Quest Journals
Journal of Medical and Dental Science Research
Volume 11~ Issue 7 (2024) pp: 28-31
ISSN(Online) : 2394-076X ISSN (Print):2394-0751
www.questjournals.org

Research Paper

"Sialolipoma: A Rare Case in the Masseter Muscle"

Gangisetty Ram Pradeep[1], Gurram Prashanthi[2],Rajan Jyotsna[3] , NarayananVivek[4], Subramanian Abinaya[5], Patel Sumaiyya[6]

1- *Postgraduatestudent, Department of oral and maxillofacial surgery, SRM Kattankulathurdental college&Hospital,SRMIST Nagar, Kattankulathur-603203,chengalput.TN,India*
2- *Associate professor, Department of oral and maxillofacial surgery, SRM Kattankulathur dental college&Hospital,SRMIST, SRM Nagar, Kattankulathur-603203,chengalput.TN, India.*
3- *Assistant Professor, Department of oral and maxillofacial surgery, SRM Kattankulathur dentalcollege&Hospital,SRMIST,SRM Nagar,Kattankulathur-603203,chengalput.TN,India*
4- *Professor & Head, Department of oral and maxillofacial surgery, SRM Kattankulathur dentalcollege&Hospital,SRMIST,SRMNagar,Kattankulathur-603203,chengalput.TN,India*
5- *Associate professor, Department of oral and maxillofacial surgery, SRM Kattankulathurdentalcollege&Hospital,SRMIST, SRMNagar,Kattankulathur-603203,chengalput.TN,India.*
6- *Assistant Professor, Department of oral and maxillofacial surgery, SRM Kattankulathur dentalcollege&Hospital,SRMIST,SRM Nagar,Kattankulathur-603203,chengalput.TN,India*

ABSTRACT:
Lipomas are common soft tissue tumors but rarely occur in the oral region. Sialolipoma, a distinct variant found in salivary glands, consists of mature adipocytes mixed with salivary gland structures. These tumors typically grow slowly and are asymptomatic unless they become large enough to cause swelling or discomfort. We present a rare case of a 32-year-old woman with a six-month history of swelling in the lower right jaw. Clinical examination revealed a soft, movable mass (2x2 cm) in the right masseter muscle. Imaging (CECT, MRI) initially suggested a cystic lesion. Histopathological analysis confirmed Sialolipoma of the salivary gland.The lesion was entirely excised through surgery, and the patient underwent a six-month follow-up period without recurrence.

KEYWORDS: *Lipoma, Sialolipoma ,Mature adipocytes*

***R**eceived 28 June, 2024; **R**evised 06 July, 2024; **A**ccepted 08 July, 2024 © The author(s) 2024.*
P**ublished with open access at **www.questjournals.org

I. INTRODUCTION:

Lipomas are the most prevalent benign mesenchymal tumors, constituting half of all soft tissue tumors.Their typical appearance is that of well-circumscribed, painless, rubbery, single nodules, which are rather common in the extremities(1).

Oral lipomas (OL) often manifest as slowly expanding masses that occasionally reach larger than 20 mm. OL's precise etiology is currently unknown. The parotid region is where OLs are most commonly found, followed by the buccal mucosa, tongue, floor of the mouth, and palate, despite the fact that they are not commonly seen in the head and neck(2). An oral lipoma is composed of mature adipocytes organized in lobules separated by fibrous tissue septa. Morphologically, they are indistinguishable from normal fat, but differ metabolically, as the lipids in oral lipomas are inactive. Histologically, they manifest as classic lipomas, fibrolipomas, intramuscularlipomas (IML), angiolipomas, and spindle cell lipomas(3). Intramuscular lipomas are a rare type of lipoma that originate within muscle tissue and can be part of the differential diagnosis along with various salivary gland lipomas(4).We present a unique case of an extraoral lipoma initially suspected to be an intramuscular lipoma: however, the definitive diagnosis unveiled it as a Sialolipoma, which is distinct variant, characterized by proliferation of mature adipocytes with secondary entrapment of normal salivary gland elements(5).

II. CASE REPORT:

A 38-year-old female patient presented to the Department of Oral and Maxillofacial Surgery at SRM Kattankulathur Dental College and Hospital with a history of a painless, progressively enlarging swelling on the right side of her lower jaw. Clinical examination revealed a soft, mobile mass measuring 2x2 cm. The swelling extended 4cm superiorly from the zygomatic arch, 8 mm inferiorly from the lower border of the mandible, 2 cm from the corner of the mouth, and 1 cm from the posterior border of the mandible. The mass was soft in consistency, non-tender, non-pulsatile, located in the right masseter muscle region. There was no bruit or pulse across the lump, and the skin and oral mucosa beneath it also seemed normal. Furthermore, there were no indications of trismus, cervical lymphadenopathy, or neuroparalysis(6).

On intraoral examination, there was no evidence of swelling. Overlying mucosa appears normal in colour and texture. Allhaematological parameters were within normal limits. Based on clinical findings, the provisional diagnosis was intramuscular lipoma involving the masseter muscle.

