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Case Report

Surgery Section

Lingual Lipoma: An Atypical Case Presentation of a Common Tumour in an Uncommon Site

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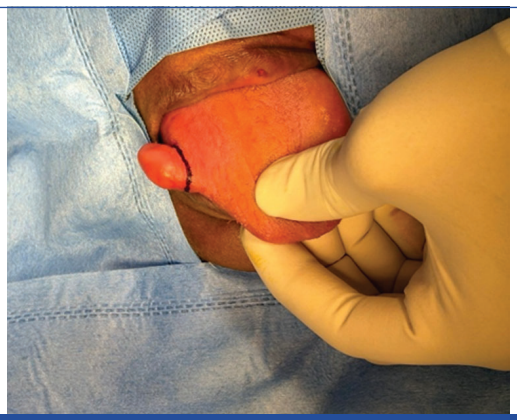
ABSTRACT

Lipomas are common benign mesenchymal tumours composed of mature adipose tissue, but they are rare in the oral cavity, particularly on the tongue. This report describes the case of a 53-year-old female who presented with a slowly enlarging, painless swelling on the right lateral border of the tongue for four years, causing difficulty in speech and eating. Clinical and radiological evaluations, including Magnetic Resonance Imaging (MRI), revealed a well-defined, fat-containing lesion without invasion. Fine Needle Aspiration Cytology (FNAC) suggested a lipoma, and complete surgical excision was performed under general anaesthesia. Histopathological examination confirmed a simple lipoma with no signs of malignancy. The postoperative course was uneventful, and the patient remained symptom-free with no recurrence at the one-year follow-up. Although they are rare, lingual lipomas should be included in the differential diagnosis of asymptomatic oral swellings, and their surgical removal provides excellent outcomes.

Keywords: Adipose tissue, Benign neoplasm, Excision biopsy, Neoplasms, Oral cavity, Tongue

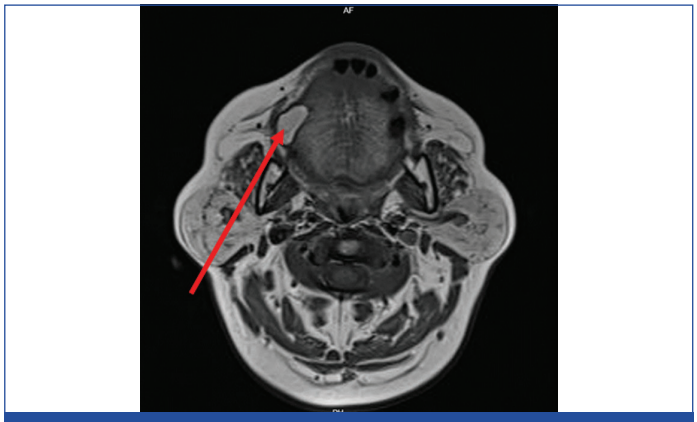
CASE REPORT

A 53-year-old female presented to the general surgery outpatient department with the complaint of swelling on the right side of her tongue for the last four years. Patient gave a history of swelling over the right lateral border of the tongue, which was initially small and painless and gradually increased to the present size. In the beginning, the lesion was asymptomatic and did not interfere with daily activities; however, for the past one year, the patient had reported increased discomfort during chewing and swallowing. There was no history of pain, bleeding, ulceration, trauma, weight loss, fever or rapid increase in size of the swelling. The patient denied a history of tobacco use, alcohol consumption, systemic illnesses, and family history of tumours. The patient visited a primary health centre initially and was then referred to our tertiary care centre for further evaluation and management. On examination, the swelling appeared light pink in colour and ovoid in shape, with a smooth surface and well-defined margins measuring approximately 2.5×2×1 cm over the right lateral border of the tongue [Table/Fig-1].



[Table/Fig-1]: Pre-operative clinical image showing a well-defined ovoid swelling on the right lateral border of the tongue measuring approximately 2.5×2×1 cm.

It was soft in consistency and non-tender, and no pulsations were felt on palpation. The remainder of the oral examination was unremarkable. MRI showed a well-defined T1/T2 hyperintense lesion measuring 2.2×1.1×1 cm (anteroposterior, transverse, and craniocaudal) in the right lateral border of the tongue with a smooth capsule and exophytic component causing a contour bulge. The lesion was seen abutting the buccinator muscle on its lateral aspect without surrounding infiltration or significant cervical lymphadenopathy [Table/Fig-2].

