Oral Fibrolipoma: A Report of Two Cases and Review of Literature

Abstract
Fibrolipoma is a benign tumor which is classified as a histological variant of conventional lipoma. It rarely occurs in oral and maxillofacial region. When present, it occurs as a soft, smooth surfaced nodular mass that can be pedunculated or sessile. Most of the lesions are less than 3 cm in size, although it may vary. Fibrolipomas mostly affect buccal mucosa and buccal vestibule and cause functional and cosmetic disabilities. Herniation of buccal pad of fat caused by trauma may also mimic lipoma. Hence, accurate histopathological examination of lipomas is important for a correct treatment plan. Here, we present 2 cases of oral fibrolipoma that presented on the retromolar triangle area and alveolar ridge in relation to missing maxillary right first molar.

Keywords: Fibrolipoma, histopathology, lipoma

Introduction

Lipoma is a benign mesenchymal soft-tissue neoplasm of mature adipocytes which accounts for only 4%-5% of all benign tumors in the body. Involvement of the oral cavity is rare with only 1%-4% of cases.[1] They usually present as painless, well-circumscribed, slow-growing submucosal masses or superficial lesions, mainly in the buccal mucosa.[1] Histologically several variants of lipoma have been described, including angiolipoma, fibrolipoma, chondroid lipoma, myxolipoma, spindle cell/pleomorphic lipoma, diffuse lipomatous proliferations (lipomatosis), and hibernoma.[2]

Fibrolipoma rarely occurs in the oral and maxillofacial region and is classified as a variant of conventional lipoma by the WHO.[3] Fibrolipoma of the oral cavity has been infrequently reported. It can occur in various anatomic sites including the buccal mucosa, lips, tongue, palate, buccal vestibule, floor of the mouth, and retromolar area. They have also been reported in the extraoral sites such as esophagus, pharynx, colon, trachea, larynx, and other locations.[3] Here, we present 2 case reports of fibrolipoma in the oral cavity.

Case Reports

Case 1

A 16-year-old female patient had reported to the dental institution with a chief complaint of overgrowth of gums in the left back teeth region. The patient was asymptomatic a year before, after which she had noticed a growth in the left retromolar region, which began initially as a small nodule and then gradually increased to the present size. The growth was painless at the beginning; however, from the past 1 week, the patient experienced discomfort on mastication. There was no external swelling or systemic illness observed.

On intraoral examination, a pedunculated overgrowth measuring about 2 cm × 2 cm was observed in the left retromolar region distal to 37. The overlying mucosa was smooth, nonulcerated and no change in color was observed as compared to the adjacent site. Bleeding on provocation was not seen [Figure 1].

Intraoral periapical radiograph [Figure 2] revealed developing crown of mandibular third molar (38) enclosed in its bony crypt. No other pathological features were noted. Upper third molar was not yet erupted. A provisional diagnosis of traumatic fibroma was given.

Complete surgical excision of the lesion was done using laser and the specimen was received for histological examination. The gross specimen was white in color, oval in shape, firm in consistency, and measured about 15 mm × 13 mm × 8 mm in dimension [Figure 3a]. On cut surface, the central area was yellowish with white periphery [Figure 3b].

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Histological sections on scanner view revealed stratified squamous epithelium with underlying fibrous connective tissue showing bundles of collagen fibers arranged in haphazard manner with lobules adipocytes in deeper areas of the section [Figure 4a and b]. Histologically, the diagnosis of fibrolipoma was stated.

Case 2

A 60-year-old male patient reported with the chief complaint of a long-standing growth on the alveolar ridge in relation to missing maxillary right first molar. The patient gave a history that there were retained root pieces in the same region for 7 years which got exfoliated on their own. After 2 years, he had noticed a small growth near the edentulous first molar site. The growth showed a slow and continuous enlargement over the past 1 year, causing discomfort on occluding the teeth and during mastication. He had a noncontributory past medical history. The patient was a chronic tobacco chewer and a smoker.

Intraoral examination revealed a pinkish, well-defined oval swelling measuring 1.8 cm × 0.9 cm present in the maxillary right edentulous area [Figure 5]. On palpation, the swelling was soft, fluctuant, nontender, mobile, and slippery on palpation. A provisional diagnosis of intraoral lipoma was established. Routine blood examination was found to be normal. The lesion was excised under local anesthesia and the tissue was sent for histopathological examination [Figure 6a and b] along with which the adjacent second molar was also extracted following poor periodontal prognosis.

Microscopic examination revealed stratified squamous parakeratinized epithelium with haphazardly arranged collagen fibers intermixed with foci of few adipocytes dispersed in the stroma of the connective tissue [Figure 7]. The final diagnosis was given as fibrolipoma.

