Case Report

The lipoma of tongue - A rare site for a tumor: Case report and review of the literature

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INTRODUCTION

Lipoma is the most common benign neoplasm of adipose tissue. It’s occurrence in head and neck region is about 15–20% and in the oral cavity only 1–4% of all benign tumors. Lipoma of tongue occurs only 0.3% of all tongue tumors. In the oral cavity, they are commonly present as slow growing asymptomatic lesion with characteristic yellowish color and soft consistency. This condition is mostly occurred in adults. Lipomas are commonly associated with lower and upper extremities. The most common site of lipoma in the oral cavity is buccal mucosa, but lipoma of tongue, floor of mouth, gingiva, retromolar area are very rare.

In this report, the authors present the clinical, histological features of lipoma of the tongue with review of the literature.

CASE REPORT

A 63-year-old male patient was reported to our department of oral and maxillofacial surgery with the chief complaint of swelling on left lateral border of the tongue since last 5 years [Figure 1]. 5 years back, he said it was very small pointed elevation come on the lateral border of the tongue. Then it was gradually increased in present size. The swelling was painless. Patient was on medication for hypertension. Family history was not contributory.

On clinical examination, extra orally lymph node was not palpable. Intra orally nodular swelling present on left lateral border of the tongue. The lesion appeared as solitary, sessile, pedunculated, soft in nature. It was approximately 15 mm × 10 mm large and ovoid in shape. Lesion appeared as dark yellow color soft tissue mass. The slip sign was positive for the lesion on palpation. Surface of tumor was smooth, nontender, soft, cheesy in consistency. On the basis of clinical examination, provisional diagnosis as benign soft tissue tumor was made. The patient was advised for surgical excision of the lesion. Routine hematological report was done prior to the surgery, all reports were within normal limits.

Under general anesthesia and proper surgical protocol, excision of the lesion was done [Figure 2]. Excised specimen sends it to the histopathological department. Then patient was kept under prophylactic antibiotics and analgesics for 5 days. Patient is kept under the follow-up. Histopathology showed squamous epithelium and an underlying zone shows a lesion enclosed by a thin fibrocollagenous capsule and composed of lobules of mature adipose tissue consistent with a picture of lipoma [Figure 3].

Key words: Adipose tissue, benign oral neoplasm, lipoma, tongue lipoma
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DISCUSSION

Lipoma is a common condition appeared on lower and upper extremities and trunk. Lipoma of the oral cavity is rare, with the prevalence rate of only 1:5000 adult, and only a few cases of lipoma of tongue were reported. The first description of lipoma was found by Roux in 1848 in a review of alveolar masses; he referred to lipoma as “yellow epulis.” The first case reported of lingual lipoma was credited to Barling in 1858.

We conduct an extensive search on PubMed for the literature review of lipoma of tongue. The search was conducted using the terms lipoma, lipoma of tongue, and lingual lipoma to retrieve all the cases reported in English literature. Only 64 cases were reported in English literature from 1909 up to 2013. All information of reported cases were collected and arranged in tabulated form [Table 1].

Simple lipoma occurs in all age groups but is more frequently seen after the age of 40 years. In general, there are no differences in gender although a slight female predilection has been noticed for fibrolipomas and male predilection for simple lipomas. This finding is in contrast with the whole body where lipomas are twice as common in females as in males. In our review, we found that all reported cases are in age group of range 20–81 years. There is slit male predilection observed (male = 21, female = 17, not available = 27). Lateral border of the tongue is the most common site for lingual lipoma. Size of lingual lipoma ranges from 1 to 11 cm (maximum diameter), considering all the cases reported [Table 1].

In the present case age, sex, site of lesion, size of the tumor these all findings were consistent with other others findings of lingual lipomas.

The etiology of lipomas remains unclear, but the trauma, chromosomal abnormality, hereditary, chronic irritation, hormonal imbalance, and metabolic conditions are some of the causative factors in the pathogenesis of this neoplasm. Multiple head and neck lipomas are closely associated with many systemic conditions such as neurofibromatosis, Gardner syndrome, familial multiple lipomatosis, Madelung’s disease, and Proteus syndrome.

These tumors are usually asymptomatic and slow growing in nature, that’s why they diagnosed accidently by dental professionals. Superficial lipoma may be suspected with a high accuracy by clinical examination. The deeper lipomas assessed by means of imaging modalities such as magnetic resonance imaging or computed tomography scan.

