

# A large oral lipoma in a young patient: A rare combination

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## Abstract

Lipoma is a benign neoplasm of mature fat cells. Although a common mesenchymal neoplasm of trunk and extremities, its occurrence in the oral and oropharyngeal region is rather rare. Lipoma accounts for 1-5% of all benign oral tumors, occurring in patients above 40 years of age with slight male predilection. Oral lipoma presents as asymptomatic, slowly growing mass rarely exceeding 25 mm in diameter. Documented here is a rare case of a large size lipoma (>3 cm in diameter) occurring as an extraoral swelling in a girl aged 13 years, which was subsequently diagnosed and treated 4 years later. Furthermore discussed are the peculiarities in the clinical presentation, differential diagnosis, and investigations for this case.

**Keywords:** Benign tumor, differential diagnosis, oral lipoma, oral swelling

## Introduction

A lipoma is a benign neoplasm composed of mature fat cells.<sup>[1]</sup> Although lipomas are common tumors of trunk and extremities. Its presence in oral and oropharyngeal region is less frequent.<sup>[2,3]</sup> It usually occurs in individuals over 40 years of age without any gender predilection; however, some studies have shown male predominance.<sup>[4]</sup> Lipomas of the oral and maxillofacial region occur most commonly in the parotid region followed by buccal mucosa, tongue, floor of the mouth, and palate.<sup>[5]</sup> Its etiology is not known although trauma and metaplasia of perivascular connective tissue have been suggested. Oral lipomas usually presents as asymptomatic, slowly growing mass rarely exceeding 25 mm in diameter and infrequently causing difficulty in speech, mastication or disfigurement.<sup>[6]</sup> Large lipoma occurring in a young female is a rarity and demands documentation. We report here one such case where oral lipomatous swelling was first noticed by a girl of 13 years which was subsequently diagnosed and treated 4 years later.

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## Case Report

A girl aged 17 year, presented with the complaint of asymptomatic swelling on the left cheek region. She gave a history of noticing a peanut sized swelling 4 years back when she was 13 years old, which gradually enlarged to attain the present size. The swelling was totally painless and was not associated with any history of toothache or trauma. The patient was otherwise normal with no significant medical history.

On extraoral examination a solitary diffuse swelling was noticed on the left cheek region, measuring approximately 3 cm in diameter [Figure 1]. The skin over the swelling was normal. On palpation the swelling was soft, nontender, borders were ill-defined and could not be felt. The swelling was fluctuant, minimally mobile, compressible, not reducible, and not pulsatile. The skin over the swelling was pinchable and the temperature of the skin over the swelling was normal. Intraorally the swelling was minimal, with similar features and with the intact mucosa [Figure 2]. Submandibular, submental and cervical chain of lymph nodes were not palpable. Considering the age, asymptomatic nature of fluctuant swelling, a provisional diagnosis of mucocele was given. Pathologies considered in differential diagnosis were:

### Lipoma

Oral lipoma presents as asymptomatic, mobile, compressible and nonpulsatile swellings. However, they are rare in oropharyngeal region, usually occurring in 4<sup>th</sup> decade onwards, has slight female predilection and rarely exceeds 25 mm in size.

### Fibroma

Fibroma is a benign tumor of fibrous connective tissue, occurring most commonly on buccal mucosa. However, they are firm, not mobile, not fluctuant, compressible but not reducible, rarely grow more than 2 cm.

### Pleomorphic adenoma of minor salivary gland

Pleomorphic adenoma typically presents as a painless, slowly growing mass and is most common in young and middle-aged

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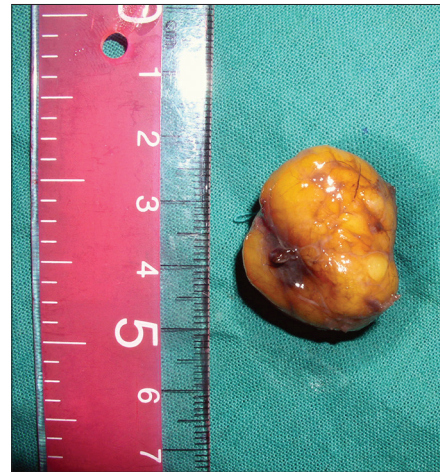
**Figure 1:** Extra-orally a solitary, diffuse swelling noticed in the left cheek region



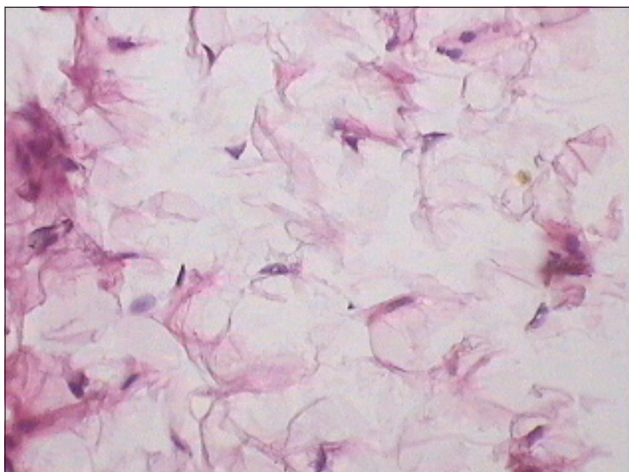
**Figure 2:** Intra-orally, a swelling was noticed in the left posterior buccal mucosa along the occlusal plane



**Figure 3:** Excisional biopsy showing yellow glistening mass exuding out of the incision margin



**Figure 4:** Specimen recovered was an encapsulated mass, glistening yellow in color, roughly oval in shape, measuring approximately 3.2 x 3 x 2.5 cm



**Figure 5:** High power microscopic showing well-delineated mass of lobules of fat cells with minimum vascularity



**Figure 6:** Postoperative intraoral picture showing well-healed incisional site

adults with slight female predilection. Pleomorphic Adenoma in the buccal mucosa is extremely rare and presents as firm, nonmobile, nonfluctuant, compressible, but not reducible swelling.

