

## Case Report

### Pyogenic Granuloma-Associated with a Primary Retained Root Stump- A Case Report

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#### ABSTRACT:

**Background:** Pyogenic granuloma is a relatively common inflammatory hyperplasia seen in the oral cavity, as a response to some underlying irritating factor. It is known by a variety of names such as Crocker and Hartzell's disease, granuloma pyogenicum, granuloma pediculatum benignum, benign vascular tumor. This tumor like growth is considered to be non-neoplastic in nature. **Method:** This paper presents a case of pyogenic granuloma managed by surgical intervention in an 11 year old boy. **Result:** Oral Pyogenic Granuloma is a non-specific growth in the oral cavity for which correct diagnosis and proper treatment is required if occurring in a pediatric patient. The patient was recalled every third month for maintenance and for routine follow up to check for possible recurrence. This case was followed up for a period of 1 year and there has been no recurrence so far.

**Key words-** Hyperplasia, Pyogenic Granuloma, benign lesion.

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#### INTRODUCTION

Pyogenic granuloma (PG) or granuloma pyogenicum is a common tumor-like mucocutaneous overgrowth that occurs in the oral cavity or on the skin.<sup>1</sup>The term "Pyogenic Granuloma" or "Granuloma Pyogenicum" was introduced by Hartzell in 1904<sup>2,3</sup>.

The pyogenic granuloma usually manifests as a localized erythematous papules with a sessile or pedunculated base and is usually hemorrhagic in nature.<sup>4</sup>The most frequent intraoral site is the gingiva (approximately 75%), but Pyogenic granuloma lesions also appear on the lips, tongue, buccal mucosa, palate and floor of mouth.<sup>3, 5</sup> Pyogenic Granuloma is relatively common tumor-like lesion which includes 3.81% to 7% of all biopsy results of oral cavity lesions.<sup>6,7</sup>

Most investigators consider the lesion arises in response of various stimuli like chronic low grade trauma, physical trauma, hormonal factors, bacteria, viruses and certain drugs<sup>8,9,10,11,12</sup> but local irritants such as calculus, foreign material in the gingiva and poor oral hygiene are also considered.<sup>8,9</sup>

Surgical excision with eradication of local irritants is the treatment of choice. Other protocol such as use of Nd: YAG laser, flash lamp pulsed dye laser, cryosurgery, and intralesional injection of corticosteroids have been proposed<sup>13</sup>.

#### CASE REPORT

A 11-year-old male patient reported to the Department of Pediatric and Preventive Dentistry, K.M.C.T Dental College, Calicut, Kerala, complaining of a swelling in the lower left gum region, which affected his mastication and phonation. The patient reported that he noticed the swelling over the past one month. The swelling was initially small in size which gradually increased to its present size with occasional bleeding episodes.

On extra oral examination; there was no visible swelling on the left side of the mandible. Intraoral examination revealed a large solitary, oval shaped well defined pedunculated gingival overgrowth extending from the lingual to the occlusal surfaces of 33, 34, and 35. The lesion was reddish pink in color with white patches and was approximately 43x

44 mm in size. The surface of the lesion was smooth, no ulcerations were seen. [Figure 1 & 2]



Figure 2: Occlusal view of the gingival growth



Figure 1: Occlusal view of the gingival growth



Figure-3: IOPA of 34, 35 region

Radiographically, there were no visible abnormalities and the alveolar bone in the region of the growth appeared normal with the presence of retained root stump of 74. [Figure 3] Routine hemogram was found to be normal. A provisional diagnosis of pyogenic granuloma was made in relation to 34 and 35 region. The differential diagnosis included peripheral ossifying fibroma, peripheral giant cell granuloma, hemangioma, and fibroma.

Surgical excision of the lesion up to the mucoperiosteum was carried out under local anesthesia using a scalpel and blade under aseptic condition, followed by the removal of root stump of 74.[Figure 4] Periodontal dressing was placed and the patient was recalled after 1 week for removal

of the pack and routine follow up was done. The excised tissue [Figure 5] was sent for histopathological examination.