Oral lipomas are mostly classified on their histological variants. According to our review [Table 1], there are 28 cases of simple lipoma, 9 cases of infiltrating lipoma, 9 cases of chondrolipoma, 5 cases of spindle cell lipoma,
Table 1: Clinical detail of all reported cases of lipoma of tongue since 1909

| Authors                | Year | Age | Sex | Site                              | Size                  | Diagnosis                |
|------------------------|------|-----|-----|-----------------------------------|-----------------------|--------------------------|
| Shatlock               | 1909 | 76  | Male| Base of tongue and epiglottis     | 1.5 inches            | Lipoma                   |
| Low                    | 1912 | 69  | NA  | Right side of tongue              | NA                    | Lipoma                   |
| Coakley et al.         | 1946 | NA  | NA  | Tongue                           | NA                    | Lipoma                   |
| Braunstein Le et al.   | 1949 | NA  | NA  | Tongue                           | NA                    | Lipoma                   |
| Ausband et al.         | 1953 | NA  | NA  | Base of tongue                    | NA                    | Myxolipoma               |
| Bertelliade            | 1965 | NA  | NA  | Tongue                           | NA                    | Lipoma                   |
| Massberg               | 1965 | NA  | NA  | Tongue                           | NA                    | Lipoma                   |
| Horton                 | 1968 | NA  | NA  | Tongue                           | NA                    | Fibrolipoma              |
| Moss et al.            | 1970 | NA  | NA  | Bilateral tongue                  | NA                    | Lipoma                   |
| Burzynski et al.       | 1971 | NA  | NA  | Tongue                           | NA                    | Lipoma                   |
| Bergman                | 1972 | NA  | NA  | Tongue                           | NA                    | Lipoma                   |
| Lekkas et al.          | 1979 | NA  | NA  | Tongue                           | NA                    | Lipoma                   |
| Rybak                  | 1980 | NA  | NA  | Tongue                           | NA                    | Lipoma                   |
| Brack et al.           | 1981 | 81  | Female| Tongue                          | 5 cm x 1 cm           | Infiltrating lipoma       |
| Jablowski et al.       | 1982 | NA  | NA  | Tongue                           | NA                    | Lipoma                   |
| Bradley et al.         | 1983 | NA  | NA  | Tongue                           | NA                    | Lipoma                   |
| Coglian                | 1983 | NA  | NA  | Tongue                           | NA                    | Lipoma                   |
| Levin et al.           | 1983 | NA  | NA  | Tongue                           | NA                    | Lipoma                   |
| Guillou et al.         | 1986 | 60  | Female| Tongue                          | NA                    | Pleomorphic              |
| Van Steensel et al.    | 1986 | NA  | NA  | Tongue                           | NA                    | Lipoma                   |
| Gargallo               | 1987 | 38  | Male | Tongue                           | 5 cm x 1 cm           | Infiltrating lipoma       |
| Shirasuna              | 1989 | 56  | Female| Tongue                          | NA                    | Infiltrating lipoma       |
| Takeda                 | 1989 | 37  | Male | Tongue                           | 4 cm x 1 cm           | Intramuscular            |
| Lin et al.             | 1989 | 49  | Male | Tongue                           | NA                    | Angiolipoma              |
| Shirasuna et al.       | 1989 | 56  | Female| Tongue                          | 8 cm x 1 cm           | Infiltrating lipoma       |
| Copeland et al.        | 1989 | NA  | NA  | Tongue                           | NA                    | Lipoma                   |
| Maes et al.            | 1989 | 47  | Male | Tongue                           | 1 cm                  | Chondrolipoma            |
| Dimitrakopoulos et al. | 1990 | 20  | Female | Tongue                          | NA                    | Lipoma                   |
| Richardson et al.      | 1992 | NA  | NA  | Tongue                           | NA                    | Lipoma                   |
| Fujimura et al.        | 1992 | 56  | Male | Tongue                           | 1.5 cm x 1 cm         | Chondrolipoma            |
| Rajan et al.           | 1893 | NA  | NA  | Tongue                           | NA                    | Myxoid                   |
| Lombardi et al.        | 1994 | 68  | Female| Tongue                          | 1.5 cm x 1.3 cm x 1 cm | Spindle cell lipoma       |
| Roles                  | 1995 | NA  | NA  | Tongue                           | NA                    | Lipoma                   |
| Kacker et al.          | 1996 | 78  | Male | Tongue                           | 6 cm                  | Intramuscular lipoma      |
| Dattilo et al.         | 1996 | NA  | NA  | Tongue                           | NA                    | Lipoma                   |
