

Oral Lipoma: Report of Two Cases

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Abstract

Oral lipoma is a rare benign mesenchymal tumor that accounts for only a small proportion of all lipomas. It usually presents as a slow-growing, painless lesion and may cause functional discomfort depending on its size and location. The diagnosis is often suggested by the clinical presentation but requires histopathological confirmation. This article reports two cases of oral lipoma managed by surgical excision. Histopathological examination confirmed the diagnosis in both cases. Postoperative follow-up showed satisfactory healing with no evidence of recurrence. Through these cases and a review of the literature, we highlight the clinical features, diagnostic approach, and therapeutic management of oral lipomas. Complete surgical excision remains the treatment of choice and is associated with an excellent prognosis.

Keywords: Oral Lipoma; Benign Mesenchymal Tumor; Oral Cavity; Histopathology; Surgical Excision; Case Report

Introduction

Lipomas are the most common benign mesenchymal tumors and can develop in virtually any part of the human body. Approximately 15 - 20% occur in the cervico-facial region, but only 1 - 4% affect the oral cavity, which explains their rarity in the oral region [1]. They develop mainly in soft tissues, although some cases involving the jawbones have also been reported in the literature [2]. Depending on their size and location, lipomas in the oral cavity can have aesthetic and functional implications [1].

The etiology and pathogenesis of lipomas remain poorly understood. Several mechanisms have been proposed: embryonic origin, cellular degeneration or metaplasia, abnormal differentiation of mesenchymal cells, as well as traumatic, hormonal, chromosomal or chronic irritation factors that may stimulate the formation of adipocytes [3].

Histologically, lipomas are composed of mature fat cells and are generally surrounded by a thin capsule of fibrous connective tissue, or at least clearly demarcated from the surrounding tissue [1]. Their metabolism differs from that of normal adipose tissue; it has been shown that the fat contained within the lipoma is not mobilized for energy production during periods of fasting, unlike normal adipose tissue. Consequently, the tumor volume does not decrease in the event of food deprivation [4].

Aim of the Study

The aim of this article is to present two cases of oral lipoma in different locations, treated by surgical excision without recurrence.

Case Presentation

Case 1

Patient information

A 45-year-old Moroccan woman with no significant medical history presented with a nodular lesion that had been evolving for two years and was causing discomfort during mastication. The lesion had shown slow, painless growth and was not associated with any systemic symptoms.

Clinical examination

The extraoral examination revealed no abnormalities.

Intraoral examination showed a sessile submucosal nodule located on the inner aspect of the left labial commissure, extending toward the buccal mucosa. The lesion measured approximately 1.5 cm in its greatest diameter, was well circumscribed, and was covered by clinically normal mucosa with a clearly visible vascular pattern. Its surface exhibited a thin, slightly elevated white line running along the long axis of the lesion (Figure 1).

On palpation, the nodule was painless, soft in consistency, non-hemorrhagic, and slightly mobile. Gentle pressure revealed a yellowish tissue through the overlying mucosa (Figure 1).



Figure 1: Intraoral examination.

Based on the patient's history and clinical findings, a pre-operative diagnosis of lipoma was established.

Treatment

An excisional biopsy was performed under local anesthesia. A superficial incision was made along the long axis of the lesion using a cold scalpel. Dissection was initially carried out with the blade and subsequently completed with scissors, allowing exposure of a yellowish,

poorly encapsulated, multilobulated mass. The surgical specimen was fixed in 10% buffered formalin and submitted for histopathological examination (Figure 2).

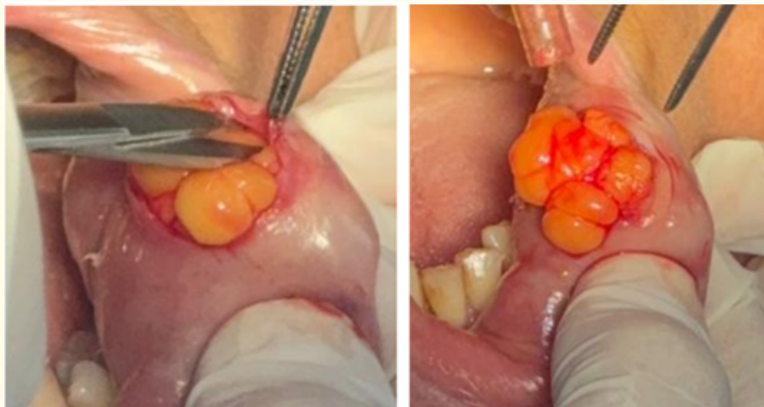


Figure 2: Surgical removal of the lesion.

