Asian Journal of Medicine and Health

9(1): 1-4, 2017; Article no.AJMAH.36927
ISSN: 2456-8414

Fibrolipoma of Oral Cavity- A Case Study

BR. Sathvikalakshmi[1*], CH. Uma Reddy[1], R. Kirthika[1], L. Chandrashekar[1] and R. Sudarshan[1]

[1]Department of Oral Medicine and Radiology, Best Dental Science College, Madurai 625104, India.

Authors' contributions

This work was carried out in collaboration between all authors. Author BRS designed the study, performed the statistical analysis, wrote the protocol and wrote the first draft of the manuscript. Authors CHUR and RS managed the analyses of the study. Author RS managed the literature searches. All authors read and approved the final manuscript.

Article Information

DOI: 10.9734/AJMAH/2017/36927
Editor(s):
(1) Galya Ivanova Gancheva, Associate Professor, Department of Infectious Diseases, Epidemiology, Parasitology and Tropical Medicine, Medical University-Pleven, Bulgaria.
Reviewers:
(1) Ebtissam Alerraqi, Egypt.
(2) Vinej Somaraj, Rajas Dental College & Hospital, India.
(3) B. C. Ephraim-Emmanuel, Bayelsa State College of Health Technology, Nigeria.
Complete Peer review History: http://www.sciencedomain.org/review-history/22393

Case Study

Received 23rd September 2017
Accepted 26th November 2017
Published 21st December 2017

ABSTRACT

Lipomas are benign soft tissue mesenchymal neoplasms of the oral cavity. Among its histological variants, fibrolipoma is a rare entity and is comprised of neoplastic fat cells embedded in dense collagen. Although, fibrolipomas may occur at various sites in the oral cavity, its etiology is obscure. The importance of differentiating an intraoral fibrolipoma from a mucocele, fibroma and pleomorphic adenoma is discussed through a case study of fibrolipoma in the buccal sulcus with review of literature. Here we present a case study on fibrolipoma in the left buccal mucosa.

Keywords: Lipoma; oral cavity; benign tumor; fat.

1. INTRODUCTION

Lipoma, a common benign neoplasm occurring on trunk, shoulders, neck, and axilla, accounts for 4–5% of all benign tumors in the body. Oral lipomas compromise 2.2% of all lipomas and 2.4% of all benign tumors of oral cavity. Though it is rare in oral cavity, the most frequent site is buccal mucosa, followed by tongue, floor of mouth, buccal sulcus, palate, lips and gingiva [1].

**Corresponding author: E-mail: samyanila@gmail.com;*

The etiology of lipoma is uncertain, but they appear to be more common in obese people. Most of the lesions are developmental anomalies. Those which occur in the maxillofacial region usually arise late in life, presumed to be neoplasm of adipocyte [2]. Clinically, oral lipomas are slow-growing submucosal tumors presenting in the form of well-circumscribed, dome shaped, mobile, painless, sometimes fluctuant yellowish-colored nodules [3].

This rare entity should be considered in differential diagnosis to differentiate it from other mesenchymal tumors of oral cavity as it plays a major role in treatment plan and diagnosis. Here we present a case of lipoma on the buccal mucosa.

2. CASE STUDY

A patient aged 67 years reported with a chief complaint of sensitivity in left upper back teeth region of the jaw for past 6 months. Patient was apparently normal before two months. History of sensitivity prevailed for the past 6 months. Sensitivity was mild, aggravated on eating cold foods and drinks. The sensitivity was relieved on its own after a while.

Intra oral examination revealed a solitary well-defined exophytic growth present in the left buccal mucosa measuring 2 cm x 2 cm in size (Figs. 1 and 2). Extends superio-inferiorly 2 cm from the upper and lower labial vestibule. Anteriorly from 1 cm from the left commissure of the lip to posteriorly 5 cm short of retromolar area. Overlying mucosa appears pale and pigmented. Surface over the growth is smooth.

All the inspectory findings including number, size, site, shape, surface and extensions were confirmed. Growth is firm in consistency and pedunculated, non-tender and attached to the underlying structures.

Considering the history and on the examination of the lesion provisional diagnosis of fibroma was made and patient was investigated further. Giant cell fibroma, pyogenic granuloma, Neurofibroma, Peripheral Giant cell Granuloma were considered as the differential diagnosis.

An excisional biopsy of the lesion was done and the specimen was processed histologically with haematoxylin and eosin stain. The histological diagnosis reveals the following macroscopic and microscopic features:

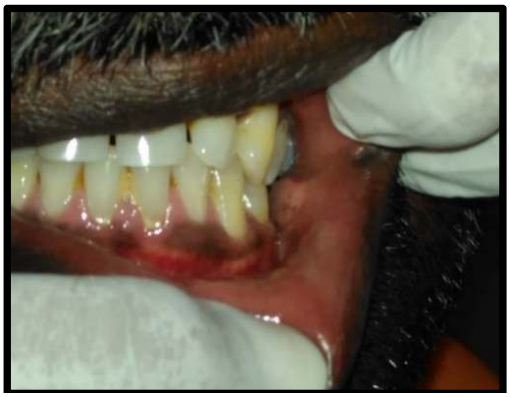

Fig. 1.