Discussion

The first description of oral lipoma was provided in 1848 by Roux in a review of alveolar masses; he referred to it as a “yellow epulis.” While most lesions are developmental anomalies, those which occur in the maxillofacial region usually arise late in life and are presumed to be neoplasms of adipocytes, occasionally associated with trauma. Few lipomas show rearrangement of 12q, 13q, 6p chromosomes.[4]

Lipomas are benign, slow-growing neoplasm composed of mature fat cells. The pathogenesis of lipoma is uncertain, but metabolism of lipoma is completely independent of the normal body fat. It is however not dependent on the calorie intake, although normal body fat may be lost. Thus, a person on a starvation diet will lose fat from normal fat depots in the body, but not from lipoma. Furthermore, fatty acid precursors are incorporated at a more rapid rate into lipoma fat than into normal fat while lipoprotein lipase activity is reduced.[5]

When superficial, there is a yellow surface discoloration. The lesion may be pedunculated or sessile and occasional cases show surface bosselation. Depending on the site, lipomas are categorized into superficial, deep, and
periosteal. Clinically, they present as soft and compressible masses with doughy consistency which are well defined clinically and radiologically. In some cases, they can present as fluctuant nodules. Multiple head and neck lipomas have been observed in neurofibromatosis, Gardner’s syndrome, encephalocraniocutaneous lipomatosis, multiple familial lipomatosis, and Proteus syndrome.[6]

Rajendran and Shivapathasundharam have classified intraoral lipomas into three types, depending on its morphology.[7]

- Diffuse form affecting deeper tissues
- Superficial form
- Encapsulated form.

Apart from fibrolipoma, the other variants of lipoma include angiolipoma, chondroid lipoma, myolipoma, spindle cell lipoma, hamartomatous lesions, diffuse lipomatous proliferations, and hibernoma.[2,6,7]

It has been suggested that fibrolipoma arises from the maturation of the lipoblastomatosis, which is an infiltrative type of benign neoplasm with lobules of immature fat cells separated by connective tissue septa and areas of loose myxoid matrix. Further, maturation of both adipose and fibrous tissues results in mature strands of collagen separating fat cells into lobules.[9]

The etiopathogenesis of fibrolipoma remains unknown. A previous study suggested that fibrolipoma is a congenital lesion caused by an endocrinial imbalance or arises via the degeneration of a fibromatous tumor or arises from the maturation of lipoblastomatosis.[9] Oral fibrolipomas are very rare; only a few cases documented so far. Since the proliferative activity of fibrolipoma is greater than the other variants, the need for accurate diagnosis is important.[10]

The proliferative activity of fibrolipoma revealed a greater proliferative rate than other simple variants, which indicates the need for accurate diagnosis of such variants with high proliferative activity and further encourages similar studies.[10,11]

To the best of our knowledge, only about 43 cases of fibrolipoma of the oral cavity are described in the English literature.[9] The site-frequency distribution is given in Table 1. The two cases reported in this article were having fibrolipoma on retromolar pad and upper alveolus.

The English literature review showed a variable distribution of these intraoral lipomas, but approximately half were related to the buccal mucosa and the remaining were found in the tongue, floor of the mouth, lips, palate, and gingiva.[10-12]

Lipoma and fibrolipoma both are usually well circumscribed and have a thin capsule. Fibrolipoma differs from the classic variant lipoma as former is

| Table 1: Site distribution of oral fibrolipoma |
|-------------------------------|------------------|
| Site                          | Number of cases reported |
| Buccal mucosa                 | 18                |
| Alveolus (including retromolar area) | 3              |
| Lateral border of tongue      | 5                |
| Floor of mouth                | 4                |
| Gingiva                       | 2                |
| Vestibular region             | 2                |
| Palate                        | 4                |
| Lower lip and upper lip       | 3                |
| Tonsil                        | 1                |
| Intra osseous lesion          | 1                |
| Current cases                 |                  |
| Retromolar area               | 1                |
| Alveolus                      | 1                |
composed of lobules of “chicken-wire” appearing, benign adipocytes with a component comprised of broad bands of dense collagen. The consistency of this lesion varies from soft to firm, on the quantity and distribution of fibrous tissue and the depth of the tumor. In the first case, we had lobules of adipocytes in the deeper part of connective tissue, while in the second case, the adipocytes were scattered evenly in the connective tissue. On occasions, fibrolipoma can be confused with herniated buccal pad of fat, but the characteristic well-circumscribed nature and lack of history of trauma will help in differentiating it.[5,11]

The treatment of lipomas including fibrolipoma is usually surgical excision. This tumor can be life-threatening due to obstruction of upper airway by virtue of its size as sudden asphyxia death when present on upper aerodigestive tract. Lesions outside the oral cavity could show greater recurrence rates after surgical excision, but intraoral intramuscular lipomas, although not well-limited, rarely show recurrence if completely excised. Therefore, treatment of lipoma is essential as long-standing cases may sometimes get converted into fibrolipoma.

Declaration of patient consent

The authors certify that they have obtained all appropriate patients’ consent forms. In the form, the patients have given his/her consent for his/her images and other clinical information to be reported in the journal. The patients understand that their names and initials will not be published and due efforts will be made to conceal identity, but anonymity cannot be guaranteed.

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Nil.

Conflicts of interest

There are no conflicts of interest.

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