

## ORAL PYOGENIC GRANULOMA OF UPPER LABIAL MUCOSA – A RARE ENTITY

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**ABSTRACT**

Pyogenic granuloma is a benign, localized mass of exuberant granulation tissue produced in response to various stimuli. It is commonly due to constant minor trauma and might be related to hormonal changes. It is manifested as a sessile or pedunculated, resilient, erythematous, exophytic and painful papule or nodule with a smooth or lobulated surface that bleeds easily. The most common treatment is surgical excision. It is an inflammatory hyperplasia of oral cavity commonly seen on gingival and rarely on other parts of oral cavity such as lips, tongue, palate, and buccal mucosa. Therefore, we report a case of Pyogenic granuloma in the upper labial mucosa of 9 year old child which is rare location to occur.

**KEYWORDS:** Granuloma.**INTRODUCTION**

Pyogenic granuloma or granuloma pyogenicum is a relatively common benign mucocutaneous lesion.<sup>[1]</sup> It is believed to be reactive and not neoplastic in nature.<sup>[2]</sup> It is neither granulomatous nor contains pus, hence the name misnomer is suitable for this condition.<sup>[3]</sup>

Hartzell in 1904 introduced term pyogenic granuloma or granuloma pyogenicum. Other name used for this is Crocker and Hartzell's disease.<sup>[4]</sup> Based on the vascularity of the lesion color can be different from reddish to pink. More than alveolar mucosa, marginal gingival is more prevalent. Apart from the gingival pyogenic granuloma other sites of oral cavity such as buccal mucosa, lips and tongue and palate are affected. Comparatively maxilla is commonly affected than mandible.<sup>[5]</sup> Pyogenic granuloma when occurs on a rare location such as labial mucosa, it becomes critical for its proper diagnosis and management. So the present case is a case of pyogenic granuloma of labial mucosa in a 9 year old male.

**CASE REPORT**

A 9 year old boy complaints of a growth in the upper left anterior region of the mouth which bleeds frequently and interferes while brushing and eating. He noticed the growth two months back which started as a size of peanut and gradually increased to reach the present size,

due to which the patient get discomfort while eating food and brushing teeth.

The lesion was red in color, exophytic and pedunculated lesions, which measured about 1.5\*2 cm in size. The surface of the lesions was smooth lobulated and was present in upper front labial mucosa in relation to 21 to 23 region.

The blood reports of the patient was within the normal limits and the excisional biopsy was carried out under local anaesthesia with 2% adrenalin. The final diagnosis was made by histopathic evaluation and the patient was recalled after 7 days and 6 months.

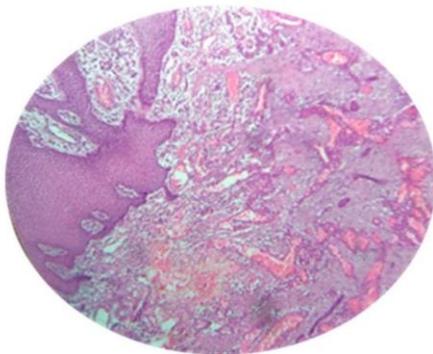
The histological findings shows hyperplastic, stratified squamous parakeratinized epithelium which has fibrovascular stroma. The stroma had numerous number of budding capillaries, fibroblasts and dense inflammatory cells which is suggestive of pyogenic granuloma.



**Fig. 1: Pre operative – pyogenic granuloma in upper labial mucosa in relation to 21 to 23.**



**Fig. 2: Excised tissue.**



**Fig. 3: Histological picture showing features of pyogenic granuloma.**



**Fig. 4: Post operative image after 6 months.**

#### DISCUSSION

PG can be defined as an inflammatory overgrowth of the oral mucosa which can be induced by minor trauma or irritation. The injuries can be caused in the mouth by gingival irritation due to the oral hygiene, trauma or local infection.<sup>[6]</sup> The pathogenesis of the PGs is through the imbalance between angiogenesis enhances and inhibitors. It is due to the over abundance of VEGF (the vascular endothelial growth factor), bFGF (the basic

fibroblast growth factor) and reduced in production of angiostatin, thrombospondin and osteogen receptors thus leading to the formation of PG.<sup>7</sup> Prostaglandin E2 may be possible common mediator of inflammatory process involved in PGs. The incidence of the PG is around 26.8 and 32% of the reactive lesion.<sup>[9]</sup> Clinically, these lesions usually present as a single nodules or sessile papules with smooth or lobulated surfaces. They may vary in size. As the lesions mature, the vascularity decreases and clinically it appears more collagenous and pink. The young PGs are more vascular in appearance as they are composed of hyperplastic granulation tissue principally. Due to this reason, any trauma to these lesion causes more pronounced bleeding.<sup>[10]</sup> The higher incidence of PGs is seen in second decade of life with a peak prevalence in teenagers and young adults especially women, due to the vascular defects of the female hormones.<sup>[5]</sup> But in our case the cause may be due to the continues irritation and trauma, not related to the hormonal discrepancy. The PGs are more commonly seen in maxillary as compared with the mandible, anterior area as compared with posterior area. The PGs are more commonly seen in facial aspect. PGs of the oral cavity mostly seen in gingival(75%), although it can also occur on palate, lower lip, tongue, buccal mucosa. In present case, the constant trauma may be the reason behind the etiology of PGs and not related to hormonal discrepancy. The differential diagnosis of PGs include irritational fibroma, hemangioma, benign salivary gland tumors, metastatic tumors of the oral cavity, kaposi sarcoma and leiomyoma.<sup>[7]</sup> Radiographs are considered, in order to avoid the bony destruction which is suggestive of any bony malignancy. Thus definitive diagnosis of PGs can be made only through histological examination of the tissues. Histologically, PGs shows highly vascular proliferation which resembles granulation tissue. The surface is usually ulcerated replaces the thick fibrinourulent membrane.<sup>2</sup> Neutrophils, plasma cells and lymphocytes are more commonly present. Neutrophils are more commonly present near the ulcerated surfaces. Chronic inflammatory cells are present deeper area. PGs are a benign lesion, therefore surgical excision is the treatment of choice.<sup>2</sup> The other method for the treatment of PGs is cryosurgery, in the form of liquid nitrogen spray or a cryoprobe. Lasers have been proved successful in excision because of minimum pain, invasiveness and lack of suturing or packing. Recurrence rate of extra gingival PGs are uncommon.<sup>[2,6,8,10]</sup>

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