World Journal of Pharmaceutical and Life Sciences
WJPLS
www.wjpls.org
SJIF Impact Factor: 3.347

A CAPILLARY HAEMANGIOMA OR A PYOGENIC GRANULOMA? PARADOX OF TERMS - A RARE CASE REPORT

[1*]Dr.Lakshmi Prabha MDS, [2] Dr.R.Kanmani, [3]Dr.M.S.Anandi, MDS, [4]Dr.Kannan, MDS and [5]Dr. Raghuram. P. H, MDS.

[1]Post Graduate Student, [2]Senior Lecturer, [3]Senior Lecturer, [4]Reader and [5]Professor, Department of Oral Medicine & Radiology, SRM Dental College Chennai – 600089.

Article Received on 21/10/2016 Article Revised on 10/11/2016 Article Accepted on 30/11/2016

***Corresponding Author**
Dr. R. Kanmani., Mds.
Senior Lecturer,
Department of Oral Medicine & Radiology,
SRM Dental College
Chennai – 600089.

ABSTRACT

Pyogenic granuloma or granuloma pyogenicum is a relatively common soft tumour of the oral cavity. However the term pyogenic granuloma is a misnomer because the lesion is not associated with pus and doesn't represent a granuloma histologically. The lesion has a striking predeliction for females especially during the second decade of life. The most common site of occurrence of pyogenic granuloma is the gingiva. Palatal occurrence of this lesion is rare. This article is a case report of a 42 year old female with a proliferative lesion on the palatal mucosa which was clinically diagnosed as pyogenic granuloma and capillary haemangioma histopathologically.

KEYWORDS: pyogenic granuloma, granuloma pyogenicum, capillary haemangioma, haemangioma.

INTRODUCTION

The commonly occurring benign vascular lesions of the oral cavity are capillary haemangioma and pyogenic granuloma[1,2] Pyogenic granuloma is a reactive soft tissue tumour of the oral cavity and is non neoplastic in nature. Occurrence of pyogenic granuloma in man was first described in 1897 by Poncet and Dor and was called botryomycosis hominis. It has been referred to by a variety of names which includes granuloma pediculatum benignum, pregnancy tumour, benign vascular tumour, vascular epulis, Crocker and

Hartzell's disease. Crocker in 1903 coined the present name.[3,4] However, few literature sources also mention that the term 'Pyogenic granuloma was coined by Hartzell.[4,5]

Angelopoulos AP proposed the term "hemangiomatous granuloma" which denotes the histopathologic picture and the inflammatory nature of pyogenic granuloma. The presence of numerous blood vessels in oral pyogenic granuloma, made Cawson et al, suggest the alternative term granuloma telangiectacticum.[3]

The aetiology of the lesion is not known. A history of trauma is common though botryomycotic infection can not be excluded. It is theorized that pyogenic granuloma originates due to tissues responding to minor trauma or chronic irritation, thus opening a pathway for nonspecific microorganisms to invade, yet they are seldom demonstrated within the lesion.[3]

The predominant site of occurence is gingiva followed by lips, tongue, buccal mucosa, and hard palate. Other sites include mucobuccal fold and frenum. It can have various clinical presentations, ranging from a sessile lesion to an elevated mass. Based on the histopathological picture, pyogenic granuloma inevitably is known as lobular capillary haemangioma as it isn't associated with pus and doesn't represent a granuloma. Here we present a case of pyogenic granuloma which was histopathologically diagnosed as capillary haemangioma.

CASE REPORT

A 42 year female reported to the Dental OP of Department of Oral Medicine and Radiology with a chief complaint of a growth over her palate for the past 1 month. On recording of history, patient reported that the growth was initially small in size which then gradually increased over the past 1 month. She also reported spontaneous bleeding from the site often, which would subside in few minutes. The patient had visited a local dentist for opinion following which she was prescribed antibiotics. The growth had reduced in size in response to the medication. Patient gave no history of trauma to the palate and no previous occurrences of a similar growth or any other oral lesion. Her medical history was also non contributory.

On intra oral examination, patient had poor oral hygiene. A single oval shaped pedunculated proliferative growth was evident over the left side of the palate, at the region of the posterior palatal seal area, 2.5 cm from the left maxillary tuberosity. The growth was reddish pink in

colour, measuring approximately 2cm × 1.5 cm in size. It had an irregular surface and well defined borders.[1] On palpation, the growth was firm, non tender, with absence of blanching and no bleeding or pus discharge. Surrounding mucosa appeared normal and was firm on palpation.