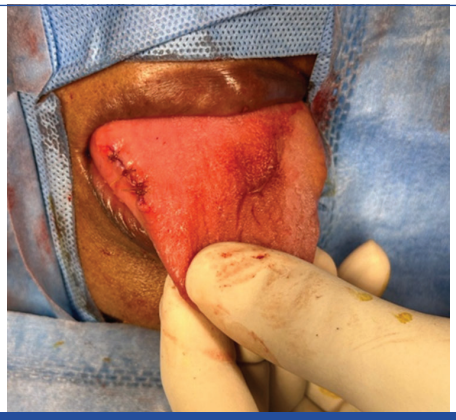


[Table/Fig-2]: MRI showing a submucosal swelling within the muscles of the tongue on the right lateral side (red arrows).

On FNAC, smears were moderately cellular, showing numerous mature adipocytes arranged in clusters and singly scattered against a clear background. The adipocytes were large, polygonal in shape, with eccentric nuclei and abundant clear cytoplasm, consistent with the fatty tissue. No atypical cells, lipoblasts, or inflammatory infiltrates were noted. These cytological features were highly suggestive of a benign lipomatous lesion. Based on the clinical history and examination findings, the most reasonable preliminary diagnosis was that of a benign soft tissue tumour of the tongue, with lingual lipoma as the leading possibility. Considering the site and clinical features, the following differential diagnoses, including a fibroma, neurofibroma or schwannoma, and granular cell tumour, were taken into account. Other possibilities considered were mucocele and minor salivary gland adenoma. In view of these possibilities, histopathological analysis was undertaken to establish the definitive diagnosis.

Treatment Plan: The patient was planned for surgical excision under general anaesthesia, and the lesion was completely excised along with its capsule to minimise the risk of recurrence. Following

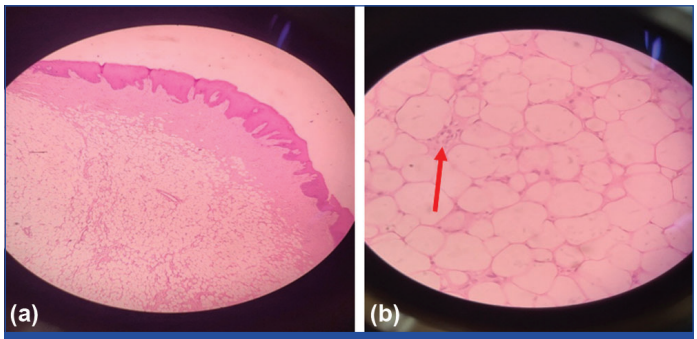
excision, primary closure of the surgical site was achieved without tension using 3-0 Monocryl suture [Table/Fig-3].



[Table/Fig-3]: Immediate postoperative clinical photograph showing complete excision of the lesion with primary closure of the surgical site on the right lateral border of the tongue.

The excised specimen was then submitted for histopathological examination to confirm the diagnosis.

Histopathological examination: Microscopic examination of the excised specimen revealed a well-circumscribed, lobulated mass lined by keratinised stratified squamous epithelium overlying a fibrofatty stroma. The stroma was composed of lobules of mature adipocytes separated by fibrovascular connective tissue septa. The adipocytes were large, round to oval cells with vacuolated cytoplasm and eccentrically placed flat nuclei, closely resembling mature fat cells. In addition, a fibrous capsule enclosing the lobules was evident, and occasional areas of dilated and congested blood vessels were observed. Importantly, no evidence of cellular atypia, lipoblasts, or malignant transformation was noted [Table/Fig-4a,b].



[Table/Fig-4a,b]: a) shows the lobulated mass with fibrous capsule 4x magnification; and b) 40x magnification showing large round to oval vacuolated cells with peripheral flat nuclei resembling mature adipocytes depicted in red arrow (haematoxylin and eosin) stain.

Postoperatively, the patient recovered well, with no complications, including bleeding, infection, or wound dehiscence, and was discharged with appropriate instructions. Upon follow-up one year later, the patient remains asymptomatic.

