CASE REPORT

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# Hemangioma of Left Buccal Mucosa: A Case Report

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**ABSTRACT:**

The Vascular lesions are indeed very widespread, with vascular tumors numbering the most common tumors in childhood. Researchers and authors frequently use the idiom hemangioma to portray or describe vascular malformations and a potpourri of vascular anomalies, whereas many of the others still use the term cavernous hemangioma for describing venous malformation and port-wine stain for capillary malformation, venous malformation, and arteriovenous malformations. Hemangiomas are those lesions which are not present at the time of birth, they become noticeable within first month of life and then exhibit a rapid proliferative phase, and slowly involutes to non-existent. In the oral cavity Hemangiomas are not common pathological entities, but the common sites are the head and neck. Presently, we are hereby report a case of vascular lesion of left buccal mucosa in an 22-year-old male patient, reviewed treatment modalities and their clinical implication.

**Keywords:** Buccal mucosa, Hemangioma, Vascular malformation.

## INTRODUCTION

Benign vascular proliferations include a variety of different lesions, grouped under common but not precise designation "hemangioma". Few of the "hemangiomas" are definitively considered as neoplasms (infantile capillary hemangioma), whilst a few are thought to represent some reactive inflammatory lesions (lobular capillary haemangioma, epithelioid hemangioma) and some - vascular malformations (arteriovenous hemangioma). New variants or entities such as acquired elastotic hemangioma, microvenular hemangioma, and capillary nonprogressive hemangioma are also described.[1]

The benign vascular lesions are an outcome of blood vessel anomalities or endothelial cell proliferation . International Society for the Study of Vascular Anomalies (ISSVA), in 1996, approved a Anomalies (ISSVA), in 1996, approved a proposed by Mulliken, Glowacki.[2]

Historically the classification of benign vascular tumors was: (1) As per the type of fluid contained in it as hemangioma (lesion containing blood) and lymphangioma (lesion containing lymph) and (2) As per the diameter of the vascular channels viz. capillary (smaller diameter) and cavernous (larger diameter).[3]

When seen clinically, the hemangioma presents as smooth or lobulated soft tissue mass, measuring a few millimeters, which is barely noticeable or it may enlarge upto several centimeters causing physical disfigurement and also functional disturbance. Usually a majority of the lesions involutes spontaneously, which thereby needs no treatment further.[4] The management of hemangiomas and their treatment of choice depends upon several factors which does include the patient's age and the extent and size of the lesions, also the clinical characteristics.

## CASE REPORT

A 22 year male patient reported to our department of oral & maxillofacial pathology, bhilai (c.g.) presenting a chief complaint of swelling present in left cheek for last 4-5

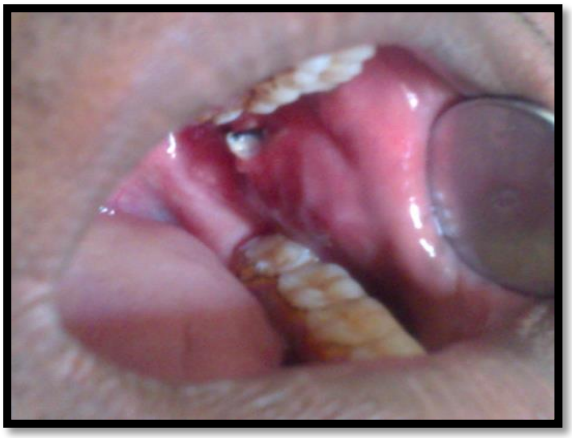
month. Previously the swelling was of peanut size, round in shape in left buccal mucosa which increased in size specially in evening time & reduced in morning. Which was also not associated with pain or any other inflammatory changes. Before coming to our department patient consulted private dentist were FNAC was conducted & suture was placed. On general examination all the vital sign were under normal limits.

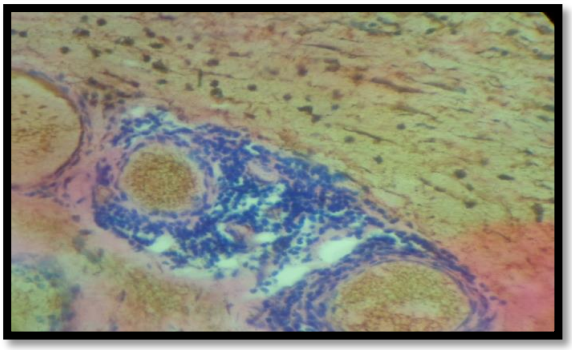
On extra oral examination a single swelling with diffuse margin of size 5x4 cm in diameter with oval shape & smooth surface texture present on left side of the face extending superioinferiorly from the left infraorbital margin to the lower border of mandible & anterioposteriorly it is extending from ala of the nose to 2 cm anterior to the external auditory meatus. There was slight rise in temperature with firm to hard (rubbery in consistency) which is compressible (slipping sign is present) & there is no involvement of lymphnodes.

