

Maxillary Pyogenic Granuloma: A Case Report.

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Case Report

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ABSTRACT

Pyogenic granuloma is one of the inflammatory hyperplasias seen in the oral cavity. This tumor-like lesion appears in response to various stimuli such as chronic low-grade local irritation and traumatic injury, as well as in pregnant women and in women taking oral contraceptives. Pyogenic granuloma usually present as smooth or lobulated red-to-purple mass that may be either pedunculated or sessile. Granuloma varies in size from a few millimetres to several centimetres. Here, we report a case of Pyogenic granuloma in the palate of a 35 years old woman which is very rare location for this lesion.

INTRODUCTION

Hullihen's in 1844 first reported pyogenic granuloma in English literature but the term "Pyogenic granuloma" or "granuloma pyogenicum" was introduced by Hartzell ^[1]. Pyogenic granuloma (PG) is a reactive inflammatory hyperplasia most commonly observed on the skin and the oral mucosa of children and young adults. This tumor-like lesion appears in response to various stimuli such as chronic low-grade local irritation and traumatic injury ^[2], as well as in pregnant women and in women taking oral contraceptives. It usually appears as a solitary ulcerated nodule that may bleed, but multiple satellite lesions have also been described. The size varies from a few millimeters to several centimeters. Microscopically, PG is characterized by a benign fibrovascular proliferation with proliferating blood vessels usually lined by plump endothelial cells. In certain cases the vessels are arranged in lobules, and these cases are designated as lobular capillary hemangiomas. The term PG is a misnomer because it does not contain pus. Pyogenic granuloma of the oral cavity is known to involve the gingiva commonly (75% of all cases). Uncommonly it can occur on the lips, tongue, buccal mucosa, palate and so on ^[3,4,5]. The purpose of this article is to report an unusual case of pyogenic granuloma occurring on the hard palate.

Case Report

A 34 year old female patient was referred to the department of periodontology, Rajarajeshwari dental college and Hospital, with the chief complaint of lesion on her hard palate.

The lesion was smaller size when the patient first noticed three months ago, but had grown rapidly over the past 30 days to attain the present size and was causing discomfort while brushing. The patient medical history was unremarkable. Intraoral examination revealed a shiny, nodulated, reddish pink exophytic growth on gingival between the maxillary right molar regions (Fig-1), the growth measured 3x2 cms was pedunculated and was reddish pink in colour highly vascular non-tender, but causing discomfort to the patient and had a poor oral hygiene. After blood investigation and through oral prophylaxis, complete surgical excision of the mass was done under local anaesthesia, (Fig-2, Fig-3) and the tissue was sent for the histopathological examination (Fig-4) Postsurgical healing after one week was satisfactory (Fig-5).



Figure 1



Figure 2



Figure 3



Figure 4



Figure 5

Histopathological Examination

Histopathological examination revealed highly vascular proliferation that resembles granulation tissue underlying connective tissue showed acute and chronic inflammatory cells, proliferating fibroblasts & collagen fibers. H&E (Fig-6). Section Showed a Corrugated Parakeratinized squamous epithelium which was atrophic. The Epithelium shows area of ulceration below which numerous budding capillaries seen. There was no evidence of atypia or malignancy. The clinical and hisological findings confirmed it to be a pyogenic granuloma. The case was followed up for six months and the growth did not reoccur.

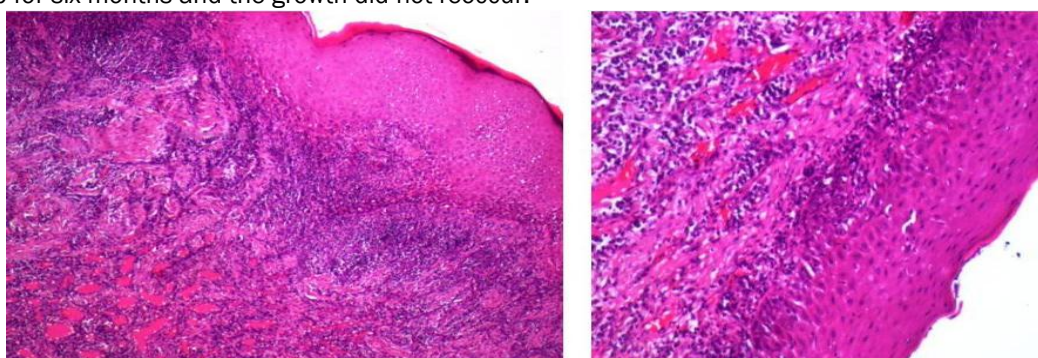


Figure 6

DISCUSSION

Oral Pyogenic granuloma is the most common gingival tumours for 75% of all cases [1].