Ultrasound reveals a relatively well defined heterogeneously hypoechoic lesion measuring 2.0x1.7x0.8cm noted in the right masseteric muscular plane. Contrastenhanced computed tomography (CECT scan) of Neck reveals a well-defined non enhancing hypodense lesion measuring 18x17x11mm noted in right masseter muscle abutting the superficial lobe of parotid gland [Figure 1]. Magnetic resonance imaging (MRI) revealed a 20 mm × 12 mm × 20 mm mass within the right masseter muscle. The mass exhibited high signal intensity on axial T2-weighted and T1-weighted images, and low signal intensity[Figure 2,3]. The differential diagnosis included Salivary gland tumors, Vascular lesions, Inflammatory processes , Intrinsic masseter muscle myopathy.

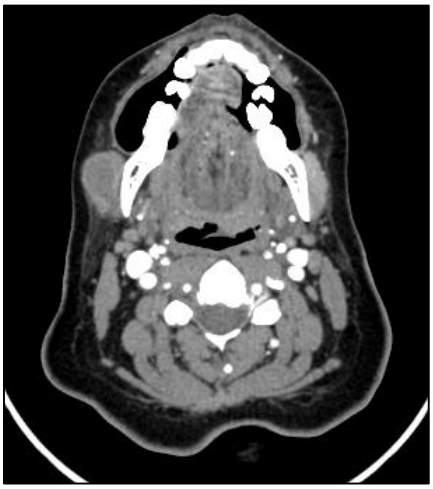

Figure 1: CECT showing Hypodense lesion in the right masseter muscle

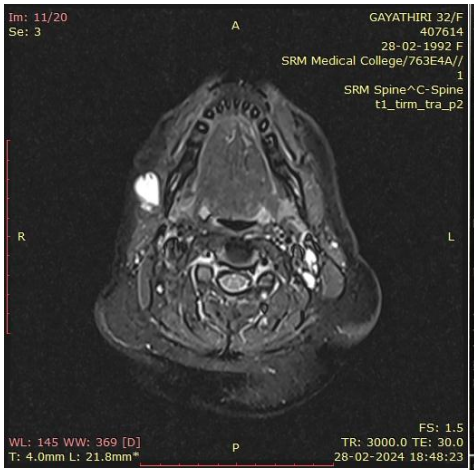

Figure 2: T2 axial: t2 hyperintense cystic lesion noted in right masseter muscle

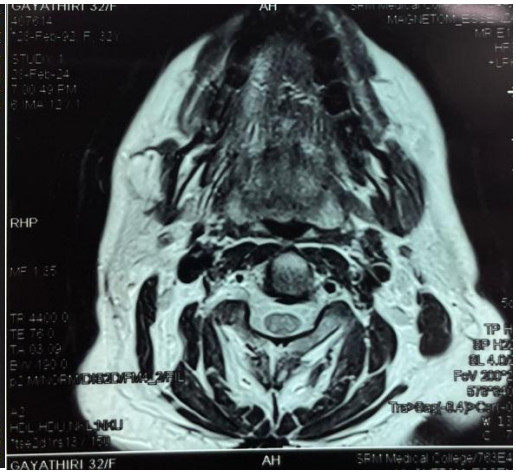

Figure 3: T1 tirm axial: t1 tirm hyperintense cystic lesion in right masseter muscle

The patient was taken for surgery under general anaesthesia following a thorough workup. The lesion was visualized by making an incision across the oral vestibule from the lower right second molar to the anterior edge of the ramus, reflecting the mucoperiosteal flap and performing a layer-by-layer blunt dissection. Bimanual palpation revealed and confirmed the presence of a yellow, fat-like lesion without a capsule, from which the cystic contents were extracted. To verify that the lesion had been removed, ultrasound was performed. Layer wise closure done using vicryl 4-0. The histologicalanalysis of the extract reveled abundance of mature adipocytes in connective tissue stroma along with Salivary glands acini ,salivary ducts and engorged blood vessels in focal areas. There were no mitoses or signs of cellular abnormality in the adipocytes [Figure 4,5]. Sialolipoma –a variant of Salivary gland lipoma was determined to be the final histological diagnosis.

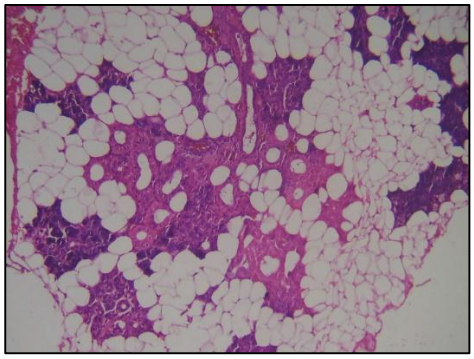

Figure4:Microscopic image showing a clearly defined, lobulated lesion predominantly composed of mature adipose tissue interspersed with salivarygland elements.