Based on her history and clinical findings, the growth on the palate was provisionally diagnosed as inflammatory papillary hyperplasia or pyogenic granuloma. The differential diagnosis was given as haemangioma, peripheral giant cell granuloma, peripheral ossifying fibroma and Kaposi's sarcoma.

An occlusal radiograph of the maxilla and an orthopantomograms was taken to rule out any bone changes. Both the images revealed no significant findings with regards to the site of the lesion.[2,3] Routine haemogram was found to be normal. Excisional biopsy was done under L.A, followed by which the specimen was placed in diluted formalin and was immediately transferred for histopathological examination.[4,5] The surgical site showed minimal bleeding following excisional biopsy.[6]

Histopathological report revealed parakeratinised stratified squamous epithelium with some stretched and ulcerated areas along with hyperplasia. The underlying connective tissue showed foci of chronic inflammatory cells, increased vascularity (capillary proliferation) and endothelial cell proliferation. There was evidence of pyogenic membrane covering the ulcerated areas.

Healing of the surgical site was uneventful with absence of recurrence over an eight months period of follow up.

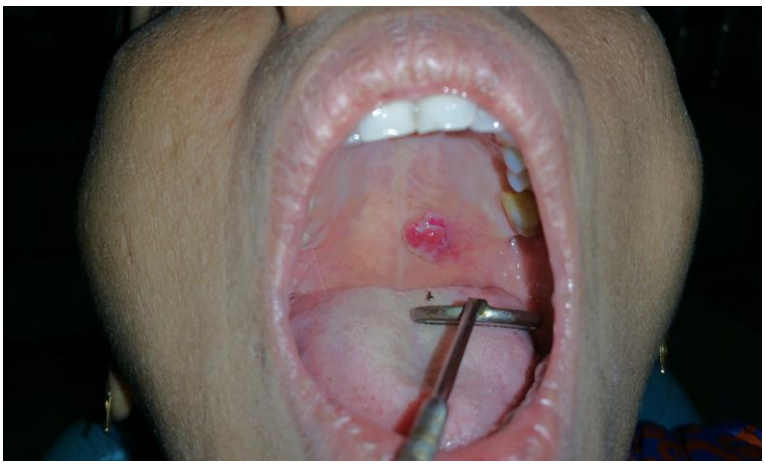
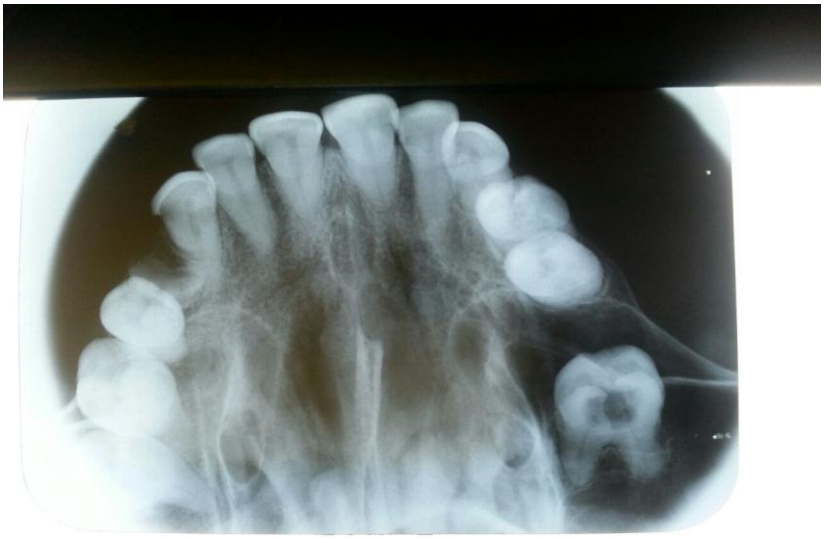


Figure 1.



