ISSN: 2581-5989
PubMed - National Library of Medicine - ID: 101738774

*International Journal of Dental Science and Innovative Research (IJDSIR)*

*IJDSIR : Dental Publication Service*

*Available Online at: www.ijdsir.com*

*Volume – 4, Issue – 1, January - 2021, Page No. : 327 - 332*

# Recurrent Pyogenic Granuloma In Children: Do We Know It Well Enough? - Deciphering The Enigma – A Case report

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**Citation of this Article:** Dr. Sanjeev Kumar Singh, Dr. Ashima Goyal, Dr. Aditi Kapur, Dr. Krishan Gauba, Dr. Manoj Jaswal, "Recurrent Pyogenic Granuloma In Children: Do We Know It Well Enough? - Deciphering The Enigma – A Case report", IJDSIR- January - 2021, Vol. – 4, Issue - 1, P. No. 327– 332.



**Type of Publication:** Case Report

**Conflicts of Interest:** Nil

**Abstract**

Granuloma pyogenicum is a distinctive entity clinically appearing as an overgrowth of tissues. Its etiology is still unclear and the nomenclature is a misnomer because the lesion is neither infectious nor granulomatous. Oral pyogenic granuloma is an inflammatory hyperplastic lesion, 75% of which occurs on facial aspect of gingiva; anterior maxilla being the most common site affected. It predominantly occurs in the second decade of life with a slightly higher female predilection. This is a case report of 6-year-old male child who presented with an unusual recurrent soft tissue overgrowth in the left posterior lingual aspect of palate, histopathologically diagnosed as pyogenic granuloma. The lesion showed recurrence after the excisional biopsy with scalpel performed for its management for the first time and also after simple laser excision the second time. It was then planned to perform a wide surgical excision after which the patient showed no recurrence with a follow-up period of 12 months.

**Keywords:** Pyogenic Granuloma, Granuloma Telangiecticum Lobular Capillary Hemangioma, child, laser, gingival overgrowth, Gingival hyperplasia

**Introduction**

Angiogranuloma /pyogenic granuloma, a reddish, bluish smooth surfaced mass grows from beneath the margins of the gingiva and is often shows ulceration and is highly vascular, compressible and bleeds readily [1]. It may penetrate interdentally and present as a bilobular (buccal and lingual) mass connected through the col area, though bone erosion is uncommon [2]. There are two types of pyogenic granuloma which are clinically seen namely lobular capillary haemangioma and non-lobular capillary haemangioma, which differ in their histological features [3]. Apart from gingiva, it can be seen on the lips, tongue, buccal mucosa and palate. These lesions develop rapidly, reaches full size, remains static for a period of time and later become fibrotic and indistinguishable from a fibroma. Here, we report a rare case of PG in a 6 years old child patient features giving a clear differential diagnosis with other similar oral mucosal lesions as regards the clinical features, radiological features as well as histopathological features.

**Case report**

A 6-year-old male child, resident of district Samba, Jammu reported to the outpatient unit our Institute with the chief complaint of swelling in the left upper back region associated with bleeding while brushing for the past 6 months. Patient was apparently normal 6 months ago when his mother first noticed a small swelling over the left side of the upper jaw, that gradually increased in size to 1x1cm and by 2-3 months for which the patient consulted a local dentist in Jammu who excised the lesion and prescribed antibiotics. As per the history given by the mother, the swelling recurred and reached to the present size of 2x3cm for which they reported to our institute (Fig 1). There was no significant past medical history. On intraoral examination, patient was in early mixed dentition stage with mesial step molar relation with unilateral chewing habit due to the swelling in the upper left posterior tooth region. The swelling extended from 64 to 26, appeared to be ulceroproliferative involving both buccal and lingual gingivae along with an obliteration of buccal vestibule. On palpation it was soft in consistency and bled on palpation but was no tender, showed local increase in temperature and pus discharge with grade I mobility in relation to 64 and 65. An orthopantomogram and IOPA revealed no caries wrt 64, 65 with appreciable pulp chamber and canals. No interdental bone resorption, root resorption or periapical radiolucency were evident. Additional investigations carried out were hemogram, coagulation test, ANA antibody (Antinuclear antibody test) and CRP (C-reactive protein) test to rule out vasculitis. All the parameters were found to be within normal limits except raised Eosinophils count which could be due to the existing inflammation. On the basis of clinical and radiographic findings, a provisional diagnosis of Pyogenic Granuloma was made. The lesion was excised under LA and sent for histopathological examination which confirmed the diagnosis of Pyogenic Granuloma (Fig 2). The patient reported with recurrence of the lesion within a week which was of the size of the excised lesion (Fig 3). After 10 days, the lesion was excised with laser along with extraction of 65 which had become mobile due to inflammation. After a further one week of follow up, the patient reported with an aggressive proliferative growth, with a tendency to bleed on slight touch. It was tender on palpation and the mobility of 64 and 26 had increased from grade I to grade II. The CBCT to see any associated bone loss did not reveal any significant bone loss in association with the swelling (Fig 3). Keeping in mind the aggressive nature of the lesion, wide excision along with extraction of 64 and 26 under General Anesthesia (Fig 4) and the sample was sent for histological examination, the results of which were