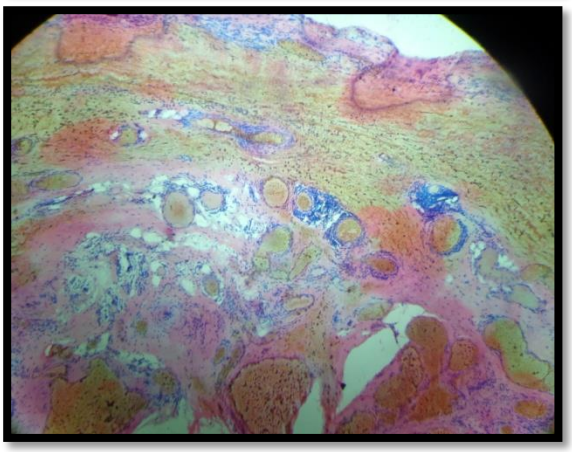
On intraoral examination a single swelling with diffuse margin with normal colour present on left buccal mucosa of size 5x4 cm in diameter extending anterioposteriorly from distal margin of 1st premolar to retromolar area. Superioinferiorly extending from maxillary buccal vestibular area to mandibular buccal vestibular area.

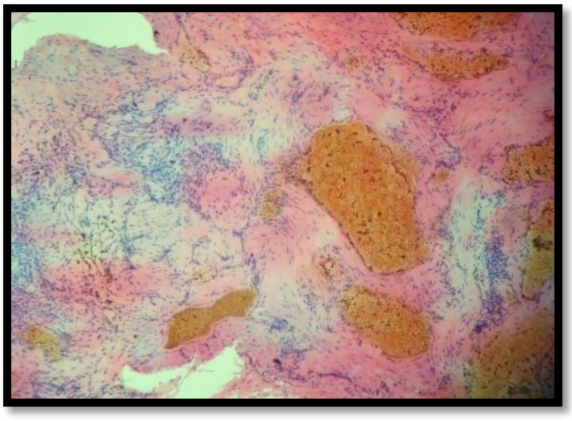
On examining OPG no abnormalities has been detected. Provisional diagnosis of lipoma of left buccal mucosa was made with differential diagnosis of hemangioma, lymphangioma & mucocele was made. Under local anesthesia and proper aseptic condition, excisional biopsy was also carried out

On gross examination, soft tissue has been received which was soft to firm in consistency, blackish brown in colour. After routine processing of tissue, hematoxyline & eosin stain section showing stroma with dilated blood space with thrombosed blood, lined by flattened endothelial cells. Surrounding the space proliferation of hyalinized wavy bundles with plump spindle shaped cells. At places small blood vessels surrounded by proliferation of plump round to oval cell and patches of inflammatory infiltrate. histopathologically diagnosis of cavernous hemangioma is made. Patient follow up was done.









**DISCUSSION**

One of the the most common soft tissue lesions Hemangiomas are usually characterized by rapid and proliferation of the cells of endothelium.[1] The prevalence of hemangiomas is estimated to be round 2-3% in neonates, 10-12% below 1 year of age and 22-30% found amongst babies who at the time of birth weigh less than1000g. They also show a female predilection (ratio 3:1). In contrast to this, the present case was observed in a male ageing 22 year. Most of the hemangiomas (eighty percent) occur as single lesion, while multiple tumors are found in 20% of affected patients. The present case also had a single tumor.[9]

Approximately 85% of childhood onset hemangiomas spontaneously regress after puberty, whereas a varix arises in older individuals and once formed does not regress. The present case was a hemangioma which dis not regressed even after puberty.[9]

Historically, hemangiomas have been classified in a variety of ways. As per the classification given by Enzinger and Weiss, hemangiomas can be capillary, cavernous, and miscellaneous forms like verrucous, venous, arteriovenous haemangiomas, and so forth. As per the classification given by **Mulliken et al in 1982,** the hemangiomas can be classified as Benign Vascular tumours. In their first workshop held in June 1996 at Rome International Society for the Study of Vascular Anomalies (ISSVA) revised the classification given by Mulliken et al and classified vascular abnormalities as vascular tumours which consists of Infantile hemangioma, Congenital hemangioma and vascular malformations.[9]

