ISSN: 0975-833X

*Available online at http://www.journalcra.com*

*International Journal of Current Research*
*Vol. 8, Issue, 05, pp.31760-31762, May, 2016*

**INTERNATIONAL JOURNAL OF CURRENT RESEARCH**

## RESEARCH ARTICLE

# ORAL PYOGENIC GRANULOMA IN THE LOWER JAW: AN UNUSUAL CASE REPORT

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**ARTICLE INFO**

***Article History:***
Received 27th February, 2016
Received in revised form
05th March, 2016
Accepted 04th April, 2016
Published online 31st May, 2016

***Key words:***

Pyogenic granuloma,
Inflammatory hyperplasia,
Gingiva.

**ABSTRACT**

Exophytic gingival lesions represent some of the more frequently encountered lesions in the oral cavity. Pyogenic granuloma is a primarily reactive hyperplasia which appears in the oral cavity as an overgrowth of tissue due to physical trauma or hormonal factors and irritation. The growth is typically seen in young adults, it may occur in any age, especially in individuals with poor oral hygiene. The purpose of this article is to present a case report of pyogenic granuloma in male patient with mandible involvement.



**Citation: Dr. Priyanka, S., Dr. Shanmuga Sundaram, M. and Dr. Saraswathi Gopal, K. 2016.** "Oral Pyogenic granuloma in the lower jaw: an unusual case report", *International Journal of Current Research*, 8, (05), 31760-31762.

## INTRODUCTION

Pyogenic granuloma, also called as granuloma pyogenicum is a reactive inflammatory hyperplasia which appears in response to various stimuli such as low grade local irritation and traumatic injury (Baskar et al., 1966). It was first originally described in 1897 by two french surgeons, Poncet and Dor, who named this lesion botryomycosis hominis (Sheiba, 2013). The term however is a misnomer as it not related to any infection, does not contain pus and is not a true granuloma (Mubeen et al., 2011). Clinically these lesions usually present as single nodule or sessile papule with smooth or lobulated surface and may be seen in an size from a few millimetres to several centimeters. It preferentially affects the gingiva, but may also occur on the lips, tongue, oral mucosa and palate (Akyol, 2001). Surgical excision is the treatment of choice, followed by curettage of the underlying lesion (Patil, 2006).

### Case Report

A 43 year old male reported to the dental outpatient department with the chief complaint of gums growth in the right lower back teeth region since 3 months (Figure 1).

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History reveals, patient noticed the first gums growth on the right lower back tooth region since 1 year. The growth was gradual in onset which was smaller in size and progressed to the present size. History of tooth picking habit on the same region and also bleeding present while brushing since 6 months. Examination of the lesion on inspection, a single large triangular shaped slightly pink coloured lobulated sessile growth seen on the marginal gingival in 44,45,46 region towards the lingual aspect (Figure 2). On palpation, growth was irregular, rough and firm in consistency. The tenderness present only at the base of the growth. Bleeding was evident on slight probing and diascopy was negative (Figure 3).

**Figure 1. Patient Profile**

**Figure 2. A single large triangular shaped slightly pink coloured lobulated sessile growth seen on the marginal gingival in 44,45,46 region towards the lingual aspect**

**Figure 3. Diascopy negative**

**Figure 4. IOPA reveals presence of horizontal bone loss and soft tissue outline just above the occlusal surface of 44, 45 and 46 teeth region**

