# Aggressive Pyogenic Granuloma Mimicking a Malignancy - A Case Report

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#### ABSTRACT-

This is a rare case report of pyogenic granuloma in a 57 years old female. It was found in posterior mandibular area. It imposed a diagnostic challenge as the clinical picture, radiological findings and no definite etiological factor caused great confusion. Only with the help of histological examination, a final diagnosis of pyogenic granuloma was given.

#### INTRODUCTION-

Pyogenic granuloma is considered a benign connective tissue proliferation as a result of a chronic stimulus or injury. Its painless sessile or pedunculated lesion commonly seen on the marginal gingiva, only 15% tumors are seen on the alveolar part.<sup>1</sup>Its a benign inflammatory reaction commonly seen in females due the presence of high levels of steroid to hormones.Various also involved factors are contributing to its etiopathogenesis like local irritation, traumatic injuries, hormonal factors, or certain kinds of drugs.<sup>2</sup> As a result of these chronic irritants, there is hyperplasia of the fibrovascular connective tissue leading to the formation of pyogenic granuloma.<sup>2</sup>

There are not many case reports where an aggressive pyogenic granuloma is causing the mobility of the adjacent tooth as well as alveolar bone resorption.

The aim of this article is to present a case of a patient who is suffering from two rapidly growing masses exhibiting aggressive behavior which is radiologically exhibiting an extensive alveolar bone loss and clinically mimics a malignant lesion.

## CASE PRESENTATION-

A 57-year-old female visited to the Department of Oral Pathology and Microbiology with the chief complaint of growth in the oral cavity associated with the lower left back tooth region which was causing interference in eating and brushing. She noticed the growth a month ago but at that time it was the size of a peanut but gradually it increased to its present size. On intraoral observation, it was observed that there are two sessile growths which are soft in consistency, pinkish in colour, oval in shape measuring approximately 3X2 cm and 2X2 cm. (Figure1-clinical image) These growths were present on the alveolar ridge in place of missing left second molar. There was bleeding on probing and the first mandibular molar exhibited noticeable mobility(Grade II mobility). These findings were confirmed by palpation. The lymph nodes were not palpable. There was no fever, weight loss, pain and numbness in the area of the lesion, difficulty in swallowing, hoarsness of voice, persistence of cough, reduced appetite or other symptoms of malignancy.<sup>16</sup>

The orthopantomography(OPG) exhibited alveolar crestal bone loss with respect to the missing second molar and root resorption with 36. (Figure 2-OPG). A patient's consent was obtained, surgical excision of the lesion under local anesthesia was done. (Figure-3-surgical excised lesion) The patient was given postsurgical instructions and the histological assessment of the tissue specimen was done.

Histology of the tissue specimen exhibited keratinized stratified squamous epithelium and the underlying connective tissue stroma (Figure 4). The connective tissue stroma is fibrovascular in nature composed of collagen fibers, spindle shaped fibroblasts and chronic inflammatory cells and numerous small blood vessels. The histological examination tends to indicate that it's a case of pyogenic granuloma.



Figure 1: Clinical image of the lesion



Fig 2: OPG image of the lesion



Fig 3: Image of the surgically excised lesion



Figure 4: Histopathological presentation of the case suggestive of Pyogenic Granuloma

## DISCUSSION

Pyogenic granuloma is considered to be an inflammatory hyperplasia and had been given various terminologies like granuloma pyogenicum, reactive granuloma gravidarum.<sup>3</sup> hemangioma and Its considered to be a misnomer as the lesion is not consist of any pus and on histological examination also it's not a granuloma.<sup>4</sup> In oral cavity, it is considered to be a reactive lesion. It was described by Angelopoulos histologically as hemangiomatous granuloma due to its inflammatory nature and due to the presence of multitudinal blood vessels.<sup>5,6</sup>In cases of recurrent pyogenic granuloma, association has been found with infective organisms like Bartonella henselaeae, B. Quintana, HHV-8.8,12

In our case report, the patient reported with an aggressive lesion. It is shown that the clinical picture of an aggressive pyogenic granuloma is that of a irregular shaped soft lesion associated with the alveolar bone loss. Similarly, Saravana also reported such finding where in his review,out of 137 patients, four patient exhibited extensive bone loss and mobility of teeth.<sup>7</sup> Normally, the Pyogenic granuloma is clinically present as an asymptomatic slow growing lesion without any bone loss. It was also found that the pyogenic granuloma can be found in association with mobile tooth.

The probable differential diagnosis will be hemangioma, peripheral giant cell granuloma, hyperplastic gingival inflammation, pregnancy tumor, peripheral ossifying fibroma, bacillary angiomatosis, angiosarcoma, metastatic cancer, Kaposi's sarcoma and non-Hodgkin's lymphoma.<sup>9,11,13, 15</sup>

Peripheral giant cell granuloma is found to be clinical identical to pyogenic granuloma,but presence of giant cells are the differentiating features.<sup>10</sup> The metastatic

tumors also have a clinical resemblance to pyogenic granuloma, microscopically they resemble their tumor of origin.<sup>1,14</sup>

## CONCLUSIONS

There can be exhibition of aggressive behaviour by the pyogenic granuloma mimicking malignancy, showing fast growth, alveolar bone loss along with mobility of adjacent tooth. Therefore its essential to go for a histopathological examination to rule out malignancy and help the patient to take proper treatment plan.

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