### Epidermoid cyst

Epidermoid cyst of oral cavity is the dermoid cysts lined by epidermis like epithelium, but they contain no dermal appendages in the cyst wall. Presents as soft, fluctuant, cystic lesions most commonly occurring in the midline of the floor of the mouth but very rarely may develop in other locations.

### Lymphadenopathy

An enlarged buccal lymph node may present as similar swelling. However considering that there were no symptoms and signs of infection along with absence of other palpable lymph nodes, it was considered last in differential diagnosis.

### Investigations

Panoramic radiograph revealed no abnormality. To evaluate the content of the lesion and its vascularity, a color Doppler ultrasonography was done. It revealed that the lesion is ovoid, hypoechoic with striped echogenic lines and with intact capsule. There was minimum vascularity detected. This was followed by ultrasonography guided fine needle aspiration, which revealed negative aspiration. Considering a slow growing encapsulated mass measuring approximately 3 cm in diameter, with no vascularity and no cystic fluid, an excision en-mass was planned. An excisional biopsy was performed intraorally under local anesthesia and lesion was extracted en-mass [Figure 3]. The sutures were placed at the extraction site and patient was given antibiotic cover for 5 days. The encapsulated mass was glistening yellow in color, roughly oval in shape, measuring approximately  $3.2 \times 3 \times 2.5$  cm [Figure 4]. It was soft to firm in consistency.

Histologic examination of lesion revealed well-delineated mass of lobules of fat cells with fibrous septa. A well-circumscribed thin fibrous capsule was present. The mass had minimum vascularity [Figure 5]. Considering the capsulated mass with lobules of fat cells and minimum vascularity a final diagnosis of lipoma was given. Patient was followed-up for 6 months. The excision site healed well and there were no signs of recurrence [Figure 6].

### Discussion

Oral lipoma, a rarity in itself, is known to affect individuals in 4-6<sup>th</sup> decades, infrequently enlarges more than 25 mm and has slight male predilection.<sup>[2-4,6,7]</sup> Large oral lipoma occurring in young individuals is very uncommon. Most of lipomas develop in the superficial subcutaneous tissues.<sup>[8]</sup> The documented case is peculiar as an oral lipoma more than 3 cm in diameter had affected a 13-year-old female which was deeply seated in tissues. Lipomas are usually

soft, painless, and mobile mass on palpation which gradually enlarges contrary to our case where it was not well palpable as it was placed deeply. In cases where lipomas are deeply seated it is difficult to distinguish it from surrounding connective tissue without specialized imaging technique. Fine-needle aspiration biopsy (FNAB) sometimes is useful for a direct diagnosis.<sup>[9,10]</sup> We used ultrasonography guided FNAB for aspiration as the mass was deeply placed. Ultrasonography is a preferred technique as it is quick, easy, less expensive, and handy. Ultrasonography shows a round or elliptical in shape lesion, with intact or mostly intact capsule. Most of lipomas are hypoechoic with echogenic lines or spots.<sup>[3,11]</sup> When the mass is difficult to identify on ultrasonography, computed tomography or magnetic resonance imaging is necessary.<sup>[12,13]</sup> The clinical differential diagnosis should consider mucocele, fibroma, dermoid cyst, thyroglossal duct cyst, pleomorphic adenoma, angioliipoma, fibrolipoma, malignant lymphoma. The histologic examination of lipoma typically shows a well-delineated mass of lobules of fat cells with fibrous septa interspersed between them. The histologic differential diagnosis should include fibrolipoma, spindle cell lipoma and others such as schwannoma, myxoid neurofibroma, leiomyoma, nodular fasciitis, myxolipoma, fibrolipoma, malignant fibrous histiocytoma, myxoid liposarcoma, and myxoid solitary fibrous tumor. Despite the close histological similarity to normal adipose tissue, lipomas, usually, have chromosomal aberrations such as translocations involving 12q13-15, locus interstitial deletions of 13q, and rearrangements involving 8q11-13 locus.<sup>[14]</sup>

Oral lipomas are usually well encapsulated and has good prognosis after complete surgical recession.<sup>[5]</sup> In adults, the recurrence is rare, but a long term follow-up is necessary in patients <18 years.<sup>[11]</sup> The key factor in avoiding recurrence of lipoma is complete resection with wide margin during the first surgical operation as was done in this case.

### Conclusion

Literature suggests that an oral lipoma, especially in children is very rare. It can be suggested from the above documented case that oral lipomas may be found more commonly in younger population than previously thought, it just might not be presented at an early stage due to its asymptomatic and slow growing character. It also suggests that more research is warranted to estimate the prevalence of oral lipoma in children and young individuals.

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