The typical lesion involves the interproximal gingival and increases in size to cover a portion of the adjacent teeth. The maxillary gingival is involved more frequently than the mandibular gingival the facial gingiva is involved more than lingual gingival. Also majority of pyogenic granulomas are found on the marginal gingival only 15% of tumor on alveolar part [6]. Early lesions bleed easily due to extreme vascularity. Pyogenic granulomas can have a rapid growth pattern that can cause alarm. If left alone, a number of pyogenic granulomas undergo fibrous maturation and resemble and/or become fibromas

Pyogenic granuloma and Pregnancy: Females are far more susceptible than males because of hormonal changes that occur in women during puberty, pregnancy and menopause. The pyogenic granuloma is called a pregnancy tumour and does occur in 1% of pregnant women generally appears in 2nd and 3rd month of pregnancy, with a tendency to bleed and a possible interference with mastication [7]. During the first month of pregnancy, the persistent influence of plaque induces catarrhal inflammation of the gingival that serves as a base for development of hyperplastic gingivitis during the last months, modulated by the cumulating hormonal stimuli. In uncontrolled cases, pyogenic granuloma may arise. This lesion is rarely observed in women with poor oral hygiene in areas with local irritating factors such as improperly fitting restoration or calculus. During pregnancy, PG when treated by surgical excision may reappear due to incomplete excision or inadequate oral hygiene [1].

The molecular mechanisms behind the development and regression of PG during pregnancy have been extensively studied that these sex hormones manifest a variety of biological and immunological effects. Some author suggest that progesterone functions as an immunosuppressant in the gingival tissues of pregnant women, preventing a rapid acute inflammatory reaction against plaque, but allowing an increased chronic tissue reaction, resulting clinically in an exaggerated appearance of inflammation [8]. Characteristic oral manifestations of hormonal oral contraceptive intake are similar to oral changes associated with pregnancy [9]. Such as pronounced vascularity of gingiva, hyperplastic gingivitis and pyogenic granuloma.

Histological examination reveals sectioned soft tissue consisting of a lesion composed of ulcerated macosa covering a cellular fibrous tissue, many dilated blood vessels dense acute inflammatory infiltration but this may be scanty or absent.

Differential diagnosis of PG includes peripheral giant cell granuloma, peripheral ossifying fibroma, metastatic cancer & haemangioma.

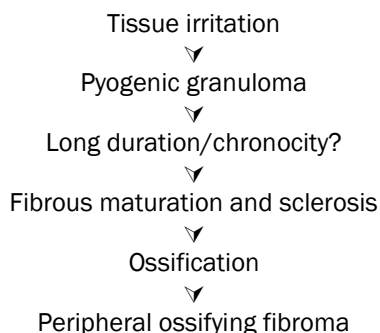
Management of PG depends on the severity of symptoms. If the lesion is small, painless and free of bleeding, clinical observation & follow up are advised [10]. Although conservative surgical excision & removal of causative irritants (plaque calculus, trauma) are the usual treatment [1,3,5,11]. Treatment consideration during pregnancy is very important. During this period, careful oral hygiene, removal of dental plaque & use of soft toothbrushes are important to avoid occurrence of a pregnancy tumour. If uncontrolled bleeding occurs, management should be based on the individual condition and should range from supportive therapy such as bleeding control by local firm compression & OH to blood transfusion, as well as medication to accelerate foetal lung maturity or even termination of pregnancy to save the patients life as with termination of pregnancy to save the patients life, as with treatment of uncontrollable eclampsia [12]. Other treatment protocols have also been proposed such as cryotherapy, chemical and electric cauterization, and the use of ND: YAG laser and carbon dioxide laser [13].

After excision, recurrence occurs in up to 16% of the lesion so in cases re-excision is necessary [1,3,5]. Recurrence is believed to result from incomplete excision, failure to remove etiologic factors or re-injury of the area [5]. It should be emphasized that gingival cases show a much higher occurrence rate than lesion from other oral mucosal site.

Whatever the reason for the occurrence of second lesion, the PG and Peripheral Ossifying Fibroma belong to the same Spectrum of "focal reactive overgrowths [14]". The initial lesion might have started as PG; long duration and maturation then led to development of the POF [2].

It is a known/ observed fact that longstanding PG may undergo organization/healing, which is evident histologically with features of decreased vascularity, decreased inflammation and focal ossification [14]. prevention consists of routine dental care & home care

Spectrum of Focal Reactive Overgrowths ^[14]



CONCLUSION

Pyogenic Granuloma is a non-neoplastic growth in the oral cavity. Proper diagnosis, prevention, management and treatment of the lesion are very important. In the present case, there was gradual increase in the size of the growth resulting in discomfort to the patient and unable to keep the area clean resulting in trauma to the growth and aggravating the condition further. The excisional procedure was performed the growth was excised and sent for a biopsy both clinical and histological findings showed it to be a case of Pyogenic granuloma. The case was followed up for 6 months and growth did not reoccur.

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