consistent with the previous diagnosis of Pyogenic Granuloma. The decision for the extraction of 64 and 26 was informed to the parents about complete removal of local irritating factors to prevent its recurrence due to its aggressive nature in the present case and consent was obtained for the same. At 12 months, there was no evidence of recurrence, but prosthetic rehabilitation was not done just to avoid any irritation to the mucosa (Fig 5).

Discussion

Pyogenic granuloma is a common, tumor like growth in the oral cavity. It is neither granulomatous nor does it contain any pus, hence the name is a misnomer and is not suitable for this condition [2]. Two French Surgeons Poncet and Dor initially termed this lesion as Botryomycosis Hominis in 1897 [4]. Hartzell in 1904, introduced the term Pyogenic granuloma or Granuloma Pyogenicum and thus it is also known as Crocker and Hartzell's disease [5]. It has been histologically described as a "hemangiomatous granuloma" due to the occurrence of abundant blood vessels and the inflammatory nature of the lesion lending it the eponym, "granuloma telangiectacticum" [6].

The possible etiological factors of this condition may include an injury to the gingival crevice [8], vigorous tooth brushing habits that lead to repeated trauma to the gingiva [8], occlusal interferences [10] etc. In the present case tooth brush trauma may be the probable cause. Whenever size of the lesion is increased there will be occlusal interference while eating and brushing. Hence leading to release of endogenous and angiogenic factors which increase blood supply to the affected area that tends to bleed [4, 10]. It can be differentiated from other lesions like haemangioma as histologically it shows proliferation of endothelial cells and lack of inflammatory cell infiltrate. Peripheral Odontogenic fibroma though seen on the gingiva has a very minimal vascular component [9, 16]. Presence of multinucleated giant cells can be identified in case of Peripheral giant cell granuloma [9, 11]. Two types of pyogenic granulomas are reported in the literature viz lobular capillary hemangioma (LCH) and the non-lobular capillary hemangioma (non-LCH) [3,7]. Based on the biopsy report, the present case belongs to the lobular type. Depending upon the size of the lesion, the treatment varies. As per the size of our lesion hence, surgical excision was done which is also recommended treatment in the literature. Cryosurgery, flash lamp pulsed dye Laser, sclerotherapy, excision by Nd YAG Laser, injection of corticosteroid or ethanol are other treatment modalities for pyogenic granuloma [12]. Pyogenic granuloma associated with Dentin Dysplasia type II have been reported by Nirmala et al. [13] but in our case it was not found to be associated with any other problems. According to Bhaskar et al 1966, the Prevalence of pyogenic granuloma accounts for 1.85% of all the oral pathoses and 0.5% of all skin nodules [14,15]. The recurrence rate of pyogenic granuloma is 17% [16]. Exclusivity of our report is that pyogenic granuloma occurrence was seen in a male child which is extremely rare. This case is unique because of the diverse nature of the condition like age, site of occurrence, gender and the rate of recurrence are distinctly separate from the normal presentation of pyogenic granuloma, and the fact that aggressively proliferating lesion did not cause any notable deformity in the underlying bone.

**Conclusion**

Benign lesions like pyogenic granuloma may at times grow rapidly which can cause pain and discomfort to the patient especially in a young child. Hence, early diagnosis and prompt treatment is very important to prevent further complications. Pediatricians should have a knowledge regarding these types of lesions and such cases must be referred to a Pediatric dentist as early as possible to

prevent discomfort and improve quality of life of the child in question.

