duct cyst, ectopic thyroid tissue, pleomorphic adenoma, and mucoepidermoid carcinoma angiolipoma, fibro lipoma, and malignant lymphoma[9]. Depending on the capsule CT scan shows a high density from 83 to 143 Hounsfield units with well or poorly defined margins[10].

The diagnosis of these tumors to be made quite readily with the help of Computed tomography and magnetic resonance imaging but the diagnosis of intraoral lipomas is usually clinical. Of all these techniques available, histopathology remains the gold standard in the diagnosis of lipoma. Lipoma is commonly presented unnucleated but ulceration leads to difficulty in the diagnosis. Special stains for lipoma cells include Oil red O, Sudan black B and Bromine Sudan black. Adipocytes stain positively for vimentin and S-100 protein.

Our case of soft tissue revealed evenly distributed adipocytes within the connective tissue capsule. According to Neville, Damn, Allen, most of the oral lipoma show mature fat cells that will not differ from normal fat cells.On rare occasions, some cartilaginous metaplasia may occur which is not seen in our case[11]. The case reported in this article showed streaks of collagen surrounding the fat tissue which is characteristic of oral lipoma especially in the tongue.

The mainstay of treatment for intraoral lipoma is complete surgical excision of the lesion. Most histologic variants do not affect the prognosis, and recurrence is rare except for the intramuscular subtype, owing to its infiltrative growth pattern and the fact that they are not encapsulated like simple lipomas. The current literature stated that the intraoral intramuscular lipomas, although not well limited. Even in cases with recurrence, there has been no reported incidence of malignant transformation [12].

Medical management of lipomas includes steroid injections that result in local fat atrophy, thus, decreasing the tumor size, which is now common. They are best done on lipomas that are less than 1 inch in diameter. A monthly repeated injection of a 1:1 mixture of lidocaine and triamcinolone acetonide into the central region of the tumor might be helpful in the regression of the lesion.(Average volume of steroid used :1 to 3 ml depending on the size of the tumor). Liposuction using a 16-gauge needle and large syringe is useful in small or large lipomatous growth where scarring is to be avoided [13].

CONCLUSION

Intraoral lipoma is a rare entity that is usually noticed only during routine dental examinations. They are usually painless which causes a delay in seeking treatment. The patient's concerns are usually due to esthetics or discomfort in mastication, swallowing and speech. Due to its noninvasive behavior and low recurrence rate, surgical management should be regarded as the best therapeutic option. The clinical presentation may be misleading and hence it is mandatory for a clinician to diagnose intraoral lipoma with proper investigations and conservatively manage them without causing any discomfort and functional disability to the patient.

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