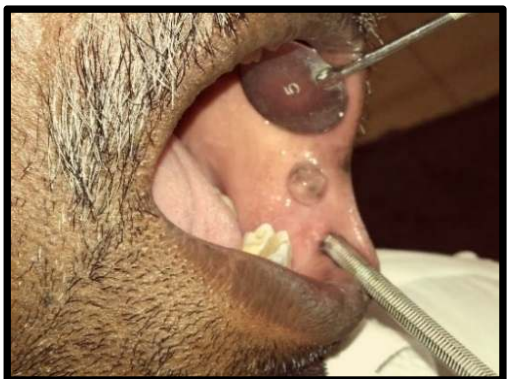

Fig. 2.

2.1 Macroscopic Feature

A single soft tissue bit measuring 0.68 x 0.5 cm of size, greyish white in colour, spherical in shape with smooth surface, soft in consistency was submitted. The entire specimen was processed for histopathological examination.

2.2 Microscopic Features

The histopathology of the submitted soft tissue specimen showed surface epithelium and the underlying connective tissue.

The epithelium is of parakeratotic stratified squamous epithelium with absence of rete peg process. There is no evidence of any dysplastic features. The underlying fibrous connective tissue shows dense collagen fibres arranged in irregular bundles with many lobules of mature fat cells with intervening connective tissue. There is absence of any inflammatory reaction. In some areas there is presence of few dilated blood capillaries with engorged RBCs (Fig. 3). The histopathology is suggestive of FIBROLIPOMA.

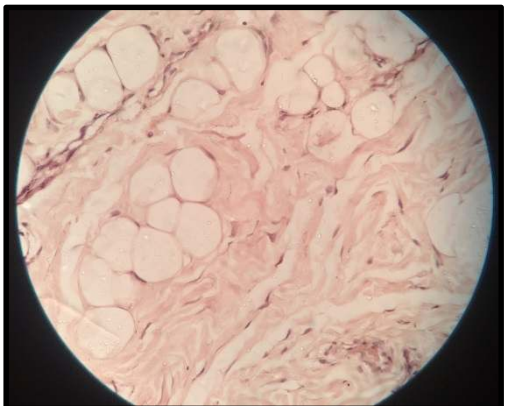

Fig. 3.

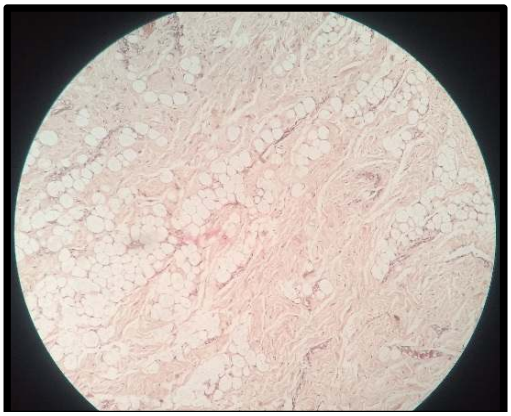

Fig. 4.

3. DISCUSSION

The first description of oral lipomas was given by Roux (1848) in a review of alveolar mass; he referred to it as a “yellow epulis”. Lipomas are benign, slow growing neoplasm composed of mature fat cells. Fibrolipoma of the oral cavity is a rare entity among them, with only 35 cases reported in the literature [8]. Extra orally, fibrolipomas have been reported in the oesophagus, pharynx, colon, trachea and larynx [9]. Intraoral, they can occur at various sites, such as buccal mucosa, lips, tongue, palate, buccal vestibule, floor of the mouth and retromolar area [10,13]. Fibrolipomas, classified as a variant of conventional lipoma by the WHO occurs commonly on the buccal mucosa and the buccal vestibule, followed by tongue, floor of mouth and lips [2]. Fibrolipoma differs from the classic variant because the mature adipose tissue is interspersed by bands of connective tissue [11]. A recent study revealed that 27% of 41 cases of oral lipomas were fibrolipomas [9]. Whereas previous studies have reported a lower incidence [12]. The nodular mass presented in our case was diagnosed as fibrolipoma due to presence of mature adipocytes interspersed with dense collagen fiber bundles. The adipose and fibrous tissue matures to form strands of collagen separating fat cells into lobules [10]. The other variants of lipomas are angiolipomas in case of excess. The pathogenesis of lipoma is uncertain, 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 [2]. 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 [1]. The etiology varies from the differentiation of multipotent mesenchymal cells in fat tissue, cartilage, and bone to metaplasia of a pre-existing lipoma. Mesenchymal cells are modified by systemic and local influences that range from local trauma to prolonged ischemia. Other aetiologies postulated are hormone alteration, metaphase of muscles cells, and embryonic cell nest in origin [4] Most lipomas have chromosomal aberrations such as translocation involving 12q13–15, interstitial deletion of 13q and rearrangement involving 6p21–23. Chop gene is involved in adipocytic differentiation [5]. The most common locations of lipoma in the oral cavity have been reported to be in the buccal mucosa, a region abundant in fatty tissue [6,13]. When superficial, there is a yellow surface discoloration. The lesion may be pedunculated or sessile and occasional cases show surface bosselation [7]. Depending upon the site, lipomas are categorized into superficial, deep, and periosteal. The variants of lipoma include angiolipoma, chondroid lipoma, myolipoma, spindle cell lipoma; hamartomatous lesions; diffuse lipomatous proliferations and hibernoma [4]. Lipoma is mainly treated by surgical excision [1]. The prognosis of lipoma is generally favourable, and recurrence is unlikely when surgery is performed appropriately. However, a case in which a lipoma of the buccal mucosa, which was diagnosed by biopsy, underwent transformation to liposarcoma has been reported [14]. In a previous study, the proliferative activity of lipomas was examined by immunohistochemically analysing the expression of proliferating cell nuclear antigen and Ki-67. As a result, it was suggested that Ki-67 expression is indicative of recurrence or malignant transformation [14]. Another study found that

