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## Unusual presentation of pyogenic granuloma

**Dr. K Saraswathi Gopal, Dr. Mahesh Kumar and Dr. Priyam Kapoor**

### Abstract

**Introduction:** Pyogenic granuloma is one of the commonly encountered condition. It presents as growth on gingiva which bleeds on touching. It is associated with chronic irritation. Local excision is the treatment of choice.

**Case report:** A 40year old patient presented with growth on left buccal mucosa. A provisional diagnosis of traumatic fibroma was given. The patient underwent scalpel excision under local anaesthesia. There was considerable bleeding during the procedure which raised a suspicion on the nature of the lesion. The specimen was sent for histopathological examination. Interestingly, the histopathological diagnosis of pyogenic granuloma was given.

**Conclusion:** the present case report had a misleading appearance of pyogenic granuloma. Thus, dental surgeon should be careful in diagnosis and during the treatment procedure to avoid complications.

**Keywords:** pyogenic granuloma, traumatic fibroma, excision

### Introduction

Pyogenic granuloma is a commonly encountered tumor-like lesion in the oral cavity. It is a misnomer as the entity is not exactly a granuloma. It develops as a result of chronic irritation or trauma<sup>[1]</sup>. The common clinical presentation is a smooth or lobulated mass which can be either sessile or pediculated. The overlying mucosa ranges from pink to red and may have ulceration. The most common site of occurrence is gingiva followed by lips, tongue, buccal mucosa<sup>[2, 3]</sup>. The treatment is conservative surgical excision and recurrence rate is low. Hullihen's in 1844 was first to describe and Hartzell in 1904 was first who coined the term "pyogenic granuloma"<sup>[4, 5]</sup>.

### Case reports

A 40 year old male patient reported to our department with the chief complaint of growth in his left side cheek region for past 3-4months. History revealed that the growth was initially small and slowly increased to the present size. He gave history of cheek biting and sharp teeth near that region. On intra-oral examination, there was evidence of a single, sessile growth on left buccal mucosa below the occlusal plane corresponding to sharp cusp of 33, 34 teeth. The growth was round to oval in shape and the overlying mucosa was greyish white in color with no secondary changes. On palpation, the growth was non-tender and firm in consistency (Figure - 1). A provisional diagnosis of traumatic fibroma was made. A 55year old female patient reported with the chief complaint of growth on right upper gum region for past 6months. She gave history of the growth was initially smaller in size which slowly increased to the present size. It was associated with bleeding on touching and difficulty in mastication and speech. On intra-oral examination, there was a single, sessile growth on right upper gingiva covering the labial surface of 11,12,13,14 region. The color of growth was red with focal pale areas and firm in consistency with tender on palpation (Figure - 2). A provisional diagnosis of pyogenic granuloma was established.

The patients were advised routine blood investigations and planned for surgical excision. After the written consent of the patients, surgical excision was performed under local anaesthesia. After providing adequate local anaesthesia, the growth was held with forceps. During the surgical procedure, we encountered severe bleeding in the first case which was controlled and sutures placed (Figure - 3). The specimens were fixed in 10% formalin and sent for histopathological examination. The H&E stain specimens showed fibrovascular connective tissue stroma with numerous dilated endothelial lined blood vessels filled with RBC'S and

budding endothelial cells. Presence of chronic inflammatory cell infiltrate predominantly lymphocytes were also seen. The overlying epithelium was stratified squamous and a portion of which was ulcerated. The histopathological features suggestive of pyogenic granuloma.



**Fig 1:** Case 1: intra-oral picture



**Fig 3:** Case 1: Immediate post-operative picture



**Fig 2:** Case 2: intra-oral picture

### Discussion

Pyogenic granuloma is also known as lobular capillary hemangioma, telangiectatic granuloma, and “pregnancy tumor” as it has been frequently found in pregnant women [4]. The important factors taken into consideration when suspicion are the duration, onset, progression, and association of these

lesions with pain to rule out serious pathology. The reported incidence is between 26.8 and 32% of all reactive lesions. [5] Jafarzadeh *et al.* explained that oral pyogenic granuloma occurs due to irritation or minor injury [10]. Regezi *et al.* described the etiology of pyogenic granuloma as known stimulant or injury by foreign material which results in exaggerated proliferation of connective tissue [6]. Ainamoto *et al.* suggested that the cause of the lesion is repetitive tooth brush trauma to the gingiva [7]. There can be increased prevalence of this lesion during pregnancy due to hormonal imbalance between estrogen and progesterone [2]. The molecular mechanism can be explained by increased production of vascular endothelial growth factor; the basic fibroblast growth factor and decreased amounts of angiostatin, thrombospondin-1, and the estrogen receptors [2].

