

A RARE LIPOMA: LIPOMA OF FLOOR OF MOUTH - A CASE REPORT

Dental Science

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ABSTRACT

Lipoma is a common, slow growing, benign, encapsulated tumour of fatty tissue that is most common benign mesenchymal tumour of the human body but a rare occurrence in the oral cavity. It was reported as early as 1887 by Grosch. Lipoma differs from normal body fat as the lipid in lipoma is not metabolically active. Miles et al suggested that this factor, together with its autonomous growth, warrants its classification as a true benign neoplasm [1]. Generally, lipomas are asymptomatic, painless, composed of fatty tissue and develop slowly in the proximal extremities and the trunk region. Oral lipomas are likely to affect the region of cheek, tongue, lips, gingiva but rarely seen in the floor of the mouth. The incidence of oral lipoma is approximately 1.0-4.4% of all benign oral lesions [2]. Here we report a case of a 55 years old male patient with oral lipoma involving the floor of the mouth. The tumour was completely excised and sent for histopathological examination which confirmed the tumour to be a simple classical lipoma. The aim of this case report is to highlight the rarity of the lesion and the treatment modality used, with brief overview on different treatment modalities available and any future scope regarding treatment options.

KEYWORDS

INTRODUCTION:

Lipomas are the most common benign tumours affecting the human body. Generally, lipomas are asymptomatic; they are typically removed for cosmetic purposes or when they impair surrounding tissues causing mechanical dysfunction. They are painless, composed of fat, and typically develop slowly in the proximal extremities or the trunk.

Lipomas are common benign soft tissue tumours that appear throughout the body; however, they infrequently occur in the oral cavity. Usually occurring between the ages of 40 and 60 years, they are generally slow-growing and cause minimal symptoms. The gender predilection for intraoral lipoma shows male dominance with 3:1 ratio [2]. The incidence of oral lipoma is approximately 1.0-4.4% of all benign oral lesions [2]. Oral lipomas occur at various sites including the major salivary glands, buccal mucosa, lip, tongue, palate, vestibule and floor of mouth [3]. These oral mesenchymal tumours are less common on the floor of the mouth accounting for only 4% of these lesions [4]. Histologically they can be classified as simple lipomas or its variants. They are either encapsulated or non-encapsulated or present in an infiltrating manner.

Oral lipomas are usually asymptomatic and detected on routine examination. Even though lipomas are benign, slow growing, and generally do not invade surrounding tissues, they can cause issues in the maxillofacial region and oral cavity due to the close complex anatomy of those areas.

Case Report:

A 55 years old male patient came to Department Oral and Maxillofacial Surgery with complaint of soft tissue growth in the floor of the mouth for 30 years and interference in chewing. The swelling was insidious in onset and gradually increased to current size without any associated pain, bleeding, discharge and also no aggravating or relieving factors.

On extraoral examination facial symmetry was present. Vital signs were stable and mouth opening was adequate. No lymph nodes were palpable and TMJ movements were normal. On intraoral examination, a well-defined soft, smooth, round swelling measuring 5x5 cm approx. seen in floor of the mouth, which is non reducible or noncompressible, non-pulsatile, which is non tender and non-fluctuant, soft in consistency, crossing the midline. Surface and surrounding mucosa is normal and few

dilated vessels evident on the surface of the swelling (fig.1).

The margins of the swelling slips on palpation showing positive slip sign. The swelling showed negative aspiration.

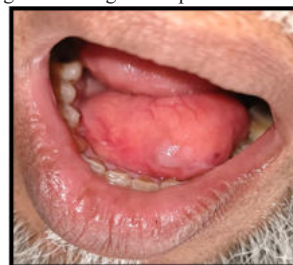


Fig 1: Intraoral swelling in the floor of mouth which shows few dilated veins

MRI shows a well-defined mass in the floor of the mouth measuring 2 x 2.6 x 2.7 cm is seen in the sub-mucosal plane limited to the floor of the mouth in the midline. It is hyperintense on T1W1 and T2W1 with fat suppression on fat saturation and STIR images. Anteriorly it is abutting the alveolar ridge with no evidence of cortical irregularity (fig.2). Posteriorly causing mass effect in the form of compression of the tongue with well-defined fat planes. Superiorly, abutting the ventral surface of the tongue (fig.3). Inferiorly limited to the floor of the mouth and is abutting the genioglossus and geniohyoid muscles suggestive of a benign neoplasm.