fibrolipoma exhibits higher Ki-67 expression than classic lipoma and other variants of lipoma [14]. The present patient should be examined for malignant changes during the follow-up period.

4. CONCLUSION

This rare entity in oral cavity should always be considered in differential diagnosis while dealing with oral soft tissue tumors. A painless, soft slow growing tumor, either sessile or pedunculated with a smooth surface and well defined margins should be given a benefit of doubt of being a lipoma. Chances of malignant transformation are rare, yet there is always a possibility. Hence prompt treatment in the form of surgical excision followed by histopathological diagnosis is warranted.

CONSENT

As per international standard or university standard written patient consent has been collected and preserved by the authors.

ETHICAL APPROVAL

It is not applicable.

COMPETING INTERESTS

Authors have declared that no competing interests exist.

REFERENCES

1. Kumaraswamy SV, Nanjappa Madan, Keerthi R, Singh Shakti. Lipomas of oral cavity: Case studys with review of literature. J Maxillofac Oral Surg. 2009;8(4):394–397.
2. Neville B, Damm DD, Allen CM, Bouquot J. Oral and maxillofacial pathology. 3rd ed. Philadelphia: Saunders. 2008;523–4.
3. Amila Brki'c, Cigdem Ozcamur, Banu Gurkan- Koseo Glu, Vakur Olgac. Angiofibrolipoma of the buccal mucosa: A case study. Journal of Oral Science. 2010;52(1):173-176.
4. Naik R, et al. Intraoral soft tissue lipoma. Journal of Advanced Medical and Dental Sciences Research. 2015;2:97-100.
5. Rajendran R. Shafer's oral pathology. 7th ed. Amsterdam: Elsevier. 2012;141–3.
6. Raman Preet Kaur, Shikha Kler, Amandeep Bhullar. Intraoral lipoma: Report of 3 cases. Dent Res J. 2011;8(1): 48–51.
7. Cayson RA, Binnie WH, Speight PM, Barrett AW. Lucas's pathology of tumors of the oral tissues. 4th Ed. New York: Churchill Livingstone. 1984;176–9.
8. Fregnani ER, Pires FR, Falzoni R, Lopes MA, Vargas PA. Lipomas of the oral cavity: Clinical findings, histological classification and proliferative acitivity of 46 cases. Int J Oral Maxillofac Surg. 2003;32(1):49-53.
9. Perez B, Campos ME, Rivero J, Lopez-Agaudo D. Giant esophageal fibrolipoma. Otolaryngol Head Neck Surg. 1999;120: 445-46.
10. de Visscher JG. Lipomas and fibrolipomas of the oral cavity. J Maxillofac Surg. 1982;10:177-81.
11. Greer RO, Richardson JF. The nature of lipomas and their significance in the oral cavity: A review and case study of cases. Oral Surg Oral Med Oral Pathol. 1973;36:551-57.
12. Weiss SW, Goldblum JR. Enzinger and Weiss's soft tissue tumors (5th ed). Philadelphia: Mosby. 2007;571-639.
13. Manjunath BS, Patel GSD, Shah V. Oral fibrolipoma - A rare histological entity: Report of 3 cases and review of literature. J Dent (Tehran). 2010;7(4):226-31. Autumn
14. Yamada K, Dohara Y, Nagata M, Kawashima K, Yamashita S. A case of liposarcoma of the cheek. Japanese Journal of Clinical Oncology. 1979;9(1): 123–129.

Peer-review history:
The peer review history for this paper can be accessed here:
http://sciencedomain.org/review-history/22393