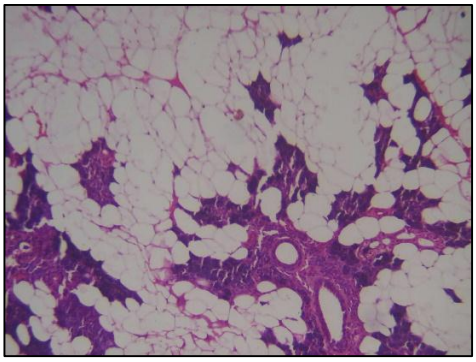

Figure 5: Microscopic image depicting salivary gland ducts surrounded by a cellular infiltrate, with no observable mitotic changes

III. DISCUSSION:

Lipomas, which resemble mature adipose tissue histologically, are the most common type of benign mesenchymal encapsulated tumors. Only an average of 25% of lipomas and their variants are observed in the head and neck region(7).

Intramuscular lipomas (IML) are uncommon benign mesenchymal tumors which infiltrate skeletal muscle(8). The IML is said to have a 63% local recurrence rate.Due to their deeper location, rubbery consistency, painless infiltrative-like growth pattern, which cause swelling and deformity, oral intramuscular lipomas (IMLs) can be challenging to distinguish from other oral lipomas using diagnostic imaging techniques such as ultrasound (US), computed tomography (CT), or MRI. Therefore, the definitive diagnosis can only be achieved through an incisional or excisional biopsy. In this case, the mass was completely removed without a preceding biopsy

Our histology and ultrastructural analysis verified that the glandular components within the lesion had normal salivary gland cellular phenotypes with no proliferative activity in the surrounding tissue. The glandular components were composed of regularly organized epithelial and myoepithelial elements with salivary acini and ducts(9). Based on these results, it is more likely that the glandular components in our case were not neoplastic elements but had entrapped during lipomatous development.Thus, as a unique variation of salivary gland lipoma, called "Sialolipoma" was diagnosed.

Sialolipoma, which is a non-neoplastic salivary gland elements between the adipose tissue(10). However, Akrish et al. hypothesized that the pathogenesis of Sialolipoma might be linked to some form of salivary gland dysfunction, resulting in an altered glandular configuration. Microscopically, this theory is supported by the replacement of normal salivary gland tissue with mature adipose tissue interspersed with atrophic salivary glandular elements.Only histopathologic review is capable of achieving a definitive diagnosis.

Regarding the treatment approach in this case, complete surgical removal of the lesion is preferred treatment , similar to the management of ordinary lipomas(11).Interestingly, there have been no documented cases of Sialolipoma recurrence following similar treatment, as seen in our case.

IV. CONCLUSION:

Sialolipoma can manifest in various sites where salivary glands and adipose tissue intersect. A retrospective histological review may uncover an increased incidence of this novel variant, potentially reclassifying some previously diagnosed ordinary lipomas closely associated with salivary glands as Sialolipoma. Future analyses are anticipated to elucidate the origin of salivary gland tissue within these tumors and validate Sialolipoma as a distinct histological subtype of lipomas.

In conclusion, this case report distinguishes itself in two significant ways from previously documented cases of intra-oral lipomas. Firstly, it highlights a rare occurrence of intra-oral lipoma involving salivary gland tissue. Secondly, it documents a novel instance of Sialolipoma occurring in the masseter muscle, which has not been reported in the literature before.

REFERENCES :

[1]. Sharma V, et al., Role of IDEAL technique in diagnosing a rare parotid gland lipoma,BMJ Case Rep 2022;15:e247382. doi:10.1136/bcr-2021-247382.
[2]. Santoso et al.Lipoma in Parotid Gland: A Rare Case Report, European Journal of Dentistry Vol. 17 No. 3/2023.
[3]. Ben-Zion Joshua et al ,Intramuscular (Infiltrating) Lipoma of the Floor of the Mouth,case reports in medicine, Volume 2018, Article ID 3529208.
[4]. G. Tsumuraya et al., Intramuscular lipoma in the masseter muscle: a case report , British Journal of Oral and Maxillofacial Surgery 52 (2014) e21–e23.
[5]. Nagao T, Sugano I, Ishida Y, Asoh A, Munakata S, Yamazaki K, Konno A, Kondo Y & Nagao K (2001) Histopathology 38, 30±36 Sialolipoma: a report of seven cases of a new variant of salivary gland lipoma.
[6]. Sarda et al., Diagnostic dilemma in maxillofacial pathologies: a case series,Journal of Medical Case Reports(2024) 18:174
[7]. Fregnani etal., Lipomas of the oral cavity: clinical findings, histological classification and proliferative activity of 46 cases, Int. J. Oral Maxillofac. Surg. 2003; 32: 49–53
[8]. Shane et al., Intramuscular Lipoma: A Review of the Literature,Orthopedic Reviews 2014; 6:5618.
[9]. Akrish et al., Sialolipoma of the Salivary Gland: Two New Cases, Literature Review, and Histogenetic Hypothesis, J Oral MaxillofacSurg 69:1380-1384, 2011.
[10]. Ponniah et al., Island of salivary gland in adipose tissue: a report of three cases, J Oral Pathol Med (2007) 36: 558–62.
[11]. Lin YJ, Lin LM, Chen YK et al. Sialolipoma of the floor of the mouth: a case report. Kaohsiung J Med Sci 2004; 20: 410–4.