Fig.2 Axial section of MRI shows hyperintense area in the floor of the mouth

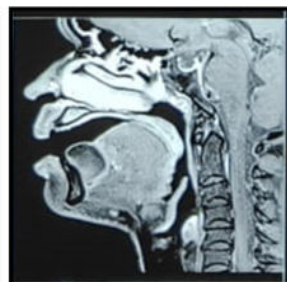


Fig.3 sagittal section of MRI shows the antero-posterior extent of

swelling beneath the tongue

Under all aseptic precautions, local anesthesia was used to provide regional anesthesia of floor of mouth. Creviceal incision was given in region 43 to 35 region. The submucosal dissection was done and lesion was exposed (fig. 4) and dissected from the periphery as well from the floor of the mouth. The entire lesion was excised in toto (fig. 5). Suturing was done (fig. 6). The tissue specimen was sent for histopathological examination. The recovery of the patient was uneventful and follow-up was done weekly for 1 month (fig. 7). The follow-up was done over a period of 2 years with no sign of recurrence.

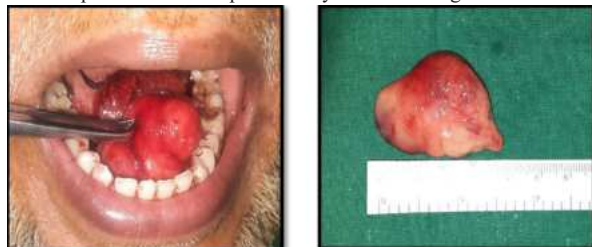


Fig.4 shows exposure of the lesion in the floor of the mouth

Fig.5 shows the size of the excised lesion



Fig.6 shows the surgical site after suturing

Fig.7 shows follow – up after one month

On histopathological examination, the H&E-stained section shows bits of soft tissue consisting of adipose tissue surrounded by connective tissue capsule (fig. 8). Low power view shows the lesion tissues is composed of mature adipocytes; loose collagen fibres are seen admixed between the adipocytes along with endothelial lined blood vessels. These features are suggestive of LIPOMA (fig 9).

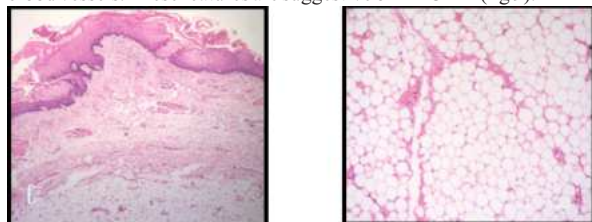


Fig.8

Fig.9

DISCUSSION:

A benign mesenchymal tumour of adipocytes is known as lipoma. Lipoma was first described by Roux (1848) as 'yellow epulis' in alveolar mucosa [5]. Lipomas are the most common benign tumours affecting the human body. They are painless, composed of fat, and typically develop slowly. More commonly occurs in the trunk and thighs but seldom in head and neck region. Their overall incidence in the oral cavity is thought to be between 1% and 4.4% [2]. The overall incidence of a lipoma growing in the floor of the mouth is 0.1%-0.44% of all lipomas appearing in the body.

A 14- year retrospective study by Morais HGF, Costa CSO studied 7,861 oral and maxillofacial lesions out of which 95 cases were oral lipoma, which was 1.2% of the total cases studied [20]. Perez-Sayáns M, Blanco-Carrión A conducted a multicentre retrospective study which reported 97 cases of intraoral lipoma with a prevalence of 0.33% [21].

Multiple head and neck lipomas have been observed in Neurofibromatosis, Gardner syndrome, Encephalo-cranio cutaneous lipomatosis, Multiple familial lipomatosis, Proteus syndrome [6].

As most of the intraoral lipomas are slow growing, usually they are less

than 2 cm in diameter. However, lipomas of floor of the mouth may occasionally reach large size and may interfere with speech, mastication and movement of tongue. Although the etiology of intra-oral lipoma is not fully understood, various predisposing factors have been proposed such as trauma, hereditary, hormonal, chronic irritation and embryonic cell nest origin etc.

Tumours of the adipose tissues are classified on the basis of Histological features into Simple Lipoma, Infiltrating Lipoma, Angiolipoma, Fibro-lipoma, Pleomorphic Lipoma, Osseo-Lipoma, Chondro-lipoma, Myxo-lipoma, Sialo-lipoma, Spindle Cell Lipoma [7]. Classic lipoma and fibro-lipoma are the two most common variants. There is no significant difference in the clinical behaviour of all sub-types of lipomas.

