

## CASE REPORT

# PYOGENIC GRANULOMA IN THE ORAL CAVITY- A CASE REPORT

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### ABSTRACT

Pyogenic granuloma is a commonly occurring inflammatory hyperplasia of the skin and oral mucosa. It is not associated with pus as its name suggests and histologically it resembles an angiomatous lesion rather than a granulomatous lesion. It is commonly seen on gingival and rarely on other parts of oral cavity such as lips, tongue, palate and buccal mucosa. It is seen predominantly in second to third decade of life in young females. Clinically manifesting as a small red erythematous exophytic lesion must be biopsied to rule out other serious conditions. This article presents a case report of a pyogenic granuloma of the gingiva and its management.

**Key words:** Pyogenic granuloma, gingiva, excision, benign lesion

## INTRODUCTION

Pyogenic granuloma (PG) is a benign lesion of vascular origin<sup>1-4</sup>. In English literature it was described by Hullihen<sup>5</sup> and Hartzell<sup>6</sup> called pyogenic granuloma or granuloma pyogenicum. PG is also known as: eruptive haemangioma, granulation tissue - type haemangioma, granuloma gravidarum, lobular capillary haemangioma, pregnancy tumour or tumour of pregnancy. It is located on the skin and mucous membrane, especially on the lips, gums, cheeks and tongue. Often singular but sometimes multiple. PG develops most frequently from an ulcerations, trauma, small wound, chronic irritation or rough patches following dental care<sup>1-4</sup>. The etiology for lesion by local irritation, chronic irritation, minor trauma, hormonal factors, drugs and hormonal imbalance<sup>7</sup>. It is difficult to diagnose or confused with parulis, fibroma, peripheral giant cell granuloma, peripheral fibroma, peripheral ossifying fibroma, leiomyoma, hemangioendothelioma, hemangiopericytoma, kaposi's sarcoma, pregnancy tumour and post-extraction granuloma. Final diagnosis of pyogenic granuloma made only after by histo-pathological investigation. Management of pyogenic granuloma is surgical excision, curettage of the root surface<sup>8,9</sup>. This case report shows a pyogenic granuloma in a female patient along with histological findings and management.

## CASE REPORT

A 44 years old female patient presented with a chief complaint of growth of gingiva on left tooth region. The lesion was of negligible size when the patient first noticed it 6 months ago. There was a gradual increase in size causing discomfort while brushing and closing her lips. She had stopped brushing the area due to bleeding from the area. The patient was unaware of any initial trauma to site of the lesion. Her past medical history was non-contributory and her extra oral examination did not reveal any abnormalities.

Clinical examination revealed an exophytic, red pedunculated lesion measuring approximately 1.5\*1.5 cm in size, having a smooth lobulated surface situated on left maxilla below the line of occlu-

sion in relation to 11-12 region (figure 1). The lesion was firm in consistency, non-tender, non-compressible, and no pulsation were seen. It appeared ovoid in shape. There were bleeding points on the lesion and the lesion was easily bleeding on touch. Oral hygiene was poor and the mouth showed large amount of calculus.

Hemogram of the patient was within the normal limits. The patient did not have any systemic problems, so the case was prepared for surgery on the basis of clinical evidence. Oral prophylaxis was completed and the lesion was excised under aseptic conditions. Excision of the lesion up to and including the mucoperiosteum was carried out under local anaesthesia using a scalpel and blade followed by curettage (figure 2). The excised tissue was sent to the



