

Lobular Capillary Hemangioma : A Rare Entity

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Abstract :

Hemangioma is a relatively common benign proliferation of blood vessels that primarily develops during childhood. Two main forms of hemangioma are: capillary and cavernous. The capillary form presents as a flat area consisting of numerous small capillaries. Cavernous hemangioma appears as an elevated lesion of a deep red color, consisting of large dilated sinuses filled with blood. The purpose of the study was to report the case of a capillary hemangioma in a patient and to describe the successful treatment of this case.

Keywords :

Capillary hemangioma, Pyogenic granuloma, Angiosarcoma, Kaposi's Sarcoma

Introduction

Various terminologies have been given to describe vascular lesions, and they are classified either as hemangiomas or vascular malformations.⁽¹⁾ The term hemangioma includes a heterogeneous group of clinically benign vascular lesions which shows similar histologic features.⁽²⁾ Hemangioma is a benign lesion, characterized by proliferating mass of blood vessels and does not show malignant transformation.⁽¹⁾ It shows a higher prevalence in females than in males. Although the lesion develops in childhood i.e. congenital, few cases are being reported in older individuals as well.^(1,2)

Hemangioma is known to be the most common soft tissue finding in the head and neck region, but it is relatively uncommon or a rare finding in the oral cavity. On the basis of histologic features, hemangiomas are classified as : 1) Capillary hemangioma ; 2) Cavernous hemangioma.

Capillary hemangiomas are composed of small thin-walled vessels of the capillary size that are lined by a single layer of flattened or plump endothelial cells and surrounded by a discontinuous layer of pericytes and reticular fibers. In 1973, Sznajder et al. first described this lesion under the term "Hemorrhagic hemangioma". On the other hand, cavernous hemangiomas show deep, irregular, dermal tangles of large thin-walled vessels or sinusoids which are separated by scanty connective tissue and surrounded by discontinuous layers of endothelial cells.

If we see clinically, hemangiomas are characterized as a soft mass that could be smooth or lobulated, sessile or pedunculated, and may be seen in any size ranging from a few millimeters to several centimeters.⁽³⁾ The color of the lesion ranges from pink to red-purple. The tumor blanches on the application of pressure, and it may bleed either spontaneously or after minor trauma. They are generally painless. Intraorally, it is usually seen on the gingiva and less

frequently at other sites. Periodontally, these lesions often arise from the interdental gingival papilla and spread laterally to involve adjacent teeth.⁽⁴⁾

Management of hemangioma and the treatment of choice depends on several factors such as the age of the patient, the size and extent of the lesions, as well as their clinical feature. If the lesion is congenital, then it may undergo spontaneous regression at an early age.⁽⁵⁾ If the lesion is superficial and does not show any esthetic problem and if it is not subjected to masticatory trauma, it may be left untreated. Small and superficial lesions may be completely excised with relative ease. On the other hand, the excision of more deeply seated lesions usually involves a wider surgical approach.

Various treatment modalities have been used in the management of hemangiomas, consisting of oral corticosteroids, intralesional injection of fibrosing agents, interferon α -2b, radiation, electrocoagulation, cryosurgery, laser therapy, embolization, and surgical excision.⁽⁵⁻⁷⁾ Recurrence has been reported.

This article describes the case of a patient who had a growth similarly arising in an edentulous space between the mandibular left central incisor and canine which was successfully managed by excision, with six months of uneventful follow-up for observing any recurrence.

Pyogenic Granuloma :

It is a relatively common, tumorlike, exuberant tissue response to localized irritation or trauma. It is a reactive inflammatory process filled with proliferating vascular channels, immature fibroblastic connective tissue, and scattered inflammatory cells. The surface of the lesion usually is ulcerated, and it exhibits a lobular architecture.⁽⁸⁾ Histologically, numerous small and large channels are formed which are engorged with red blood cells and lined by banal flat or plump endothelial cells.⁽⁹⁾

Angiosarcoma :

Angiosarcomas are malignant tumors of the vascular endothelium, consisting of only 2% of soft tissue sarcomas. Approximately half of the patients die within 15 months of the diagnosis due to metastases to the lungs, liver, and bone. Clinically, it shows rapid expansion which is red to bluish color and of a soft to fibrous consistency, which bled easily. The tumor size ranged from 25 to 60 mm. Histologically, it shows solid sheets of mitotically active pleomorphic cells with large nuclei containing multiple nucleoli.⁽⁴⁰⁾