Figure 4: Extracted root stump of 74



Figure 5: Excised Tissue

Histopathological report revealed occasional parakeratinised epithelium, in some places. The underlying connective tissue stroma showed numerous small and large endothelium lined channels engorged with blood elements, extravasated red blood cells, angiogenesis, few inflammatory cells, and bundles of collagen fibers.[Figure6]. The diagnosis of pyogenic granuloma was histologically confirmed.

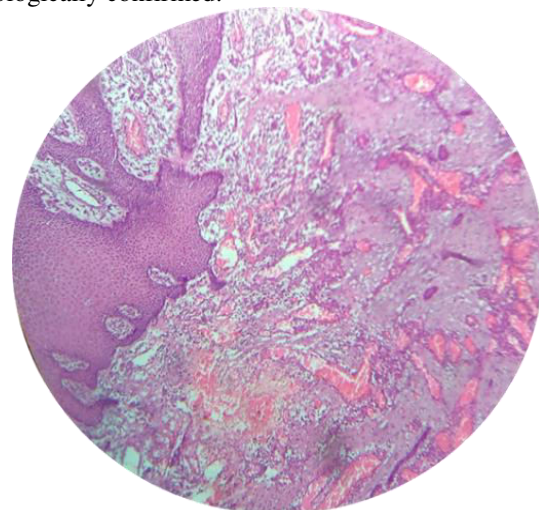


Figure 6: Histologic section of the growth

The patient was recalled every third month for maintenance and for routine follow up to check for possible recurrence. This case was followed up for a period of 1 year and there has been no recurrence so far.[Figure 7 & 8]

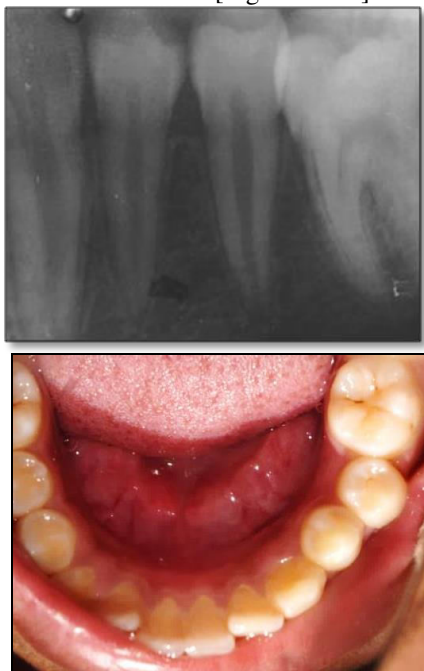


Figure 7 and figure 8: 17 months follow up

## DISCUSSION

Pyogenic granuloma or granuloma pyogenicum is a relatively common benign non-neoplastic tumour. The term “pyogenic” is a misnomer since this condition does not produce any purulent secretion, not related to any infection, and does not even represent a granuloma histologically.<sup>14</sup>

Oral pyogenic granulomas occur in all age groups, children to older adult, but are more frequently encountered in females in their second decade due to the increased levels of circulating hormones estrogen and progesterone.<sup>15</sup>

In this case, the patient discussed was an 11 year-old healthy male. From the numerous etiologies the probable etiologic factors applicable in this case included the presence of retained root stump of 74, repeated trauma and occlusal interference while eating due to the size and position of the lesion.<sup>16</sup>

This lesion presented here showed a large growth localized to the lingual surfaces of the lower left posterior mandible, reddish pink in color, the growth was present since 1 month which gradually increased in size, started to bleed intermittently, and also interfered during mastication, which prompted the patient to seek treatment. The growth involved the attached gingiva and the marginal gingiva extending beyond the occlusal plane, thereby interfering mastication, and phonation.

Excision and biopsy of the lesion is the recommended line of treatment unless it would produce a marked deformity and in such a case incisional biopsy is recommended.<sup>17</sup>

## CONCLUSION

Oral Pyogenic Granuloma is a non-specific growth in the oral cavity for which correct diagnosis and proper treatment required if occurring in a pediatric patient. There was rapid growth of the lesion involving both facial and lingual surfaces covering the entire left lower second premolar and extending up to alveolar mucosa.

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