



CAPILLARY HEMANGIOMA OF GINGIVA MIMICKING AS PYOGENIC GRANULOMA: A CASE REPORT.

Periodontology

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ABSTRACT

Capillary haemangioma is benign proliferation of blood vessels that primarily occurs during childhood. Pyogenic granuloma one of the common benign lesions often found in oral cavity. Pyogenic granuloma is known to show a striking predilection for the gingiva and capillary haemangioma frequently occurs in the lips, cheek, and tongue. The gingival occurrence of capillary haemangioma is considered relatively rare. The purpose of this article is to report a unusual case of benign tumor occurring on the gingiva which was clinically diagnosed as pyogenic granuloma and histopathologically as capillary haemangioma.

KEYWORDS

INTRODUCTION:

A number of terms have been used to describe vascular lesions, which are classified either as haemangioma or vascular malformations. Haemangioma is a term that encompasses a heterogeneous group of clinical benign vascular lesions that have similar histologic features. It is benign lesion, which is a proliferating mass of blood vessels and do not undergo malignant transformation. There is a higher incidence in females than males.¹

Although a few cases are congenital, most develop in childhood. Occasionally, older individuals are affected. The congenital haemangioma is often present at birth and may become more apparent throughout life.¹

Although haemangioma is considered one of the most common soft tissue tumours of the head and neck, it is relatively rare in the oral cavity and uncommonly encountered by the clinicians. They may be cutaneous, involving skin, lips and deeper structures; mucosal, involving the lining of the oral cavity; intramuscular, involving masticator and perioral muscles; or intra-osseous, involving mandible and/or maxilla.¹

Haemangioma are also classified on the basis of their histological appearance. Capillary and cavernous hemangiomas are defined according to the different size of vascular spaces. Capillary haemangioma are composed of thin walled Vessels of 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 fibres. Cavernous hemangiomas consist of deep, irregular, dermal blood-filled channels. They are composed of thin-walled Cavernous vessels or sinusoids that are separated by a scanty connective tissue stroma. Mixed hemangiomas contain both components and these are more common than the pure cavernous lesions.¹

Haemangiomas are clinically characterized as a soft, smooth mass, sessile or pedunculated and may be seen in any size from a few millimetres to several centimetres. The colour of the haemangioma ranges from pink colour to red colour and the lesion may be blanched by the application of pressure, and haemorrhage may occur either spontaneously or after minor trauma. They are generally painless. These Lesions are mostly seen on the face, fingers and occasionally

seen on oral mucosa. Oral hemangiomas are rarely seen on the gingiva where it occurs as a capillary or cavernous type, more commonly the former one. Clinically, these lesions often appear to arise from the interdental gingival papilla and to spread laterally to involve adjacent teeth.¹

There are different treatments have been used in the management of hemangiomas, including oral corticosteroids, intralesional injection of fibrosing agents, interferon α -2b, radiation, electrocoagulation, cryosurgery, laser therapy, embolization and surgical excision.¹

The purpose of the study was to report the case of a recurrent capillary haemangioma in a patient and to describe the successful treatment of this case.

CASE REPORT:

A 32 year old female patient reported to the department of periodontics with a chief complaint of swelling in lower front region since 3 months. Patient was apparently asymptomatic 7 months back, then she noticed growth of tissue over the gingiva in lower front tooth region. Patient also gives a past history of excision of particular lesion (two times) which was reoccurred to the present size within 3 months.



INTRAORAL CLINICAL PHOTOGRAPH

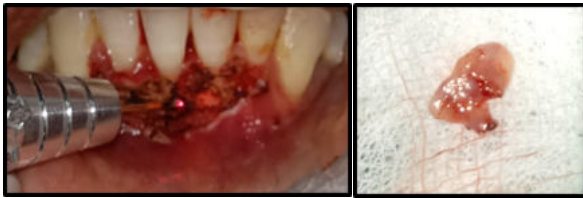
ORTHOPANTOMOGRAM

On extra oral examination no gross facial asymmetry seen and intraoral examination reveals a solitary well defined roughly oval shaped swelling of size approximately 1× 1.5 cm seen in the region of lower incisors. The lesion was pedunculated and originated from interdental papillary region of 31, 41 on the labial aspect from the marginal gingiva to 1mm below the Occlusal surfaces of lower incisors.