Kaposi's Sarcoma :

Kaposi's sarcoma (KS) is a multicentric mucocutaneous neoplasm of endothelial origin. Oral KS frequently affects the hard and soft palate, gingiva, and dorsal tongue. The lesions vary in color from brownish-red to bluish-purple, as a result of the extravasation of erythrocytes and local deposition of hemosiderin. The histologic features show a mixture of proliferating spindle cells, inflammation, incomplete vascular slits, and extravasated erythrocytes.⁽⁴¹⁾

Case Report

A 50-year-old female patient came to the Department of Periodontics and Oral Implantology with the chief complaint of gradually increasing, painless swelling in the lower left front tooth region of the jaw since 2 months. The patient is a known case of hypertension under Tab. Amlodipine since 1 year. Extra-oral examination including the lymph nodes was insignificant. Intra-oral examination revealed 1x1.5cm growth which was red in color with a bluish hue on the attached gingiva in an edentulous space between #31 and #33. The lesion appeared sessile with surface ulceration most probably because of trauma during mastication. The growth showed blanching on the application of pressure. A Periodontal pocket (approximately 8 mm) was detected in the associated region. Other findings included a mild supragingival calculus around teeth and the absence of multiple teeth.

Before starting surgical treatment, thorough scaling and root planning were done carefully to remove any local irritating factors which may have been responsible for the gingival inflammation. The patient was instructed regarding good oral hygiene maintenance practices. Later excisional biopsy and microscopic examination were planned, and the patient's consent was taken for the same. Preoperative hematological examination revealed all findings within normal range. After administering local anesthesia, the lesion was excised, and bleeding was controlled with a pressure pack. Suturing was not required. The excised tissue was kept in formalin (10%) and sent for histopathologic examination. The patient was prescribed analgesics and instructed to rinse twice daily with 0.12% chlorhexidine rinse for 2 weeks postoperatively to avoid trauma or pressure at the surgical site. Histologic

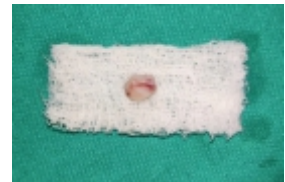
features were suggestive of “Lobular capillary hemangioma”.



Pre-operative Photograph



Intra-operative Photograph



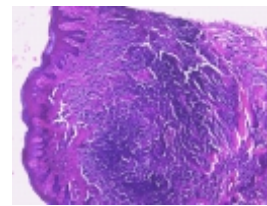
Excised Growth



1 Week Follow-Up



2 Months Follow-Up



Histological Picture

Discussion

The term hemangioma has been used traditionally to describe a variety of vascular anomalies, and may be referred by terms like hamartoma, malformations, or true benign neoplasm/tumors. It is necessary to distinguish it from inflammatory growths (reactive hyperplasia) which shows excessive proliferation of reparative tissue. The hemangiomas (both solitary or when found with other anomalies/angiomas syndromes) are true hamartomas. Barette and Speight observed oral vascular malformations over a 48 years period at their institution. The mean age was 52.6 years with a range of 12-90 years.

In the present article a 50 years old female presented with epulis in an edentulous area between 31 and 33. The etiology for this epulis is local irritants, and patient does not give history of any trauma. Inflammatory component of epulis subsides in this case after removal of local irritants. Histological examination shows proliferative stratified squamous epithelium without dysplasia covering chronically inflamed fibrovascular stroma composed of budding

capillaries with extravasated red blood cells and chronic inflammatory cells. The overall histologic features are suggestive of lobular capillary hemangioma.

Conclusion

Early detection of the lesion and biopsy is necessary to determine the clinical behavior of the tumor and its potential complications. Capillary hemangioma is a rare benign tumor of the oral cavity, and is important to the periodontist because of its associated gingival vascular features and complications in the form of poor oral hygiene and impaired nutrition, increased accumulation of plaque and increased susceptibility to oral infections, which can impair the systemic health of the affected individual. Also, the periodontal surgical management of hemangiomas should be performed with caution because the tissues may bleed profusely intra operatively and postoperatively.

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