Fig. 1



Fig. 2

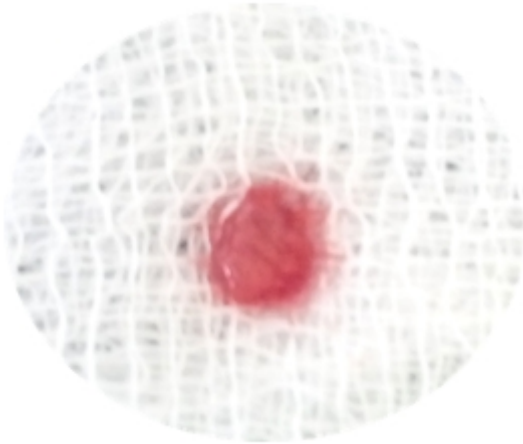


Fig.3

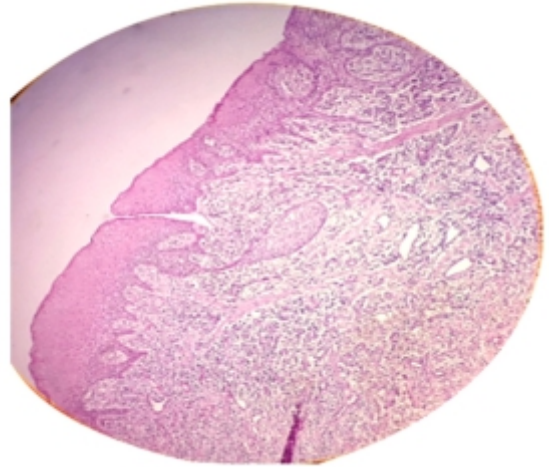


Fig.5

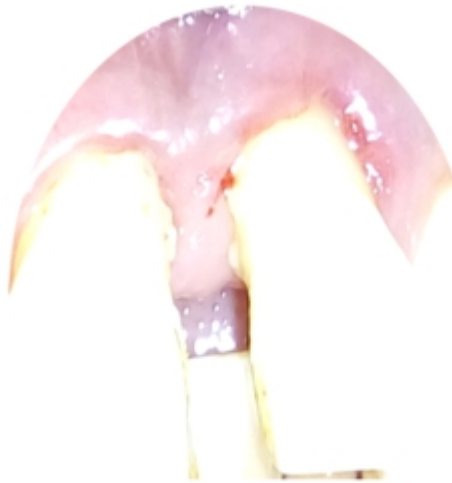


Fig.4

department of oral pathology for histologic examination (figure 3). Periodontal dressing was placed and the patient was recalled after 1 week for removal of pack and review. The progression was favourable, with no recurrence after 8 months (figure 4).

### Microscopic Apperance

Haematoxylin - eosin - stained section shows stratified squamous parakeratinized epithelium that is proliferating in to the underlying connective tissue stroma. Epithelium is ulcerated in focal areas. Connective tissue stroma is loose with numerous

proliferating blood vessels .Endothelial cell proliferating is seen. Fibrinous exudate is seen in focal areas. Chronic inflammatory cell infiltrate is also evident in the connective tissue stroma. The above histopathology features are suggestive of pyogenic granuloma (figure 5).

### DISCUSSION

Pyogenic granuloma is an inflammatory response that follows chronic irritation (poor oral hygiene, calculus/plaque, excessive restoration etc.) Trauma or a hormonal change in pregnant women<sup>1,10</sup>. As etiology in our cases includes calculus, Ainemo11et al discovered that recurrent trauma causes release of various endogeneous and angiogenic which contributes and increase vascularity of the lesion.

The gingiva is most common site mainly the maxillary gingiva more than mandibular gingiva. The typical growth of the site involvement is the interdental papilla and increase in size to cover a portion of the adjacent teeth. It is rarely located on the hard palate .the gingival location represents more than 75% of reported cases, with a predilection to the interdental papilla region<sup>6,12,13</sup>.

Clinically pyogenic granuloma often presents as a painless, pedunculated or sessile asymptomatic mass with a smooth or lobulated surface, soft in consistency, red to purple in colour that bleeds at the slightest touch. The lesion may ulcerate and he cov-

ered with a fibrinopurulent layer. The size varies from a few millimetres to a few centimeters<sup>7,12,14</sup>.

Pyogenic granuloma occur in all ages but predominant in the second decade of life in young adult female, possibly because of vascular effects of female hormone. Incidence is increased in pregnancy which is related to be increased level of estrogen and progesterone<sup>14,15</sup>. The prevalence of pyogenic granuloma in pregnant women varies between 5% and 8% .it is most commonly seen after the first trimester of pregnancy and is considered a hormone dependent lesion. Most pyogenic granulomas occurring during pregnancy will decrease after delivery<sup>1,16</sup>. Treatment during pregnancy is recommended in the second trimester, with ongoing checks after delivery<sup>3</sup>.

The line of treatment recommended is excision and biopsy of the lesion<sup>17</sup>. Conservative surgical excision of the lesion is removal of irritants such as plaque, calculus. Excision of the gingival lesions up to the periosteum with through scaling and root planing of adjacent teeth to remove all sources of irritation<sup>13</sup>. Various other treatment modalities are, the use of Nd: YAG laser, carbondioxide laser, flash lamp pulse dye laser, cryosurgery, electrodesiccation, sodium tetradeacylsulphates clerotherapy<sup>15</sup>.

Through follow up, especially in pyogenic granuloma of the gingiva cases is needed because of its higher recurrence rate Vilmann, et al<sup>14</sup>our case was followed up for a period of 1 year with sequent intervals and no recurrence was observed.

## CONCLUSION

PG is a benign lesion of the skin and mucous membrane. The case report shows that pyogenic granuloma can be nicely treated with the correct diagnosis and proper treatment planning and follow up of the lesion.

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