



## CASE REPORT

# Lobular Capillary Hemangioma Of Buccal Mucosa – A Case Report

Kavya.L<sup>1</sup>, Swetha Paulose<sup>2</sup>, Vandana.S<sup>3</sup>, Yoga.S<sup>4</sup>

**ABSTRACT :** Hemangiomas are relatively common benign proliferative lesion of vascular tissue origin. They are considered to be benign tumors of infancy characterized by a rapid growth phase with endothelial cell proliferation, followed by gradual involution. It is more common in females when compared to males. In this case report we present a case of Lobular capillary hemangioma in the right buccal mucosa in a 39 year old female.

**Key-words:** *Lobular Capillary Hemangioma, Pyogenic Granuloma*

### Introduction:

Vascular lesions are classified either as hemangiomas or vascular malformations. The word hemangioma comes from Greek word, hema - 'blood', angio - 'vessel', oma - 'tumor'(2). Hemangiomas consist of proliferating mass of blood vessels which do not undergo malignant transformation. The peak incidence of hemangioma is in the second and fifth decades of life. In 80% of cases, hemangiomas occur as single lesions. They may be cutaneous occurring in the skin, lips and deeper structures, mucosal occurring in the mucosal lining of the oral cavity, intramuscular involving the masseter and perioral muscles and intraosseous involving the jaw bones like the maxilla and mandible.(1)

Although it is one of the most common soft tissue tumors of the head and neck accounting for 60% of cases, it is relatively rare in the oral cavity. The most frequent site of occurrence of intraoral hemangiomas are lips, tongue, buccal mucosa and palate.(2)

Clinically hemangiomas are characterized as a pink to red or purple coloured soft painless mass, smooth or lobulated, sessile or pedunculated in any size measuring from a few millimeters to several centimeters. The tumor blanches on application of pressure, and hemorrhage may occur spontaneously. Hemangiomas are usually classified into capillary, cavernous and mixed hemangiomas on the basis of their histological appearance. It was first described in the literature by Sznajder et al., in 1973 under the term "Hemorrhagic hemangioma". It was first described by Poncet and

Dor in 1897 as Botryomycose humane.(9) Mixed hemangiomas contain both components and may be more common than the pure cavernous lesions.

Management of hemangiomas depends on several factors including the age of the patient and the size and extent of the lesions, as well as their clinical characteristics. At an early age, spontaneous regression takes place. Only 10 to 20% require treatment, because of their size, location and clinical progression. Surgical excision is the indicated treatment for small and superficial lesions.(6)

This article describes the case of a lobular capillary hemangioma, a histopathological variant of pyogenic granuloma in right buccal mucosa in a middle aged female patient and the successful treatment of this case.

### Case report

A 39 years old female patient reported to Department of Oral Medicine and Radiology, Indira Gandhi Institute of Dental Sciences, Puducherry with a chief complaint of a growth in the right side cheek region of the mouth (Figure 2) since 3 months. History revealed that the patient had a similar growth of size approximately 2 cm, 5years ago in the same site which was removed by the patient while accidentally biting on it. Recurrence of the growth was noticed on the same site 3 months ago which gradually progressed to current size. It was associated with discomfort while chewing food but no pain was reported. Past Medical history was non-contributory.

On clinical evaluation, no significant extra-oral finding was noticed. Intra oral examination revealed a solitary, pedunculated erythematous exophytic growth measuring 1.5 -2 cm arising from the right buccal mucosa at the level of the occlusal plane in relation to 15,16,45,46. Borders were distinct. The surface of the growth appeared shiny with mild lobulations and diffuse hyperkeratotic spots. The growth was non tender, firm in consistency and fixed to the underlying mucosa. No pulsations or bruit were noticed. Based on the history and clinical appearance, provisional diagnosis of pyogenic granuloma was made.

A pre-operative haematological examination revealed all parameter were within normal limits. Excisional biopsy was performed under local anesthesia. The excised tissue was fixed in 10% neutral buffered formalin and was sent for histopathological examination. Satisfactory uneventful healing occurred after one month (Figure 3). Patient was recalled periodically at intervals of three months and six months and no evidence of recurrence was observed. Patient is under regular follow-up till date.

### **MICROSCOPIC FEATURES**

The stained H&E section revealed stratified squamous keratinized type epithelium with underlying connective tissue exhibiting cellular areas interposed with thick fibrous connective tissue giving a lobular pattern. These lobules contained highly proliferative blood vessels and capillaries associated with chronic inflammatory cell infiltrate. The overlying epithelium was of variable thickness exhibiting hyperplasia and atrophy (figure 3). The histopathological features were suggestive of lobular type capillary hemangioma.

### **DISCUSSION**

Vascular lesions are generally divided into two categories: Hemangioma and vascular malformations. The term hemangioma has been traditionally used to describe a variety of developmental vascular anomalies of infancy and childhood. It is reported to be occurring in 5–10% cases of 1 year old children. Although few cases are reported to be congenital, most hemangiomas cannot be recognized at birth, but arise subsequently during the 8 weeks of life. On the other hand, vascular malformations are present at birth and persists throughout life.(2,11)

Hemangiomas of infancy are usually classified into superficial, deep and mixed. Most common sites for intra oral hemangiomas are buccal mucosa (45.2%), followed by the tongue (35.5%), lip (9.7%), gingiva (6.5%), and palate (3.2%).(1)

Capillary hemangiomas are usually present at birth, while most cavernous hemangiomas occur in adulthood. However, the case presented by us in this paper is a type of intra- oral capillary hemangioma in a middle aged female which is relatively rare. The incidence varies from 0.5-1.0% of all intraoral neoplasms.(8)