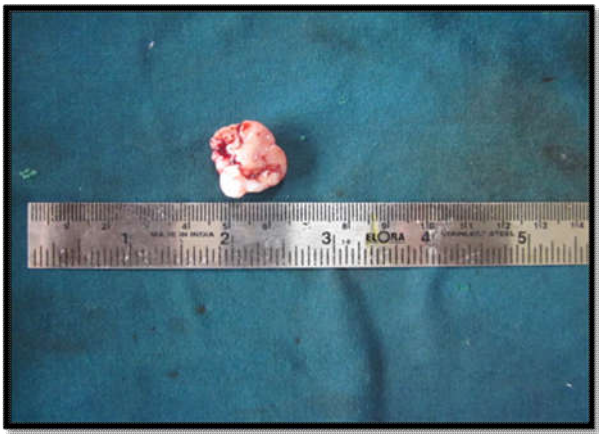

**Figure 5. Surgical excision of the lesion**

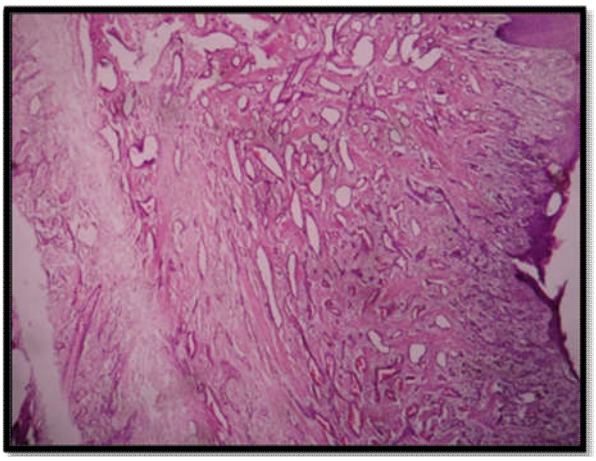

**Figure 6. Histopathological section**

**Figure 7. Follow up after 3 weeks**

Based on clinical findings, the case was provisionally diagnosed as pyogenic granuloma. Intra oral periapical radiograph revealed, horizontal bone loss and soft tissue outline above the occlusal surface of 44, 45,46 teeth region (Figure 4). Surgical excision of the lesion was done (Figure 5) and the lesion was sent for histopathological evaluation. The patient was advised post-operative antibiotics, analgesic and maintainence of oral hygiene measures and recalled after three weeks (Figure 7). The excised specimen showed

parakeratinised stratified squamous epithelium and a fibrovascular connective tissue stroma. The epithelium lies in continuation with a membrane consisting of fibrinous exudates, mixed inflammatory cell infiltrate of lymphocyted, plasma cells and neutrophils underneath which are seen numerous sprouting capillaries. Numerous endothelial lined dilated capillaries are seen in the deeper levels (Figure 6). The above histopathologic findings were suggestive of pyogenic granuloma.

## DISCUSSION

Pyogenic granuloma is a kind of inflammatory hyperplasia. The term inflammatory hyperplasia is used to describe a large range of nodular growths of the oral mucosa that histologically represents inflammed fibrous and granulation tissue (Eversole, 2002; Greenberg et al., 2003). It occur at any age, but they most frequently affect young adults with female predilection. The maxillary gingiva (especially in the anterior region) is involved more frequently than the mandibular gingiva; the facial gingiva is involved more than the ligual gingiva. Three quarters of all oral pyogenic granulomas occur on the gingiva, lips, dorsal surface of tongue and buccal mucosa . A history of trauma is common in extragingival sites, whereas most lesions of the gingiva are response to irritation (Ramirez, 2002; Maryam, 2008). But in our case pyogenic granuloma occurred in the mandibular lingual gingiva with male predilection in fourth decades of life.

Clinically pyogenic granuloma is a smooth or lobulated exophytic lesion manifesting as small, red erythematous papule on a pedunculated or sessile base. Its color ranges from pink to red to purple, depending on the age of the lesion. Young pyogenic granulomas are highly vascular in appearance because they are composed predominantly of hyperplastic granulation tissue in which capillaries are prominent (Nevile, 2004). Thus minor trauma to the lesion may cause considerable bleeding, due to its pronounced vascularity. Whereas older lesions tend to become more collagenized and pink (Ragezi, 2003). 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 (Jafarzedh, 2000). Although pyogenic granuloma can be diagnosed clinically with considerable accuracy, radiographic and histological investigations aid in confirming the diagnosis and treatment (Calonje, 1997). Differential diagnosis includes traumatic fibroma, giant cell fibroma, peripheral ossifying fibroma, peripheral giant cell granuloma. The treatment of choice is conservative surgical excision. For gingival lesions, excising the lesion down to the periosteum and scaling adjacent teeth to remove any calculus and plaque that may be a source of continuing irritation is recommended[14]. The prognosis is excellent, and the lesion usually does not recur unless inadequately removed. No complications are anticipated with removal of this lesion other than the chance of a cosmetic gingival defect (Sheiba, 2013).

**Conclusion**

Pyogenic granuloma can be present in uncommon site and with unusual size. Careful diagnosis should be made with clinical and histological findings. Meticulous oral hygiene should be instituted. Surgical excision of the growth, along with curettage should be done to prevent recurrences.

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