There are three phases of growth of pyogenic granuloma described by Sternberg *et al.* namely, 1. Cellular phase 2. Capillary/vascular phase 3. Involuntary phase. The first phase consist of little lumen and mainly cellular stroma. The second phase has high vascularity in the form of lobules and intraluminal RBC's. The last phase mainly represents healing of the lesion and fibrosis. These phases can be correlated with the clinical presentation of the lesion as initial phases the masses are reddish blue and older lesions are pale to pink [3, 8]. Cawson *et al* has explained two histopathological types based on the rate of proliferation and vascularity: 1. lobular capillary hemangioma and 2. non-lobular capillary hemangioma. But these lesions are not true hemangiomas [3, 9].

Usually, these lesions can be clinically diagnosed and confirmed after histopathology. The differential diagnosis includes irritational fibroma, peripheral giant cell granuloma, peripheral ossifying fibroma, benign salivary gland tumor, and non-Hodgkin's lymphoma, hemangioma, Kaposi's sarcoma, leiomyoma, amelanotic melanoma, basal metastatic carcinoma, and squamous cell carcinoma [5]. Surgical excision of the lesion and removal of irritation is the treatment of choice. The other treatment modalities are Nd:YAG laser, flash lamp pulsed dye laser, cryosurgery, intra lesional injection of ethanol or corticosteroid and sodium tetradecyl sulfate sclerotherapy [2].

### Conclusion

Pyogenic granuloma is a benign condition which can be commonly encountered in the oral cavity. The clinician must have a detailed knowledge in practice. The article highlights the diagnostic dilemma of these lesion. Hence, emphasis on biopsy and histopathological examination of the lesions.

### References

1. Gomes SR, Shakir QJ, Thaker PV, Tavadia JK. Pyogenic granuloma of the gingiva: A misnomer? - A case report and review of literature. *J Indian Soc Periodontol.* 2013; 17(4):514-9. DOI: 10.4103/0972-124X.118327. PubMed PMID: 24174735; PubMed Central PMCID: PMC3800418.
2. Asha V, Dhanya M, Patil BA, Revanna G. An unusual presentation of pyogenic granuloma of the lower lip. *Contemp Clin Dent.* 2014; 5(4):524-6. DOI: 10.4103/0976-237X.142823. PubMed PMID: 25395771; PubMed Central PMCID: PMC4229764.
3. Marla V, Shrestha A, Goel K, Shrestha S. The Histopathological Spectrum of Pyogenic Granuloma: A Case Series. *Case Rep Dent.* 2016; 2016:1323798. DOI: 10.1155/2016/1323798. Epub 2016 Jun 12. PubMed PMID: 27382492; PubMed Central PMCID:

- PMC4921146.
4. Parajuli R, Maharjan S. Unusual presentation of oral pyogenic granulomas: a review of two cases. *Clin Case Rep.* 2018; 6(4):690-693. DOI: 10.1002/ccr3.1435. eCollection 2018 Apr. PubMed PMID: 29636941; PubMed Central PMCID: PMC5889261.
  5. Pallikaranai C. Unusual presentation of pyogenic granuloma of buccal mucosa. *Journal of Indian Academy of Oral Medicine and Radiology.* 2010; 22(4):S45-47.
  6. Regezi JA, Sciubba JJ, Jordan RC. *Oral Pathology: Clinical Pathological Considerations.* 4th ed. Philadelphia: WB Saunders, 2003, 115-6.
  7. Ainamo J. The effect of habitual toothcleansing on the occurrence of periodontal disease and dental care. *Suom Hammaslaak Toim.* 1971; 67:63-70.
  8. Deshmukh J, Kulkarni VK, Katti G, Deshpande S, "Pyogenic granuloma, an unusual presentation in pediatric patient-a case report," *Indian Journal of Dental Sciences.* 2013; 1(5):90-93.
  9. Cawson RA, Binnie WH, Speight PM, Barrett AW, Wright JM. *Lucas Pathology of Tumors of Oral Tissues,* Mosby, St. Louis, Mo, USA, 5th edition, 1998.
  10. Sternberg SS, Antonioli DA, Carter D, Mills SE, Oberman H, *Diagnostic Surgical Pathology,* Lippincott Williams & Wilkins, Philadelphia, Pa, USA, 3rd edition, 1999.