The colour of the lesion was slightly erythematous, tender, soft in consistency with a smooth surface, nonfluctuant and noncompressible.

There was a slight bleed on provocation and no pulsations were felt. Local factors were moderate and orthopantomogram (OPG) revealed mild bone destruction in 31, 32, 41. By clinical and radio graphical findings the lesion was provisionally diagnosed as a pyogenic granuloma.

Under all aseptic precautions excisional biopsy with diode laser was planned. Under local anesthesia the lesion was excised with a diode laser. It was ensured that the lesion was completely excised by trimming up the remnants of the soft tissue adjacent to the tooth to prevent recurrence of the lesion. Intraoperatively, there was no bleeding from the lesion and the excised tissue was fixed in 10% neutral buffered formalin and was sent for histopathological examination. The patient was recalled after 1 week for removal of periodontal pack. The healing was uneventful and satisfactory even after 1 year.



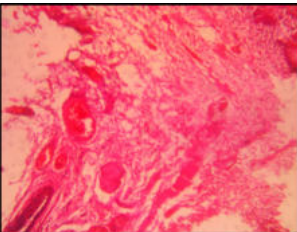
INTRAOPERATIVE PHOTOGRAPH AND EXCISED TISSUE



FOLLOW UP INTRAORAL CLINICAL PHOTOGRAPH AFTER 2 WEEKS



FOLLOW UP INTRAORAL CLINICAL PHOTOGRAPH AFTER 1 YEAR



HISTOLOGICAL SECTION OF LESION

Histopathological report revealed lesion was lined by stratified squamous epithelium with ulceration covered by fibrinous exudate. Sub epithelium shows lobules of proliferated capillaries lined by plump endothelial cells filled with red blood cells.

By histopathological finding, a final diagnosis of capillary haemangioma was made.

DISCUSSION:

haemangioma are characterized by the proliferation of blood vessels, they are characterized by three stages, namely, endothelial cell proliferation, rapid growth, and spontaneous involution. They may be cutaneous, mucosal, intramuscular, and intraosseous. In the oral cavity they were extremely rare on the palatal mucosa and gingiva.²

Exact etiology of haemangioma is unknown. Imbalance in angiogenesis plays an important role in the development of haemangioma. Based on the microscopic appearance they are classified into capillary, cavernous, mixed, and sclerosing variety. In the present case, the lesion was capillary type of haemangioma.³

Clinically, radio graphically, and sometimes microscopically they may resemble other lesions making the diagnosis difficult. Pyogenic granuloma, peripheral giant cell granuloma, peripheral ossifying fibroma, and squamous cell carcinoma should be included in the differential diagnosis. Hence microscopic evaluation is mandatory to make a definitive diagnosis.⁴

Microscopically pyogenic granuloma is classified in to lobulated capillary haemangioma (LCH) and non-lobulated capillary haemangioma (NLCH). Microscopically, LCH type of pyogenic granuloma consist of an attenuated endothelial lining surrounded by somewhat uniform proliferation plump to spindle cells whereas capillary haemangioma consist of more prominent endothelial cells and an array of capillary sized blood vessels with lobular architecture.⁵

The treatment of haemangioma of the oral mucosa depends upon various factors such as age of the patient, size and extent of lesion and, site of involvement and the clinical features. The most common treatment modality of haemangioma is surgical excision of the lesion with or without ligation of vessels and embolization. Surgical management should be done with caution because of the possibility of the bleeding Intraoperatively and postoperatively. Recently developed treatment modalities include steroid therapy, electro surgery, lasers, cryosurgery and sclerotherapy.

Diode lasers are having more advantages compare to other treatments such as less invasive, suture less procedures over conventional excision. Rapid healing can be observed within a few days of treatment, and as blood vessels are sealed, there is a reduced need for post-surgical dressings. It also depolarizes nerves, thus reducing the postoperative pain and also destroys the many bacterial and viral colonies that may potentially cause infection. Reduced postoperative discomfort, edema, scarring, and shrinkage have all been associated with its use.⁸

Because of above mentioned advantages we have chosen the treatment plan of excision of the lesion with diode lasers.

CONCLUSION:

Diode laser can be effectively used for the excision of capillary haemangioma to minimize discomfort during and after surgery.

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