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CASE STUDY

RARE LIPOMA OF THE RETROMANDIBULAR REGION

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ABSTRACT

Lipomas are benign soft tissue neoplasm of mature adipose tissue seen as a common entity in the head and neck region. Lipomas are extremely rare in oral and maxillofacial regions and consist of around 1 to 5% of all neoplasms of the oral cavity. However, they are the most common tumours of mesenchymal origin in human body. And although the etiology remains unclear, several theories have proposed the role of the pathogenesis of this adipose tissue tumour and also different histological variants of oral lipoma. Intraoral lipomas are a rare entity which may be noticed only during routine dental examinations. A significant amount of these tumors rarely cause pain or torment, bringing about deferral to look for treatment. It is required for a clinician to analyze intraoral lipomas utilizing most recent symptomatic strategies and conservatively treat them without bringing on much distress.

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INTRODUCTION

Lipomas being the most common soft tissue neoplasm in the body, represent 0.1 to 5% of all benign tumors of the mouth (Dixon and Ziskind, 1956). About 15 to 20% of the cases involve the head and neck region, while 1–4% affect the oral cavity, an uncommon site for the occurrence of lipoma (Hatziotis, 1971). Ideally, they present themselves as long-standing soft nodular asymptomatic swellings covered by normal mucosa and generally occur in the areas of fat accumulation, especially the cheek, followed by the tongue, floor of the mouth, buccal sulcus and vestibule, lip, palate, and gingival (Tavares, 2015). Histologically, they are classified as simple lipoma, fibrolipoma, spindle cell lipoma, intramuscular or infiltrating lipoma, angiolipoma, pleomorphic lipoma, myxoid lipoma, and atypical lipoma (Agoff *et al*., 2001; Al Sheddi *et al*., 2014; Billings *et al*., 2006; Chen *et al*., 1984; Orlean *et al*., 1961; Perrotti *et al*., 2006; Piattelli *et al*., 1999; Tosios *et al*., 1995; Vecchio *et al*., 2009). Intramuscular or infiltrating lipoma is an uncommon mesenchymal tumor, usually appearing in the extremities or trunk but rarely occurring in the oral cavity (Schellong *et al*., 1997; Fleites Batista and Pino Miguelez, 1954; Intramuscular lipoma, 1952). Oral infiltrating lipomas are larger than the ordinary oral lipomas and present clinically as deep-seated, slow growing, painless masses. Here we report a case of intraoral lipoma along with the review of literature.

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Presentation of Case

A case of submucosal mass from the oral cavity was referred to the department of periodontology of Yashwantrao Chavan dental college & hospital Ahmednagar. The patient was a 32 year old female who was healthy with no history of smoking or cheek biting. The Patient's chief complaint was difficulty in mastication and pronunciation of few letters. Upon examination, a soft sessile mass of approximately 1 x1cm was detected at the retromandibular raphae region, which the patient reported had been present since two years (Figure 1,2 and 3). The lesion was painless. On excisional biopsy, there was a lobulated mass with well-defined margins (Figure 4). Histology revealed the presence of mature fat cells were seen clearly that indicated a case of lipoma (Figure 5).

DISCUSSION

To our knowledge, occurrence of lipoma at junction of retromandibular raphae has not been reported in the literature and is also one of the rare sites for neoplasms to occur.

Figure 1&2. Pre operative Lipoma present in the retromandiblar raphe region

Figure 3. Post excision of the lipoma

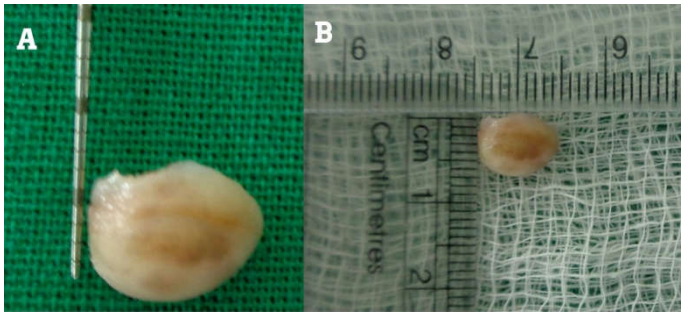

Figure 4. (A) Lipoma in toto measured with a periodontal probe (B) Lipoma measured with a scale

