

# Pyogenic Granuloma – A Gingival Menace

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## Abstract

Pyogenic Granuloma is a solitary red nodule which appears on the head or neck. It is a tumor like growth in the oral cavity, surrounding the anterior or posterior jaw region. The growth is prone to hemorrhage and bleeding is often refractory to pressure. Etiology of pyogenic granuloma is unknown, but trauma, infection, irritation, hormonal factors or certain kinds of drugs can be few of proposed agent. Surgical mode of treatment is done which includes excision of nodule. We report a case of pyogenic granuloma of upper right back jaw lasting since 8 months.

**Keywords:** Excision Biopsy, Pyogenic Granuloma, Tumour.

## Introduction:

Pyogenic granuloma (PG) or Pregnancy tumor is a common tumor like growth of the oral cavity which is considered to be non-neoplastic in nature.<sup>1</sup> These tumors have no sex predilection and may occur at any age. Intraorally it most commonly involves the tongue, lip, oral mucosa, gingiva.<sup>2</sup> The PG usually appears as a localized lump with a sessile or pedunculated base. It has either smooth or lobulated surface with a deep red or purplish color. It is a well-vascularized lesion which leads to bleeding even after any minor form of injury or stimuli.<sup>3</sup>

We report a case of pyogenic granuloma which was present at maxillary back jaw region and was causing pain to the patient since 8 months.

## Case Report:

A 45 year old systemically healthy male patient reported to department with a chief complaint of growth in the mouth involving upper right back jaw region and slight extraoral swelling since 8 months (Figure 1). Later there was a very slight increase in size, it led to discomfort to patient while eating.

Patient also complained of bleeding while brushing. Additionally, the patient had poor oral hygiene. The lesion was firm in consistency, non-tender with minimally bleeding. The patient's medical history was unremarkable. Clinical examination revealed pedunculated lesion that measured 0.7 × 0.8 cm in diameter (Figure 2 & 3). Intra oral periapical radiograph revealed mild marginal bone loss.

The blood investigation was done and was found within normal limits. Excisional biopsy was performed under local anaesthesia. Lesion was excised and the biopsy specimen was sent for the microscopic examination (Figure 4).

Histopathologically, it was revealed presence of granulation tissue along with non-neoplastic proliferation of endothelial cells. Blood cells formation and infiltration of acute and chronic inflammatory cells in a few collagenous matrix were also present. The surface of the lesion was consistent with hyperplastic parakeratinized stratified squamous epithelium with few areas of atrophy, ulcer and fibrinoleukocytic membrane. The connective tissue shows proliferating fibroblasts and collagen fibres interposed with distribution of lymphocytes and

plasma cells (Figure 5). There was no evidence of malignancy. Hence on basis of clinical and

histopathological findings we confirmed the diagnosis to be a case of pyogenic granuloma.



Figure No. 1: Extraoral Swelling



Figure No. 2: Intraoral Swelling



Figure No. 3: Location of Granuloma



Figure No. 4: Biopsy Specimen

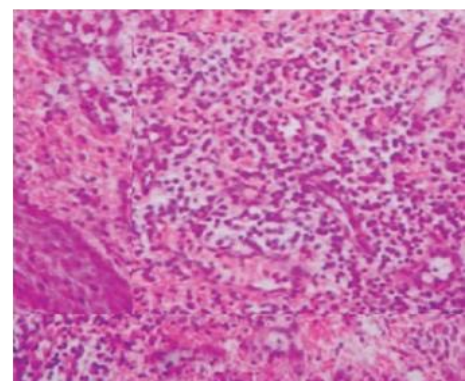


Figure No. 5: Histopathological Findings

## Differential Diagnosis:

Differential diagnosis for pyogenic granuloma can include peripheral ossifying fibroma, peripheral giant cell granuloma, fibroma, hemangioma, conventional granulation tissue, peripheral odontogenic fibroma, hyperplastic gingival inflammation, Non Hodgkin's lymphoma.

## Discussion:

Pyogenic granuloma is a misnomer since the condition is not associated with pus and does not represent a granuloma histologically.<sup>4</sup> Pyogenic granuloma is a common, tumor like, exuberant tissue response to localized irritation or trauma. PG can occur at any age, but most frequently affects young adults. The maxillary region gingiva is frequently involved as compared to mandibular gingival. So as facial gingiva is more involved than the lingual gingiva. Out of all oral pyogenic granulomas three quarters occur on the gingiva, with the lips, tongue (especially the dorsal surface), and buccal mucosa also affected.<sup>5</sup>

Although PG can be diagnosed clearly by clinical diagnosis but in order to get considerable accuracy, histopathological investigations, radiographic aids in confirming the diagnosis and treatment. Bony destruction suggestive of malignancy or to identify a foreign body can be ruled out by taking radiographs if necessary.<sup>6</sup>

Because of poor oral hygiene, dental plaque, and calculus or over-hanging restorations gingival irritation and inflammation occurs which may be precipitating factors in many cases.<sup>7,8</sup>

Some studies have concluded that some initial traumatic condition is the main etiologic factor for development of pyogenic granuloma. It has been reported that 80% of patients with oral pyogenic granuloma gave positive information about preceding injury to the site.<sup>9-11</sup> Lawoyin et al from Ibadan, Nigeria reviewed 38 cases. He reported that an average age range for occurrence of PG is 5 to 75 years (mean age 33 years). Daley TD et al conducted a study in year 1991 and they indicated that the clinical diagnosis of 'pregnancy tumour' can be given when describing a pyogenic granuloma occurring in

pregnancy, because it describes a distinct lesion not on the basis of histologic features but on etiology, biologic behaviour, and treatment protocol.<sup>12</sup>

Regezi et al in year 2003 said that Oral PG shows clear histopathological findings of prominent capillary growth in hyperplastic granulation tissue which strongly suggest activity of angiogenesis.<sup>13</sup>

## Conclusion:

Pyogenic granuloma or pregnancy tumor is a common and well-known oral lesion. The etiopathogenesis of oral pyogenic granuloma is unknown and still remains a debatable topic.

It arises in response to various aggravating factors like local irritation, traumatic injury, sex hormones or certain kinds of drugs, so removal of causative irritants (plaque, calculus, foreign materials) is the major line of treatment. Removal of tumor by excisional surgery is the treatment of choice. But nowadays new approaches for treatment such as excision by Nd:YAG laser, injection of ethanol or corticosteroid, flash lamp pulsed dye laser, cryosurgery, etc.

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