| Hietala et al.         | 1997 | 68  | Female| Tongue                          | NA                    | Chondrolipoma            |
| Dutt et al.            | 1999 | 42  | Female| Tongue                          | 3 cm x 2 cm x 1 cm    | Spindle cell lipoma       |
| Akyol et al.           | 2000 | NA  | NA  | Tongue                           | NA                    | Lipoma                   |
| Piattelli et al.       | 2001 | 49  | Female | Left lateral margin of tongue | NA                    | Osteolipoma              |
| Moore et al.           | 2001 | 43  | Male | Dorsal of tongue                  | NA                    | Atypical                 |
| Atik et al.            | 2002 | NA  | NA  | Tongue                           | NA                    | Pleomorphic              |
| Keskin et al.          | 2002 | 54  | Male | Tongue                           | 1 cm                  | Infiltrating             |
| Kaku et al.            | 2003 | 75  | Male | Margin                           | 7 cm                  | Spindle cell lipoma       |
| Chidzonga et al.       | 2006 | 58  | Female| Tip of tongue                    | 11 cm                 | Lipoma                   |
| Srinivasan et al.      | 2006 | 34  | Female| Right lateral border of tongue   | 3.5 cm x 3.5 cm       | Lipoma                   |
| Chung et al.           | 2007 | NA  | NA  | Tongue                           | NA                    | Lipoma                   |
| Imai et al.            | 2008 | 72  | Male | Bilateral margins of tongue      | NA                    | Spindle cell lipoma       |
| Goel et al.            | 2008 | 36  | Female| Tongue                          | NA                    | Chondrolipoma            |
| Nonaka et al.          | 2009 | 30  | Male | Dorsal surface                    | NA                    | Chondrolipoma            |
| Coelho et al.[4]       | 2009 | 75  | Male | Tip of tongue                    | 10 cm                 | Intramuscular            |
| Berg et al.            | 2010 | NA  | NA  | Tongue                           | NA                    | Chondrolipoma            |
| Moritani et al.        | 2010 | 68  | Male | Left lateral border              | 1.2 cm                | Atypical lipoma          |
| Shabbir et al.         | 2011 | 71  | Male | Lateral border                   | NA                    | Chondrolipoma            |
| Garg et al.            | 2011 | 55  | Male | Left lateral border              | 1 cm                  | Intramuscular            |
| Ono et al.[5]          | 2011 | 52  | Male | Left lateral border              | 1.5 cm                | Myxolipoma               |
| Lee et al.             | 2012 | 71  | Male | Both border of tongue            | NA                    | Lipoma                   |
| Chandak et al.         | 2012 | 75  | Male | Tip of tongue                    | 9 cm x 8 cm           | Lipoma                   |
| Tasi et al.            | 2012 | 60  | Female| Dorsal surface of tongue         | NA                    | Chondrolipoma            |
| Magadum et al.         | 2013 | NA  | NA  | Lateral border of tongue         | 3 cm x 2 cm           | Lipoma                   |
| Amirzadeh et al.       | 2013 | 68  | Male | Tongue                           | NA                    | Intramuscular            |
| D’Antonio et al.       | 2013 | 44  | Female| Tongue                          | 3 cm                  | Pleomorphic lipoma       |
| Jünior et al.          | 2013 | 64  | Female| Left lateral border of tongue    | 2 cm                  | Spindel cell lipoma      |
| Villarrefiel Dorrrego et al. | 2013 | 66, 43 | Female, male | Dorsum of tongue | NA | Chondroid lipoma |
| Fomete                 | 2013 | 50  | Female| Tongue                          | NA                    | Neurofibrolipoma         |
| Our case               | 2014 | 63  | Male | Left lateral border of tongue    | 1.5 cm x 1 cm         | Lipoma                   |

3 cases of myxolipoma, 3 cases of pleomorphic lipoma, 2 cases of angiolipoma, 2 cases of atypical lipoma, 1 case of fibrolipoma, 1 case of neurofibrolipoma, and 1 case of osteolipoma was reported [Pie Chart 1].
Adipocytes of lipoma are histologically indistinguishable from normal adipose tissue. The metabolism of the lipoma differs from that of the normal adipose tissue.

Treatment of lipomas consists of simple surgical excision, irrespective of the histological subtype, with no recurrence being expected. Only infiltrating lipoma shows recurrence. The surgical approach is dependent on the site of the tumor and the proposed cosmetic result.

CONCLUSION

Lingual lipomas are asymptomatic and seldom caused a major problem to the patient, that’s why they are largely ignored in the literature. On the basis of our study and experience, we like to conclude that for proper understanding of such cases, more in-depth analysis and long-term follow-up is required. The dental clinician has to be alert regarding correct clinical diagnosis and accurate treatment of this lesion, so we have to encourage the other authors and oral surgeons to share their cases and knowledge with the world.