Hemangiomas may mimic other lesions clinically and histopathologically. The differential diagnosis of hemangiomas includes pyogenic granuloma, peripheral giant cell granuloma, chronic inflammatory gingival hyperplasia (epulis), epulis granulomatosa, and squamous cell carcinoma.(5) Lobular Capillary Haemangioma (LCH) type and non-LCH type are histological variants of pyogenic granuloma. LCH is characterized by proliferating blood vessels that are organized in lobular aggregates. In a review of 639 vascular lesions of the oral cavity and upper respiratory tract, Mills et al found that 73 cases had characteristic features of LCH. The lip is the most common site (38%), followed by the nose (29%), oral mucosa (18%), and tongue (15%).(3) The foci of fibrous maturation are seen in 15% of non-LCH pyogenic granuloma but are totally absent in LCH type of pyogenic granuloma. The surface is usually ulcerated and replaced by a thick fibrinopurulent membrane. Clinical findings in correlation with histopathologic findings confirm our case as lobular capillary hemangioma.(11)

At an early age, hemangiomas require no intervention spontaneous regression takes place. Only 10 to 20% require treatment which is based on various factors such as age of the patient, clinical features and the anatomic considerations.(7) The most common treatment of choice for hemangioma is surgical excision of the lesion with or without ligation of vessels and embolization.(10) For those lesions not amenable to surgery, other treatment modalities such as intra-lesional injection of sclerosing agents, steroid therapy, interferon alpha-2b, radiation, electrocoagulation, cryosurgery, laser therapy such as YAG laser, CO2 laser, embolization may be used.(4) In our case, surgical excision was selected as the treatment modality based

on the provisional diagnosis of pyogenic granuloma, in addition to the lesion being small sized on presentation and submitted for histopathological examination. Surgical management should be executed with caution since it may lead to profuse bleeding. However, in this case minimal bleeding was encountered which might be due to the fact that the hemangioma might not be in an active proliferative stage.

## Conclusion

Capillary hemangioma is a lesion that clinically resembles pyogenic granuloma which is identified based on its histological findings. It often presents as a diagnostic dilemma to the clinician. This necessitates biopsy of such lesions for establishing a definite diagnosis and proper management and prevention of various complications. Capillary Hemangioma is associated with increased risk of postoperative recurrence that necessitates longer follow up of the site

## References:

1. Akyol MU, Yalçiner EG, Doan AI. Pyogenic granuloma (lobular capillary hemangioma) of the tongue. *Int J Pediatr Otorhinolaryngol* 2001;58(3):239–41.
2. Neville BW, Damm DD, Allen CM, Bouquet JE. *Oral and maxillofacial pathology*. 2nd ed. Philadelphia: Saunders;2002.
3. Jafarzadeh H, Sanatkhan M, Mohtasham N. Oral pyogenic granuloma : A review. *Journal of oral science*; 2006;48(4):167–75.
4. Dilsiz A, Aydin T, Gursan N. Capillary hemangioma as a rare benign tumor of the oral cavity : a case report. *Case journal*; 2009;6:1–6.
5. Rachappa M, Triveni MN. Capillary hemangioma or pyogenic granuloma : A diagnostic dilemma. *Contemporary clinical Dentistry*.2010;1(2):18–21.
6. Jayaraj D. Gingival granular cell tumor of the newborn- Report of two cases. *Journal of Scientific Dentistry*. 2012;2(1):36-39.
7. Kamala KA, Ashok L, Sujatha GP. Pyogenic granuloma on the upper labial mucosa: A case report. *J Clin Diagnostic Res*. 2013;7(6):1244–1246.
8. Satish V, Bhat M, Maganur P C, Shah P, Biradar V. Capillary Hemangioma in Maxillary Anterior Region : A Case Report. *International journal of Clinical Pediatric Dentistry*. May-August 2014;7(2):144–7.
9. Jha SK, Roy D, Pal A, Jha S. Lobular Capillary Hemangioma of Nose : case report and literature review. *Otolaryngology online journal*. 2015;5(1).
10. Kumari VRS, Vallabhan CG, Geetha S, Nair MS, Jacob TV. Atypical Presentation of Capillary Hemangioma in Oral Cavity- A Case Report. *Journal of clinical and diagnostic research*.2015;9(10):26–8.
11. Mitra D, Dutta S, Paul J, Kumar N. Central capillary hemangioma of the maxilla : Case report and a review of the literature. *Saudi J Dent Res. The Saudi Journal for Dental Research*.2016;7(1):64–8.

## Address of Correspondence

Dr. Kavya.L  
Postgraduate Student,  
Department of oral Medicine and Radiology,  
Indira Gandhi Institute of Dental Sciences,  
MGMCRI Campus, Pilliyarkuppam,  
Pondicherry- 607402.  
Email: kavayanana@gmail.com  
Contact No: 9042002745

## Authors:

<sup>1</sup>Postgraduate student, Department of Oral Medicine and Radiology, Indira Gandhi Institute Of dental Sciences, Pondicherry.

<sup>2</sup>Senior Lecturer, Department of Oral Medicine and Radiology, Indira Gandhi Institute Of dental Sciences, Pondicherry.

<sup>3</sup>Reader, Department of Oral Medicine and Radiology, Indira Gandhi Institute Of dental Sciences, Pondicherry.

<sup>4</sup>Postgraduate student, Department of Oral Medicine and Radiology, Indira Gandhi Institute Of dental Sciences, Pondicherry.

## How to cite this article :

Kavya.L, Swetha Paulose, Vandana.S, Yoga.S. Lobular Capillary Hemangioma Of Buccal Mucosa – A Case Report. *Journal of Scientific Dentistry*, 2017;7(1):18-20

**Source of Support :** Nil, **Conflicts of Interest :** None declared