Positive diagnosis

Histopathological examination revealed adipose tissue organized into lobules separated by fibrous septa. The cells consisted of mature adipocytes, showing no atypia. All these findings were consistent with a simple lipoma (Figure 3).

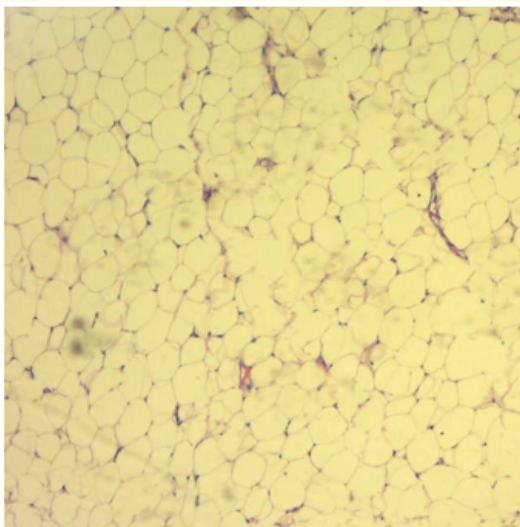


Figure 3: Microscopic appearance of the tumour.

Follow-up

Follow-up examinations at 7 days and then at 14 days showed uncomplicated healing, allowing the sutures to be removed. The two-month follow-up revealed excellent healing, with no recurrence (Figure 4).



Figure 4: 14-days postoperative follow-up.

Case 2

Patient information

A 65-year-old Moroccan woman with a medical history of hypertension and receiving antiplatelet therapy presented with an intraoral swelling that had been evolving for six months and was causing discomfort during mastication. The lesion exhibited progressive growth, was painless, and was not associated with any systemic symptoms.

Clinical examination

Extraoral examination revealed no abnormalities.

Intraoral examination revealed a pedunculated nodule located on the buccal mucosa, close to the retromolar region. The lesion was well circumscribed and covered by clinically normal mucosa. On palpation, the nodule was soft in consistency, painless, and non-hemorrhagic (Figure 5).

Based on the patient's history and clinical findings, the differential diagnoses included irritation fibroma, diaphanous, and lipoma.



Figure 5: Intraoral examination.

Treatment

A biopsy-excision of the lesion was performed using a diode laser set to a power of 2W in continuous mode (Figure 6). The specimen was fixed in 10% buffered formalin for histopathological examination.



Figure 6: Surgical excision of the lesion using a diode laser.

Positive diagnosis

Histological examination revealed a nodular proliferation consisting of mature adipocytes organized into lobules separated by fine fibrovascular septa. The cells had regular nuclei, with no cytonuclear atypia or mitotic activity (Figure 7). These histological features were consistent with a simple lipoma.

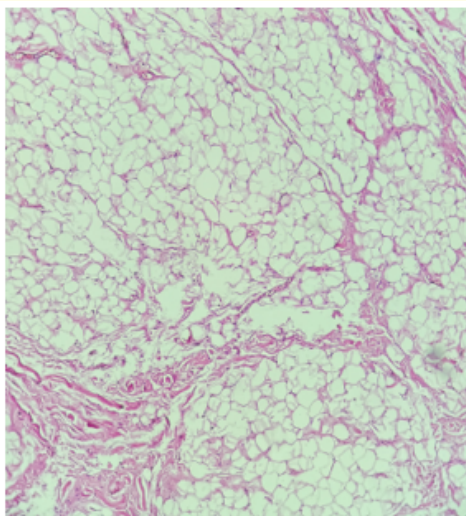


Figure 7: Microscopic appearance of the tumour.

Follow-up

Clinical evaluations at 7 and 14 days showed uncomplicated mucosal healing. After 6 months of follow-up, no recurrence was observed (Figure 8).



Figure 8: Two-month postoperative follow-up.