Hemangiomas are associated with the following syndromes: Rendu-Osler-Weber syndrome (autosomal dominant inheritance, multiple telan giectasias, frequent involvement of GI tract, occasionally involving CNS). Sturge-Weber-Dimitri syndrome (can be noninherited and nonfamilial, with port-wine stain and leptomeningeal angiomas). Kasabach-Merritt syndrome (hemangioma in combination with thrombocytopenic purpura, consumptive coagulopathy, micro angiopathic hemolysis, intralesional fibrinolysis).Maffucci syndrome (hemangiomas involving mucous membranes, dyschondroplasia). Von Hippel-Lindau syndrome (genetic transmission variable, cerebellum or the retinal hemangiomas, visceral cysts). Klippel-Trenaunay-Weber syndrome (port-wine stain, angiomatosis of the extremities).[5]

The pathogenesis is still unclear with currently being two proposed theories. As per the first theory the endothelial cells of haemangiomas get arise from the disrupted placental tissue which are embedded in the foetal soft tissues during the time of gestation or birth. Hemangioma markers have been shown to match with those found in placental tissue. The discovery of endothelial progenitor and stem cells in the circulation of patients with haemangioma gave a way to another theory. This theory was then supported by the development of haemangioma in experimental animals from the stem cells isolated from human specimens.[8]

Angiogenesis is stimulated by Cytokines, such as basic fibroblast growth factor (bFGF) and vascular endothelial growth factor (VEGF). Now excesses of these angiogenic factors or decreases of angiogenesis inhibitors (eg, gamma-interferon, tumor necrosis factor–beta, transforming growth factor–beta) have been implicated in the development of hemangiomas.[8]

Majority of hemangiomas occur in the the head and neck region. Rarely found in the oral cavity but hemangiomas may occur on the tongue, buccal mucosa, lips, palatal mucosa, gingiva, salivary glands, alveolar ridge, and jaw bones.[8]

**Pradeep pattar et al (2015)** reported a case of non involuting haemangioma of buccal mucosa. The appearance of this tumor clinically resembles to that of many other vascular tumors. Varying in size like from a few milimeteres to several centimeters the hemangioma can appears as soft mass, smooth or lobulated, and sessile or can be pedunculated. The cavernous hemangiomas in

adults do not regress and follow a chronic course having slow progressive growth. They are usually large in size and might interfere with mastication. Our case was clinically similar to those above described.[8]

Mucocele, Ranula, cysts, Varicosities and arteriovenous shunts are a few differential diagnosis. Syndromes associated with cavernous hemangiomas are Sturge Weber syndrome, Kasabach Merritt syndrome, PHACE (posterior fossa brain malformations, haemangioma of the face, arterial cerebrovascular anomalies, cardiovascular anomalies, eye anomalies, and sterna defects or supraumbilical raphe) syndrome.[8]

**Jaspreet singh gill et al (2011)** presented oral haemangioma case of palatal mucosa. It contained blood-filled capillaries lined by layer of endothelial cells in a connective tissue stroma without any evidence of inflammation.[6]

**K.a.Kamala et al (2014)** reported a case of cavernous haemangioma of the tongue. The term cavernous hemangioma has traditionally been applied when lesional vascular channels are considerably enlarged. Cavernous hemangiomas consist of deep, irregular, dermal blood-filled channels. They are composed of tangles of thin walled cavernous vessels or sinusoids that are separated by a scanty connective tissue stroma.[7]

In the present case, histopathological features resemble that of cavernous haemangioma. It contained large dilated blood-filled capillaries lined by layer of endothelial cells in a connective tissue stroma. At places small blood vessels surrounded by proliferation of plump round to oval pericytes and patches of inflammatory infiltrate.

Most of the true hemangiomas undergo spontaneous regression at an early age. Only 10-20% requires treatment. Different therapeutic procedures available are microembolization, radiation, cryotherapy, sclerosing agents, corticosteroids and laser therapy. Of them, complete surgical excision of these lesions, if possible provides the best chance of cure.

In this case, the treatment comprised of complete surgical excision of the lesion with removal of entire base of lesion. The prognosis of hemangioma, in general, is excellent since it does not tend to recur or undergo malignant transformation following adequate treatment. In the present case, the patient was recalled at regular intervals and no sign of recurrence was reported till one year follow-up.

## CONCLUSION

Intraorally, hemangiomas most commonly affect buccal mucosa. Although most of hemangiomas involute, few of isolated hemangiomas do not involute and require treatment. These types of lesions should be properly differentiated from other bluish red lesions. Proper care should be taken during management of such lesions as there are chances of heavy bleeding during treatment which could be fatal.

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