

# Lobular Capillary Haemangioma : A Case Report

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## ABSTRACT

Pyogenic granuloma is vascular growth occurring on skin and mucous membrane. Term pyogenic granuloma is misnomer as it is neither associated with pus nor it represent granuloma histologically. Oral pyogenic granuloma commonly occurs on

gingiva but can also occur on lip, palate, tongue and buccal mucosa. This case report presents benign lobular capillary haemangioma variant of pyogenic granuloma occurring interdentially on palatal aspect of maxillary right second premolar and first molar.

**Key words :** Lobular Capillary Haemangioma, Pyogenic Granuloma.

## INTRODUCTION

Pyogenic granuloma is vascular growth occurring on skin and mucous membrane. Term pyogenic granuloma is misnomer as it is neither associated with pus nor it represent granuloma histologically (1). Oral pyogenic granuloma commonly occurs on gingiva but can also occur on lip, palate, tongue and buccal mucosa. Extra orally fingers and toes are commonly affected (2). Clinically pyogenic granuloma occurs as painless soft mass smooth or lobulated, sessile or pedunculated, color varies from pink to red purple, and it may bleed spontaneously or after minute trauma. Pyogenic granuloma was first described by Poncet and Dor in 1897 (3, 4). The term pyogenic granuloma or granuloma pyogenicum was coined by Hertzell in 1904 (5). Other names for pyogenic granuloma include pregnancy tumour, Crocker and Hertzells disease, granuloma gravidum, vascular epulis, epulidangelictusgranulomatosa. Epulisgranulomatosa is special variant of pyogenic granuloma consisting of hyperplastic growth of granulation tissue arising in healing extraction socket as response to bony sequester in socket (6). Depending on its rate of proliferation and vascularity histologically two variants of pyogenic granuloma are lobular capillary hemangioma (LCH) and non LCH.

Clinically, LCH PG occurs more frequently (66.4%) as sessile lesion whereas non-LCH PG occurs as pedunculated (77%). LCH usually presents as a spontaneous, painless, bleeding mass. The lobular area of the LCH PG contained a greater number of blood vessels with small luminal diameter than did the central area of non-LCH PG. In the central area of non-LCH PG a significantly greater number of vessels with perivascular mesenchymal cells nonreactive for alpha-smooth muscle actin and muscle-specific actin was present than in the lobular area of LCH PG (7). In this article we are reporting case of lobular capillary hemangioma.

## CASE REPORT :

A 40 year old female patient came to dept. of periodontology with chief complaint of swelling on gum on upper right back jaw. It was small in size when patient first noticed but went on increasing to present size over span of one month. Clinical examination revealed 1.5X 0.9X0.6 cm sized ovoid, reddish brown, pedunculated, homogenous swelling on palatal aspect of maxillary right second premolar and first molar interdentially (Fig.1). It was not tender and bleeding was minimal, margins were smooth and firm in consistency. Intraoral hard tissue examination showed significant amount of calculus and plaque which might be etiologic agent (Fig.2). Also patient gives history of using toothpick to remove food stuck in that particular region which may have caused injury to tissue. Excisional biopsy was carried out after patient signed

consent form. Followed by flap surgery and extraction of 17 which was grade 3 mobile (Fig. 3). Suturing done using 3-0 silk suture. Lesion sent to oral pathology department for histopathological analysis and diagnosis.



Fig 1: swelling on palatal aspect of maxillary right second premolar and first molar interdentially



Fig 2: Intraoral hard tissue examination showed significant amount of calculus and plaque



Fig 3: Excisional biopsy Followed by flap surgery and extraction of 17

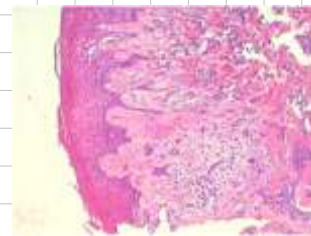


Fig 4: Histopathological H and E (hematoxylin and eosin stain) stained section suggestive of LCH

Histopathologically H and E (hematoxylin and eosin stain) stained section (fig4) showed hyperparakeratotic stratified squamous epithelium. Epithelium was discontinuous, proliferative with multiple

connective tissue entrapments with basal cell hyperplasia in some areas. Underlying connective tissue stroma was fibrocellular with moderate inflammatory cell infiltrate chiefly composed of lymphocytes. Several endothelial lined blood vessels some of which were dilated and extravasated. Red blood cells were also seen. Multiple areas showed endothelial cell proliferation. All these features were consistent with diagnosis of lobular capillary hemangioma.

#### DISCUSSION :

LCH can occur at any age although more common during 2nd and 3rd decade with no racial predilection. It has female predilection with female to male ratio 2:1. It was originally thought to be caused by pyogenic organisms. Bartonella Quintana, B. henselae, human herpes virus type 8 are postulated to play role in its recurrence but there is no confirming evidence for presence of infectious organisms (8). Trauma, pre-existing vascular lesion, chronic irritation to oral soft tissue by overhanging restoration, defective filling, food impaction, chronic periodontitis, hormonal changes during pregnancy, drugs like cyclosporine, indinavir sulphate, isotretinoin, oral contraceptive pills. Iatrogenic stimulation like GTR using DFDBA (demineralised freeze dried bone allograft) with expanded polytetrafluoroethylene membrane resulted in pyogenic granuloma (9). Factors like inducible nitric oxide synthase, vascular endothelial growth factor, basic fibroblast growth factor, connective tissue growth factors are involved in angiogenesis and rapid growth of pyogenic granuloma (10). According to Shafer et al it is caused by staphylococcus or streptococcus infection while some considered it to be reparative or reactive tumour. Pyogenic granuloma also reported to occur after bone marrow transplantation (11). Differential diagnosis includes peripheral ossifying fibroma, peripheral giant cell granuloma, fibroma, peripheral odontogenic tumour, Kaposi's sarcoma, non-Hodgkin's lymphoma (12). Treatment of pyogenic granuloma involves surgical excision along with removal of etiologic factors (calculus, plaque, foreign material, source of trauma etc.). New modalities like cryosurgery, excision by Nd: YAG laser, injection of ethanol or corticosteroid, sodium tetradecyl sulphate sclerotherapy can also be used. Topical application of timolol gel is also effective without side effect as found out in few studies (10).

Recurrence rate as high as 15% is seen with surgical excision of pyogenic granuloma. This recurrence may be due to incomplete excision or failure to remove etiologic factors or re-injury to area. Sometimes recurrence manifest as Warner- Wilson Jones syndrome where multiple satellite nodules surrounding original lesion is seen. Recurrence rate of gingival lesion is higher than lesions from other oral mucosal sites (13). Recurrence of extra gingival lesions is uncommon (14).

#### CONCLUSION

Pyogenic granuloma is common lesion occurring in oral cavity which frequently occurs on buccal aspect of gingiva. In this case we came across LCH on palatal aspect of gingiva which we successfully treated with surgical excision and flap surgery with no recurrence when followed up after 1 year after surgical excision.

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