



Gingival Pyogenic Granuloma -Clinical Case Report

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ABSTRACT: Pyogenic granuloma is a vascularized non neoplastic lesion, in the oral cavity, caused by trauma, local irritants or hormonal factors, with a higher prevalence in women, present more frequently in the mandible than in the maxilla. It is not associated with pus as its name suggests and histologically it resembles an angiomatous lesion rather than a granulomatous lesion. It is known by a variety of names such as Crocker and Hartzell's disease, granuloma pyogenicum, granuloma pediculatum benignum, benign vascular tumor and during pregnancy as granuloma gravidarum Treatment consists of removal of local irritant, if any followed by excisional biopsy. This clinical case report presents the clinical and histopathological characteristics of the large pyogenic granuloma in a 36-year-old female, who reported to the Department of Santosh Dental College, Ghaziabad. Intraoral examination revealed a lesion mainly non tender, sessile, soft in consistency and measuring approximately 16 by 9 mm in diameter in the posterior side of maxillary first quadrant. Keeping in view the characteristics of the lesion, anamnesis and the literature, the pyogenic granuloma and giant cell granuloma were defined as diagnostic hypotheses. Excisional biopsy was done and specimen was sent for histopathological evaluation.

KEYWORDS: Biopsy, Granuloma, Non Neoplastic, Pyogenic, Pregnancy, Tumour

Pyogenic Granuloma (PG) is a non neoplastic tumour of vascular origin and is a misnomer as its not associated with pus and does not resemble granuloma histologically also^[1-3] Other names are eruptive haemangioma, granulation tissue-type haemangioma, granuloma gravidarum, lobular capillary haemangioma, pregnancy tumour or tumour of pregnancy.^[1-4] Pyogenic granuloma is a nonspecific conditioned enlargement of the gingiva. Basically it is the hyperplasia of connective tissue in response to chronic irritation, physical hormonal imbalance^[5] High incidence of this lesion during pregnancy is associated to high levels of estrogen and progesterone.^[6]

Presence of hormonal imbalance in pregnancy heightens the organisms response to irritation, but plaque and gingival inflammation are necessary for subclinical hormonal alteration leading to gingivitis.^[7]

This pathology can be found at any age but is more common in the second and third decades of life. Its most common location is the gums (75% of all cases). It can also be found on the lips, tongue, oral mucosa and palate.^[8-9] It can present with wide array of clinical presentations ranging from a sessile lesions to an elevated mass granulomas, generally are soft, nontender, deep red to purple in colour.^[9] Treatment of choice is generally wide surgical incision with sup periosteal curettage to minimize the chances of recurrence. The present article reports the treatment of a large pyogenic granuloma in posterior region of gingiva.

CASE REPORT

A 35 year old female patient reported to Department of periodontics and Oral Implantology in Santosh dental college and hospital Ghaziabad, with the chief complaint of growth on the gums, which had developed over last 2-3 months in right posterior region of her mouth. Patient complaint of bleeding and discomfort while brushing. Patient was otherwise healthy & clinically and medical history was noncontributory. The patient had poor oral hygiene, with large plaque deposits on the buccal surfaces, mainly on the affected site. Clinical examination revealed an inflammatory gingival lesion at the level of teeth 15, 16, 17. Measuring approx 16 x 9 mm, the lesion covered the clinical crown of 15 and 16 almost completely and also was partially extending to the lower arch. It was lobulated, of rugged texture, non tender, soft in consistency, sessile and vascular. Bleeding was there even on slight provocation. (Fig -1) Periodontal assessment did not reveal periodontal pockets.



Oral prophylaxis was done and on subsequent visit patient was evaluated after a week. There was a little reduction in size of the growth. After that the biopsy was done. Procedure was explained to the patient and consent was taken. Under local anesthesia gingival growth was excised and Subsequently, an intrasulcular incision, with two releasing incisions, was made to reflect a double-thick flap that was displaced coronally to cover the exposed part of the root. Tissue was sent for the histopathological examination. Periodontal dressing was applied on the excision site and analgesic, antibiotics were given to the patient for three days. Patient was motivated to maintain oral hygiene and to brush twice a day along with oral rinse. Patient was recalled after one day post operatively for check up. Patient was comfortable and no complain was reported by her. Check up at 1 month post operative showed good healing.

HISTOPATHOLOGICAL FEATURES

Microscopical appearance showed highly vascular proliferation resembling granulation tissue. Areas of ulceration was seen in the epithelium. The connective tissue showed proliferating fibroblast and collagen fibers interposed in which can be seen lot of foci of epithelial lined spaces within the connective tissue can be seen patchy distribution of lymphocytes and plasma. No evidence of atypia was seen. Clinical and histopathological features confirmed the diagnosis of pyogenic granuloma.

DISCUSSION

Pyogenic granuloma is a tumour like lesion which occurs in response to chronic inflammation, trauma or hormonal changes in woman.^[10] Its name is a misnomer because it does not contain any pus actually. Its most common site of occurrence is gingiva with a predilection in the interdental papilla region^[1,2,4] This pathology is more common in the second and third decades of life.^[1,3,4] and affects women more than men, The prevalence of PG 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. As the high level of sexual hormones (oestrogen and progesterone) stimulates the expression of angiogenic factors in inflammatory tissues.

Based on histological features there are two variants of pyogenic granuloma i.e lobular capillary hemangioma type (LCH) or nonlobular capillary hemangioma (NLCH). LCH has proliferating blood vessel organized lobules with no edema, capillary dilation or granulation tissue, whereas non LCH which consist of vascular core similar to granulation tissue with foci of fibrous tissue. In central of non LCH shows greater number of blood vessel with perivascular mesenchymal tissue non reactive for alpha smooth actin (SMA) is detected, compared with the lobular area of the LCH type of pyogenic granuloma. Inflammatory cells are present and may include polymorphonuclear neutrophils, lymphocytes and plasmacells. There may be an underlying epithelial cuff.^[12-14] The histological appearance of PG is variable because of its inflammatory nature. It can become more mature, less vascularised and rich in collagen, gradually converting to a fibrous epulis.^[12-14] Histologically, the tumour is more like a granulomatous lesion and not a pyogenic lesion. However, this term is universally accepted and used, and any attempt to change it may lead to confusion.^[12-14]

Differential diagnosis can be peripheral giant cell granuloma, peripheral ossifying fibroma, peripheral fibroma and haemangioma.^[1,14] It can also resemble a primary or metastatic malignant lesion (squamous cell carcinoma, fibrosarcoma, angiosarcoma, leukaemia or non-Hodgkin's lymphoma).^[1] Treatment of pyogenic granuloma includes surgical excision along with removal of irritants. Excision should be done to the depth of the periosteum with 2mm margins at its clinical periphery. And the adjacent teeth should be thoroughly scaled and curettage should be done to prevent any recurrence.^[15] Recurrence rate for pyogenic granuloma said to be 16% of the treated lesion. Recurrence is because of incomplete removal of the etiologic factors, or re injury of the area.

CONCLUSION

PG is a benign lesion of skin and mucous membranes. The lesion is not associated with pus and histologically, the lesion is angiomatous rather than granulomatous. It should be diagnosed properly both clinically and histologically so that proper treatment can be planned to prevent recurrence and patient discomfort.



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FIGURE 1



FIGURE 2

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