DISCUSSION

Lipomas are benign soft tissue neoplasms of mesenchymal origin, composed of adipose tissue. They are asymptomatic, slow growing, have a smooth surface with lobulation, soft in consistency, usually well-circumscribed and encapsulated. They are variable sizes, although usually less than or equal to 30 mm in diameter [1]. Being the commonest mesenchymal tumours of the trunk and proximal parts of the extremities, 15-20% cases have been reported to involve the head and neck region as well. However, they are rarely found in the oral cavity, comprising just about 1-4% of benign neoplasms reported in this location, presenting as sessile or pedunculated submucosal masses [1]. Histologically, lipomas are classified into simple lipomas and several variants, including fibrolipoma, spindle cell lipoma, intramuscular or infiltrating lipoma, angiolipoma, salivary gland lipoma (sialolipoma), pleomorphic lipoma, myxoid lipoma, and atypical lipoma [2]. Based on the histopathological findings in the present case, the lesion was identified as a simple lipoma arising from the right lateral aspect of the tongue. The aetiology of lipomas is still not well understood. Multiple hypotheses have been proposed, including genetic predisposition, trauma, hormonal imbalance, chronic irritation, fatty degeneration, metaplasia of muscle cells, irradiation, infarction, and the presence of embryonic cell nests [3]. Although lipomas can occur at any age, they are most commonly seen in individuals over the age of 40 years, with no significant gender predilection [4]. The first case of oral lipoma was documented by Roux in 1848, who described it as “yellow epulis” [5]. Baonerkar HA et al., reviewed 64 cases of tongue lipomas and found an increase in occurrence after 40 years of age (age range of 20 to 81 years) for the studied cases [6].

A slight male predilection was noted. Most of the cases presented clinically as slow-growing and asymptomatic masses, with surgical excision being the treatment of choice in all cases. In the rare subtype of intramuscular (infiltrating) lipoma, Colella G et al., reported a giant lipoma (~10 cm) in a 75-year-old man, infiltrating muscle fibres but showing no histologic atypia or lipoblasts [7]. Despite its size, complete excision resulted in no recurrence at 15-month follow-up.

In this case, the simple lipoma was successfully managed by complete surgical excision, with no recurrence on follow-up. These reports further support that lingual lipoma is a rare but benign entity with an excellent prognosis after surgical removal.

Clinically, the buccal mucosa is the most common site for oral lipomas, while occurrences on the tongue, floor of the mouth, gingiva, and retromolar area are rare. Among lingual lipomas, the lateral border of the tongue is the most frequent site [1]. When small, these lesions often go unnoticed. However, as they enlarge, they may cause functional impairments such as discomfort, difficulty in speech, mastication, and swallowing. Histologically, lipomas are composed of mature adipocytes arranged in lobules separated by fibrous septa. While histologically identical to normal fat, oral lipomas differ functionally due to their metabolically inactive lipid content [8]. It is important to differentiate oral lipomas from other soft-tissue lesions of the oral cavity. Based on the clinical presentation of a slow-growing, painless, well-circumscribed swelling on the right lateral border of the tongue, a preliminary impression of a benign submucosal tumour was considered. Developmental cysts such as dermoid and epidermoid cysts were excluded, as they typically occur in younger patients and in a midline location. Vascular lesions such as haemangiomas and lymphangiomas, which usually present at birth or early childhood with mucosal discoloration, were also unlikely. Infectious or inflammatory swellings were ruled out because the patient had no systemic symptoms such as fever, tenderness, or acute onset. FNAC supported the working diagnosis by showing mature adipocytes consistent with a lipomatous lesion. The definitive confirmatory diagnosis of a simple lipoma was established through histopathological examination [9]. Imaging plays a crucial role in diagnosis and surgical planning. MRI typically shows a well-defined lesion that is hyperintense on both T1- and T2-weighted images due to its fat content [10]. FNAC can provide a preliminary diagnosis, but histopathological examination remains the gold standard. Complete surgical excision is the treatment of choice, with excellent prognosis and minimal chance of recurrence. Recurrence is generally associated with infiltrating or intramuscular lipomas due to incomplete excision. Any recurrence should raise suspicion for liposarcoma and warrants histopathological reassessment [11,12]. In this case, the lesion was completely excised under general anaesthesia, and the postoperative period was uneventful. Histopathology confirmed the diagnosis of a simple lipoma, with no evidence of atypia or malignancy. The patient reported no residual symptoms during follow-up.

CONCLUSION(S)

The present case highlights a rare occurrence of a simple lipoma on the right lateral border of the tongue, which was diagnosed through clinical evaluation, FNAC, and confirmed by histopathology, successfully managed by complete surgical excision, and showed an uneventful postoperative recovery without recurrence.

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