Discussion

Oral lipoma was first described in 1848 by M. Roux, who referred to it as a “yellow epulis” [5,6]. It is a benign mesenchymal neoplasm that rarely occurs within the oral cavity. In 1887, Grosch., *et al.* reported 716 cases of lipoma, none of which were located in the oral cavity. Later, in 1943, Geschickter., *et al.* identified only three intraoral lipomas among 460 reported cases. In a study covering the period from 1945 to 1967, Hatziotis., *et al.* reported 145 cases of oral lipoma [4]. More recently, Furlong., *et al.* documented only 125 cases of oral lipoma over a 20-year period, further highlighting the rarity of this tumor in the oral cavity [7].

Oral lipomas most commonly occur during the fourth and fifth decades of life, with a peak incidence around the age of 40 years, and are rarely observed in children [4,8]. In contrast to the male predominance generally reported for extraoral lipomas, oral lipomas appear to affect both sexes equally, although a slight female predominance has been reported in some studies [4,9]. These findings are consistent with those observed in our two patients.

Clinically, oral lipomas may arise at any site within the oral cavity. According to the literature, the most common locations, in descending order of frequency, are the buccal mucosa (37.9%), tongue (24.2%), labial mucosa (10.5%), palate (7.4%), floor of the mouth (7.4%), retromolar region (4.2%), and gingiva (2.1%). The buccal mucosa, which was involved in our second case, represents the most frequent site of occurrence, this may be explained by its high content of adipose tissue [3].

The preoperative diagnosis is primarily based on the clinical appearance of the lesion, which typically presents as a slowly growing, painless, well-circumscribed, soft, sessile nodule. Its size generally ranges from 0.5 to 1.5 cm and rarely exceeds 2.5 cm. The color of the lesion depends on its depth within the soft tissues: when deeply located, the overlying mucosa usually appears normal, whereas superficially located lipomas often exhibit a characteristic yellowish color visible through the overlying mucosa [1,8,11].

Clinical manifestations depend on both the size and location of the lesion. In our two patients, the buccal and labial location of the lesions, together with their relatively large size, caused masticatory discomfort, thus justifying consultation.

Complementary investigations have a limited role in the assessment of intraoral lipomas. However, ultrasonography and magnetic resonance imaging (MRI) may be useful in selected cases. On ultrasonography, these tumors typically demonstrate echogenicity lower than that of the adjacent muscle and higher than that of the subcutaneous fat. On MRI, adipose tumors exhibit high signal intensity on T1-weighted sequences and signal suppression on fat-saturated sequences. MRI also enables accurate assessment of tumor boundaries, vascularization, and relationships with adjacent critical anatomical structures [3,12]. In our two patients, these investigations were not considered necessary, as the clinical presentation was highly suggestive of an adipocytic tumor.

The definitive diagnosis is established by histopathological examination. Microscopically, the tumor is composed of mature adipocytes arranged in lobules separated by fibrous connective tissue septa. Tumor vascularization is provided by capillaries compressed by the surrounding adipocytes. Histologically, some lesions contain additional mesenchymal components associated with the predominant adipose tissue, giving rise to several variants. To date, nine histological subtypes have been described: simple lipoma, fibrolipoma, intramuscular (or infiltrating) lipoma, spindle cell lipoma, pleomorphic lipoma, myxolipoma, angiolipoma, sialolipoma, and osteolipoma [1,3,5,9]. Simple lipoma is the most common subtype, accounting for approximately 48% of cases, as observed in our patients, followed by fibrolipoma, which represents approximately 33% of cases [9].

Regardless of the histological subtype, complete surgical excision remains the treatment of choice for oral lipomas. The recurrence rate is very low, generally below 5%. Intramuscular or infiltrating lipomas, due to their non-encapsulated nature, are more difficult to remove completely and therefore carry a higher risk of recurrence [3,6,8].

Conclusion

Intraoral lipoma is a rare benign mesenchymal tumor characterized by slow growth and an often-asymptomatic clinical course. Although the diagnosis is frequently suggested by the clinical presentation, definitive confirmation relies on histopathological examination. Complete surgical excision remains the treatment of choice and is associated with an excellent prognosis, with a very low risk of recurrence.

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