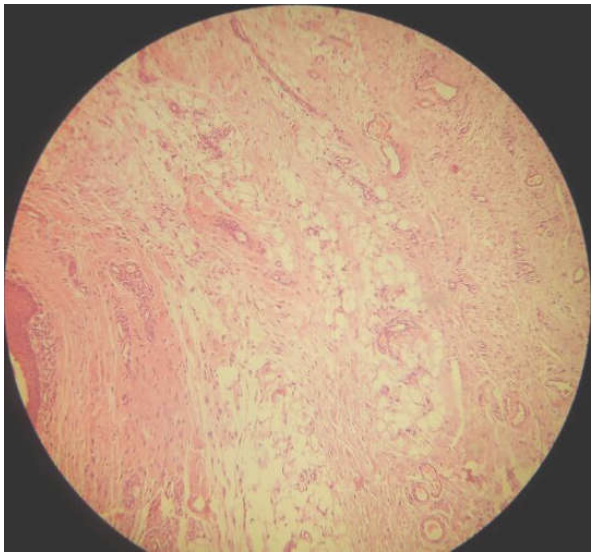

Figure 5. Histology of the excised lipoma

According to Furlong *et al*, 125 instances of intraoral lipomas were reported over a period of 20 years, which affirms the uncommonness of this oral tumor (Furlong *et al*., 2004). Lipomas, are benign soft tissue neoplasm of mature fat tissue, generally of mesenchymal origin and can commonly occur in the trunk and proximal portions of the extremities but are extremely rare in the oral cavity (1 to 4% influencing these locales) (Dixon and Ziskind, 1956). The usual complaint is of a painless palpable mass, and there is seldom dysfunction of an involved muscle (Hatziotis, 1971). Lipomas vary in size from 3 x 3 mm to 25 x 30 mm, with most measuring around less than 10 mm in diameter. They often present as slow growing asymptomatic lesions that are yellowish color with a doughy feel, and with generally no gender predilection (Dixon and Ziskind, 1956). The most common regions for occurrence in the oral cavity involve the buccal mucosa, a region abundant in fatty tissue, followed by tongue (Rapidis, 1982). Due to the presence of an extremely tiny amount of fat tissue in the hard palate, the incidence in that region is very low (Panders and Scherpenisse, 1967). The etiology of intraoral lipoma is still unknown, but the speculated hypertrophy theories attribute it to obesity which lead to accumulation of the inadvertent growth of these fat masses, thereby promoting the occurrence of these lesions (Zografos *et al*., 2002; Chow, 2015; Puget *et al*., 2009). However, this theory has been disregarded due to the lacking evidence in literature regarding the occurrence of these lesions in regions not native to preexisting adipose tissue. Another hypothesis known as "metaplasia hypothesis" reports that lipomatous improvement occurs due to the distorted separation of in situ mesenchymal cells into lipoblast (Chow, 2015). J. J. Lin and F. Lin proposed that these lesions may be formed from embryonic multipotential cells that persists subclinically torpid as congenital injuries (Lin *et al*., 1974). Lipomas are not very different in microscopic appearance from the surrounding fat and hence histopathology still prevails as the gold standard in the diagnosis of lipoma (Kind *et al*., 2009). Like fat, they are composed of mature fat cells, but the cells vary slightly in size and shape and are somewhat larger, measuring up to 200 mm in diameter (Zollinger, 1955). Furthermore, a useful diagnostic marker in the differential diagnosis between benign and malignant adipose tissue is the immunohistochemical detection of al 2 protein, which is expressed in lipoblasts. Other connective tissue lesions such as granular cell tumor, neurofibroma, traumatic fibroma, and salivary gland lesions

(mucocele and mixed tumor) might be included in the differential diagnosis (Zollinger, 1955; Naruse *et al*., 2015).

Surgical excision is the primary mode of treatment for intraoral lipoma. No reports of recurrence have been reported after local excision, however, infiltrative lipoma tends to recur after inadequate excision due to the fact that they are not encapsulated like simple lipomas. Even in cases with recurrence there has been no reported incidence of malignant transformation. If a patient refuses surgical excision, steroid injections can be administered on lipomas that are less than 1 inch in diameter that result in local fat atrophy thereby shrinking the tumor (Trento *et al*., 2017). Medical management of lipomas has also been proposed which involves injecting steroids to cause atrophy of adipose tissue. Average volume of steroid used may range from 1 to 3 mL depending on the size of tumour (Nanda, 2011). Liposuction using a 16-gauge needle and large syringe are useful in small or large lipomatous growth where scarring should be avoided (Nichter *et al*., 1990). In this review lipoma were treated by surgical excision and none of them showed any recurrence.

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