**References**


1. Goodman-Topper ED, Bimstein E. Pyogenic granuloma as a cause of bone loss in a twelve-year-old child: report of case. ASDC J Dent Child. 1994;61(1):65-7.
2. Ramirez K, Bruce G, Carpenter W. Pyogenic granuloma: case report in a 9-year-old girl. Gen Dent. 2002;50(3):280-1.
3. Ojanotko-Harri AO, Harri MP, Hurttia HM, Sewón LA. Altered tissue metabolism of progesterone in pregnancy gingivitis and granuloma. J Clin Periodontol. 1991;18(4):262-6.
4. Odel EW (1998) Lucas Pathology of tumors of oral tissues. In: Cawson RA, et al. (Eds.), Oral Oncology, (5th edn), Missouri: Mosby, USA, pp. 434.
5. Hartzell MB. Granuloma pyogenicum. J Cutan Dis Syph. 1904; 22:520–5.
6. Angelopoulos AP. Pyogenic granuloma of the oral cavity: statistical analysis of its clinical features. J Oral Surg. 1971;29(12):840-7.
7. Ajay M, Parul S, Poonam. Lobular capillary haemangioma in a child: a case report and literature review. Scientific reports 2012;1(5):1-3
8. Regezi JA SJ, Jordan RC Oral Pathology: Clinical Pathological Considerations. 4 ed. Philadelphia, USA, WB Saunders; 2003.
9. Ainamo J. The effect of habitual tooth cleansing on the occurrence of periodontal disease and dental caries. Suom Hammaslaak Toim. 1971;67(1):63-70.
10. Widowati W BT, Shareff A. Epulis and pyogenic granuloma with occlusal interference. Maj Ked Gigi 2005; 38:52–5.
11. Steelman R, Holmes D. Pregnancy tumor in a 16-year-old: case report and treatment considerations. J Clin Pediatr Dent. 1992;16(3):217-8.
12. Parisi E, Glick PH, Glick M. Recurrent intraoral pyogenic granuloma with satellitosis treated with corticosteroids. Oral Dis. 2006;12(1):70-2.
13. Nirmala SV, Sivakumar N, Usha K. Dentin dysplasia type I with pyogenic granuloma in a 12-year-old girl. J Indian Soc Pedod Prev Dent. 2009;27(2):131-4.
14. Bhaskar SN, Jacoway JR. Pyogenic granuloma--clinical features, incidence, histology, and result of treatment: report of 242 cases. J Oral Surg. 1966;24(5):391-8.
15. Cawson RA BW, Speight PM, Barrett AW, Wright JM. Lucas Pathology of tumors of oral tissues. 5 ed. Missouri: Mosby; 1998.
16. Taira JW, Hill TL, Everett MA. Lobular capillary hemangioma (pyogenic granuloma) with satellitosis. J Am Acad Dermatol. 1992;27(2 Pt 2):297-300.