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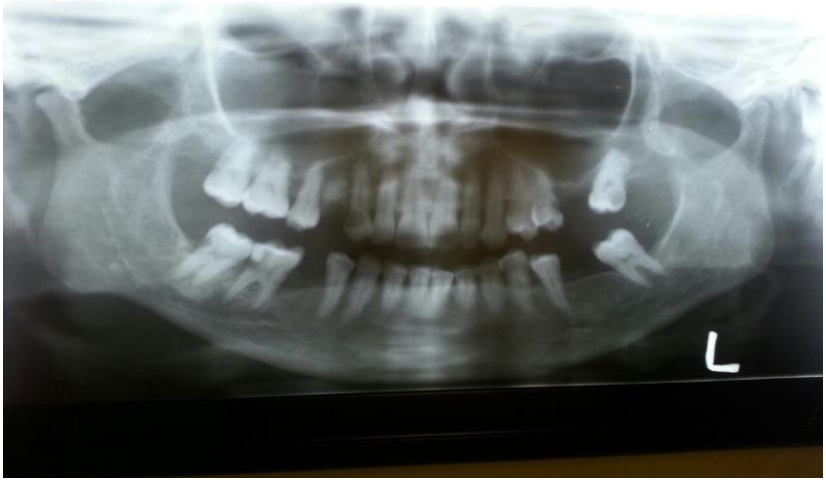

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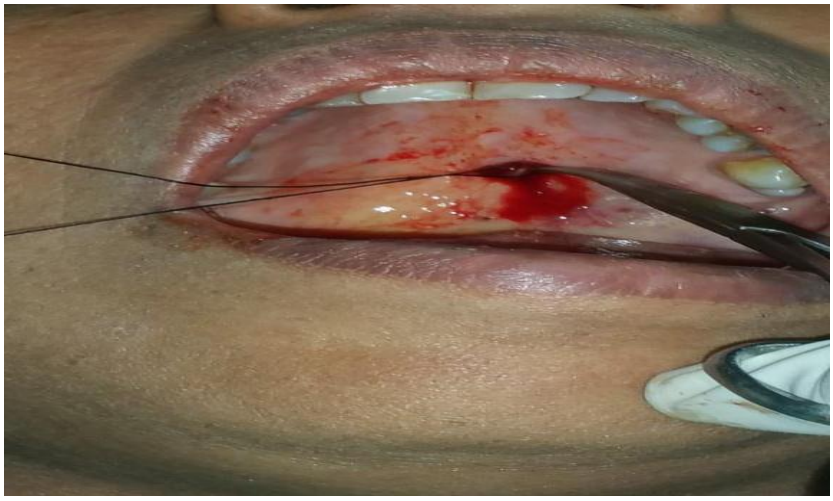

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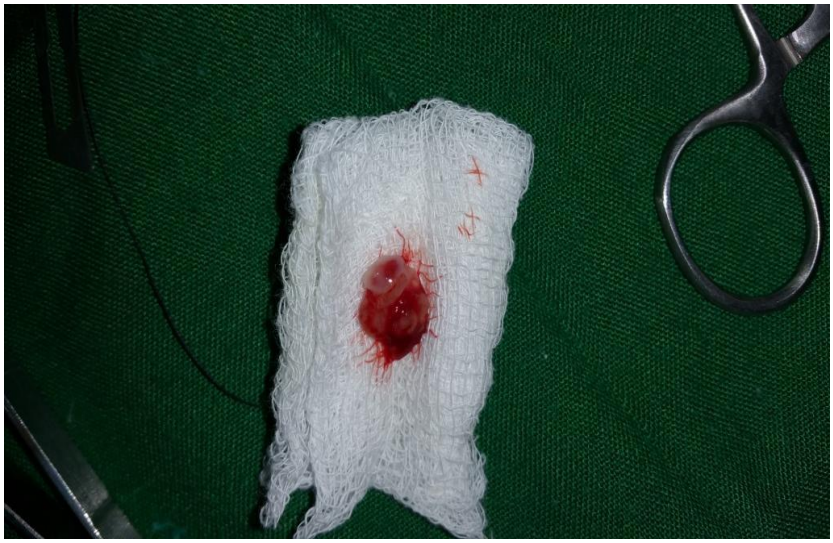