Classical lipomas are often well encapsulated. The infiltrating lipomas are not encapsulated and invade easily to deeper soft tissues and recurrence after surgical excision is above 60% [8]. Rarely oral lipomas can change into liposarcoma. In contrast to the present case liposarcomas lack a lobular appearance, usually occur in deeper locations and contain lipoblasts.

Various differential diagnosis based on clinical examination of swelling in floor of mouth may include: obstructive swelling like Ranula and Sialolithiasis, developmental swelling like Dermoid cysts and Thyroglossal duct cysts and neoplastic or malignant tumour of salivary gland origin [9]. Ranula and sialolithiasis can be excluded by presence of adequate salivary flow, swelling being non-fluctuant and lack of positive transillumination. Dermoid cysts and thyroglossal duct cyst can be excluded by presence of negative aspiration and MRI scan showing fat mass density.

The lesion was hyperintense in T1WI and T2WI, other lesions hyperintense in T1WI could include: dermoids; high-protein cysts such as Tornwaldt's cysts, colloid cysts, lymphoceles, and some branchial cleft cysts; hemorrhagic cysts of thyroid origin; high-melanin content melanomas; cholesterolin-containing cholesterol granulomas; and hemorrhagic or finely calcified masses, such as endolymphatic sac tumours and some fibro-chondro-osseous bone lesions [10].

Various management methods are, Surgical excision, Steroid injection (1:1 mixture of lidocaine and triamcinolone acetanide) [11], Liposuction (16-gauge needle and large syringe) [12], Injection lipolysis (phosphatidyl choline/sodium deoxycholate (PDC/DC) compounds) [13].

Surgical excision remains the main stay of treatment for lipoma of large size, new techniques of excision have been developed. The 'Squeeze technique' with a small incision over lipoma provides adequate cosmetic value, decrease in pain and hypoesthesia [14].

The new method of surgical excision for cosmetic value is the MOTIF method. MOTIF stands for Minimal-One Third Incision and Four-Step method of excision lipoma [15].

For very large and extensive lipoma involving the temporal and infratemporal space requires extensive dissection and more invasive approach. Cases of lipoma involving infratemporal region and temporal have been excised by 'trans-zygomatic hemi-coronal' approach [16] and also by means Al-Kayat-Bramley approach respectively [17].

Liposuction can be used to remove small or large lipomatous growths, particularly those in locations where large scars should be avoided. Complete elimination of the growth is difficult to achieve with liposuction. Office procedures using a 16-gauge needle and a large syringe may be safer than large cannula liposuction. Diluted lidocaine usually provides adequate anesthesia for office liposuction [12,18].

Steroid injections cause fat atrophy and are indicated for small lipomas and in cases patient does not wish surgical excision. Volume of steroid injected depends on the size of lipoma present and varies between 1-3 ml. Disadvantage of steroid injection include lack of completely elimination lipoma, multiple injections and depigmentation of skin [19].

Because of the scarring and deformation associated with lipoma

excision, injection lipolysis has evolved as an alternative treatment, including injection of phosphatidyl choline, deoxycholate (a bile acid), and the combination of both phosphatidyl choline/sodium deoxycholate, ethanol, and other sclerosing solutions.

Indications for injection lipolysis include small, soft areas of localized fat, lipomas, post-liposuction deformities, skin contour irregularities due to traumatic fat necrosis, cellulite, post-fat grafting deformities, and depressed scar with adjoining areas of protruding fat. Larger fat deposits (>500 ml), fat pad more than 3 cm. thick, fibrous fat or thinner fat deposits spread over a broad surface area should not be treated with this technique [13].

CONCLUSION:

Given the intricate anatomy of the oral region and due to the broad differential for diagnosis, sublingual masses need a comprehensive workup in order to provide the patient with the proper management. Hence it is important to investigate further with a detailed history with family history and social habits, a thorough physical examination of the head and neck, and pre-operative imaging such as CT scan, MRI or ultrasonography to aid in proper diagnosis and surgical planning. With increased importance to the cosmetic value in cases of lipoma of head and neck, focus has shifted away from extensive surgical excision to more minimally invasive surgical procedure. In patients not willing for surgical treatment, more conservative modalities have been developed and improved since few years.

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