**Legend Tables**

Figure 1: Pretreatment- Ulceroproliferative growth in maxilla

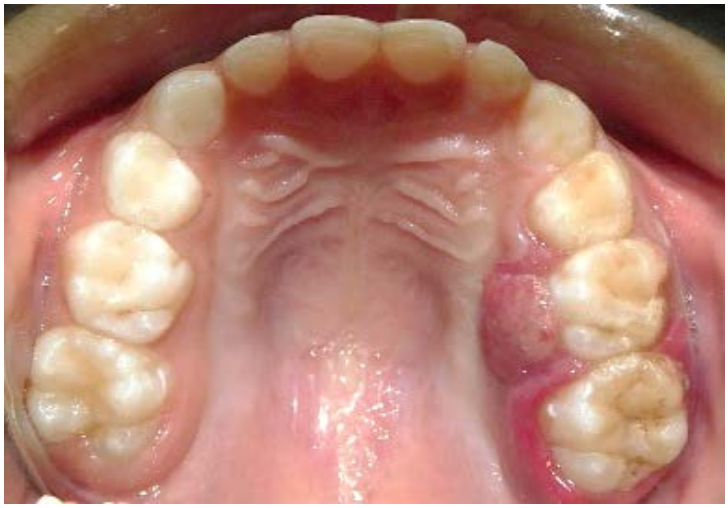

Figure 2: Excisional Biopsy

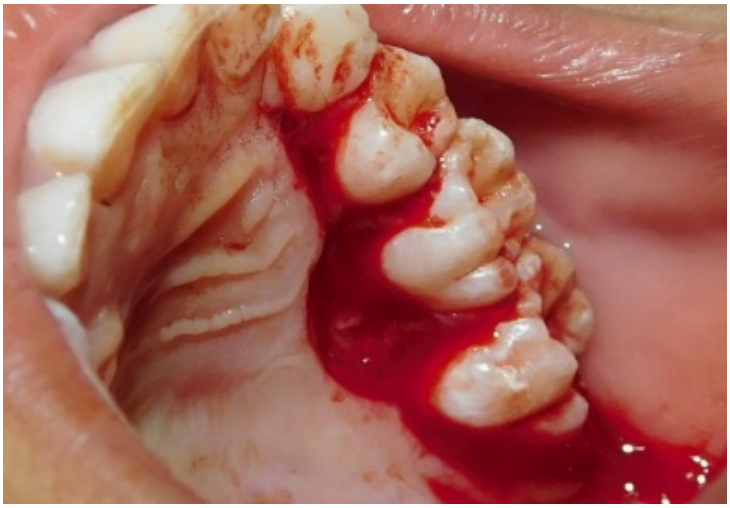

Figure 3: Recurrent lesion after Excisional biopsy

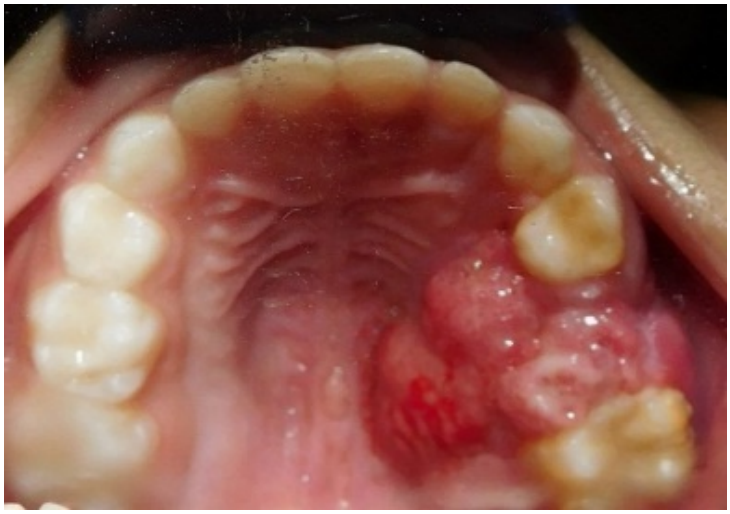

Figure 4: No underlying bony changes and associated root resorption

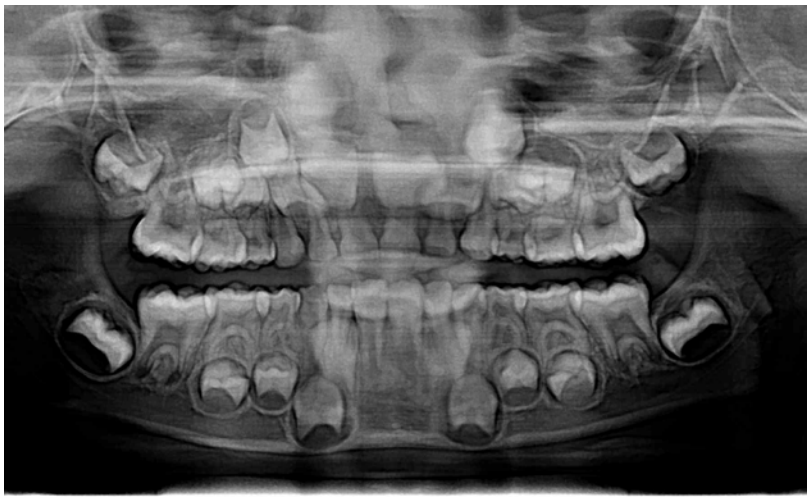

Figure 5a: Excision of the lesion under general anesthesia

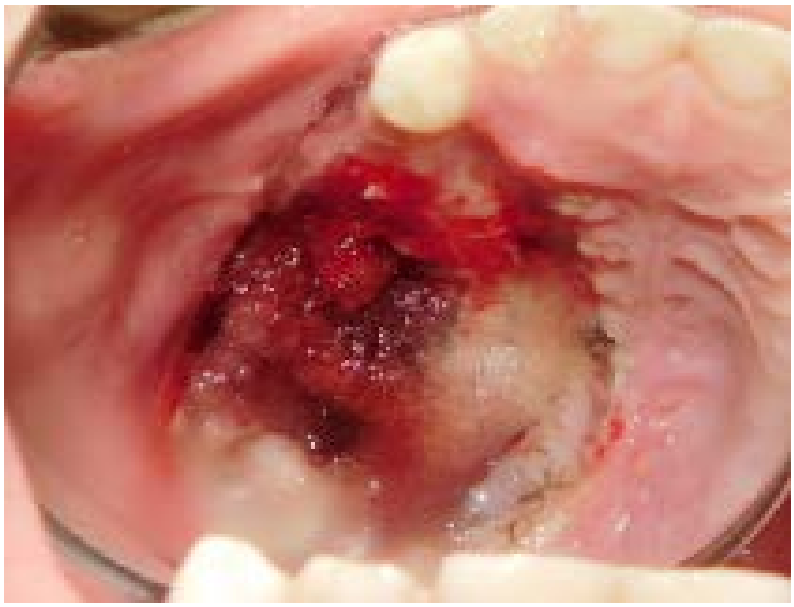

Figure 5b: Follow up at 12 months