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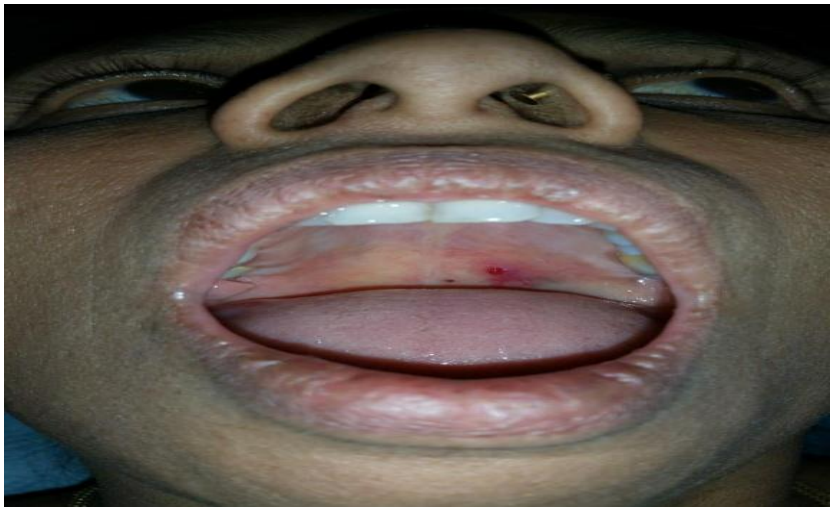

Figure 6.

DISCUSSION

A wide range of pathological processes can present with soft tissue enlargements thus presenting a diagnostic challenge. Inflammatory hyperplasias comprise a wide range of nodular growths of the oral mucosa which histopathologically represents inflamed fibrous and granulation tissue. Pyogenic granuloma is a kind of inflammatory hyperplasia.[6] The other lesions which also come under the term of inflammatory hyperplasia are giant cell granuloma, pregnancy epulis, palatal hyperplasia and fibrous inflammatory hyperplasia such as clinical fibroma, epulis fissuratum and pulp polyp.

Haemangiomas are benign tumours of the oral cavity composed of blood vessels and are classified into capillary, mixed cavernous and sclerosing variety on the basis of their

histological appearance. There are two kinds of pyogenic granuloma namely lobular capillary hemangioma type and non lobular capillary haemangioma type which differ histologically.[7] Usually on microscopic examination, pathologists designate pyogenic granuloma as "capillary haemangioma, granuloma type" or lobular capillary haemangioma. True haemangioma of infancy and a pyogenic granuloma is difficult to differentiate on the basis of light microscopic examination. However pyogenic granuloma exhibits immunocytochemical and ultrastructural differences. Pyogenic granuloma is mostly perithelial, rather than an endothelial tumour.[2]

Several "etiologic factors" are suggested for the occurrence of the lesion such as trauma, injury to a primary tooth, chronic irritation, drugs, hormones, pre existing vascular lesions, gingival inflammation, defective fillings in the region of tumor, chronic irritation due to exfoliation of primary teeth, food impaction, eruption of permanent teeth, total periodontitis, toothbrush trauma, etc.[3] Maxillary gingiva is a more common site of occurrence of the lesion than the mandibular gingiva and anterior regions as well are more common than posterior regions. Facial aspect is more common than the lingual aspect of gingiva however some lesions extend between the teeth and involve both the facial and lingual gingiva.[8]

Clinically pyogenic granuloma appears as a smooth or lobulated lesion manifesting as small, red erythematous papules on a pedunculated or sessile base mostly hemorrhagic and compressible. Sometimes they may even develop as dumb bell shaped masses. The lesion usually varies in size from a few millimetres in diameter to several centimetres, usually within 2.5cm.[6] Development of the lesion is slow, asymptomatic and painless and usually reaches its full size in few weeks or months and remains indefinitely thereafter. Radiographs are advised so that any bone destruction can be ruled out and to identify any foreign body that has to be removed with the lesion. However usually radiographic findings are absent in oral pyogenic granuloma.[3] Treatment of pyogenic granuloma is excisional biopsy and removal of irritating factors along with careful follow up as the recurrence rate is 16% and the recurred lesions should be re excised.[5]

CONCLUSION

Pyogenic granuloma is rarely seen over the palatal mucosa and the proper diagnosis and management of the lesion is essential as, though it may present as an innocent lesion, however it may lead to serious complications if erroneously diagnosed. Therefore dental

clinicians should be cognizant of such atypical presentations so that the best of treatment can be advocated without any adverse effects.

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