

MANGEMENT OF PYOGENIC GRANULOMA WITH ELECTROCAUTERIZATION: A CASE REPORT

Case Report

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ABSTRACT

Pyogenic granuloma is one of the inflammatory hyperplasia in the oral cavity. This term is a misnomer because the lesion is unrelated to infection and in reality arises in response to various stimuli such as low-grade local irritation, traumatic injury or hormonal factors. It predominantly occurs in the second decade of life in young females, possibly because of the vascular effects of female hormones. Pyogenic granuloma consists of capillary proliferations, venules and fibromyxoid stroma. The development occurs in three stages and bleeding is a common symptoms. Clinically oral pyogenic granuloma is a smooth or lobulated Exophytic lesion manifesting as small, red erythematous papules on a pedunculated or sometimes sessile base, which is usually hemorrhagic. Treatment plan includes several methods such as surgical intervention or laser treatment, but also more conservative approaches, including the application of topical systemic agents. In our case we managed the case with electrocauterization to see the efficacy of that treatment and post-operative recurrence.

Key Words: Pyogenic granuloma, Inflammatory hyperplasia, Electrocauterization

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INTRODUCTION

Pyogenic granuloma also known as lobular capillary hemangioma or granuloma teleangiectaticum is a relatively common vascular proliferation of the skin and mucous membranes. [1] It is of benign nature and tends to affect mostly children and adolescents as well as young adults, particularly pregnant women. [2]

This term is misnomer as the lesion is neither granulomatous nor it contains pus. It was originally described in 1897 by two French surgeons, Antonin Poncet and Dor. [3] the scientifically accurate term for this entity is the lobular capillary hemangioma. [4] It is most commonly seen on the marginal gingiva but lesions have been reported on palate, buccal mucosa, tongue and lips. The skin of the face, neck, upper and lower extremities, as well as the mucous membranes of the nose and eyelids are affected extra orally. These lesions usually manifests as a single, very friable, crimson, pedunculated papule. Less frequently, it could show up as a sessile lesion. It exhibits quick Exophytic development and frequently ulcerates its surface. On rare occasions, it is seen along the digestive tract. [5]

Pyogenic granuloma has been associated with certain medications such as oral contraceptives, retinoids, gefitinib, cabecitabine, and afatinib. [6-9] most tumours occur as solitary lesions, but multiple grouped or

disseminated tumours have been described. Multiple disseminated tumours are an adverse cutaneous effect of melanoma treatment with selective BRAF inhibitors like vemurafenib or encorafenib. [10] Multiple periungual PGs occur with targeted oncological therapies using epidermal growth factor receptor inhibitors or mitogen activated protein kinase (MEK) inhibitors and rituximab. [11, 12]

These benign growths also known as “epulides” have a compels genesis that includes aggravating factors such as worn out dentures, gum diseases, smoking, chewing tobacco, gingivitis and periodontal disease, hormonal disruptions (during pregnancy) , and blood dyscrasias. It is known as granuloma gravid arum, granuloma of pregnancy, or epulis gravid arum when it develops in the intraoral mucosa in the context of pregnancy particularly on gingiva typically in second & third trimester. [5]

CASE REPORT:

A 45 years old Male patient presented to the outpatient department, department of Oral Medicine & Radiology with a chief complaint of pain and swelling on his upper right front region of jaw for the last one month. The patient gave a history of gradual increase in size of the growth and pain which was dull & continuous in nature. The pain aggravated while taking food and warm water and does not subside even after taking analgesics. There was positive

history of pus bleeding on irritation on the surface of the growth.

Extra orally no gross abnormality was seen. On intraoral examination a 1.5 x 2 cm (approx.) oval growth was seen with the right anterior segment of the hard palate. The surface was smooth with well-defined margins with pinkish purple colour (FIG 1). The consistency was soft & oedematous and was confined between the distal surfaces of 12 to mesial surface of 11. Tenderness, exudation & bleeding was present upon stimulus.

Upon total clinical evaluation a provisional diagnosis of Pyogenic Granuloma was made.

MANAGEMENT

After informing the patient regarding the findings it was decided to go for surgical removal with electrocautery. Patient was taken for surgery with the due aseptic precaution by prophylactic antibiotic coverage. A Proper anesthetized area was achieved before surgery by 2% lignocaine with 1:80,000 adrenaline. Surgical excision was done by electro cauterization and sub periosteal curettage was followed (FIG 2). Offending tooth 11 which was grade 3 mobile was also extracted (FIG 3). The excised area was then irrigated with povidine iodine and 0.9% normal saline solution. The area was approximated with 30- non absorbable silk suture. Simple interrupted sutures were placed on the margins (FIG 4). Primary haemostasis was achieved and post-surgical instructions were given. The excised tissue specimen was sent for histopathological evaluation (FIG 5).

Histopathological examination revealed that the H & E stained section shows stratified squamous epithelium with thin & elongated rete pegs. The connective tissue shows numerous blood vessels and budding capillaries. Extravagated blood elements were also seen. Both chronic & acute inflammatory cells are seen alongside. The overall features are suggestive of Pyogenic Granuloma (FIG 6, FIG 7).



Figure 1: A 1.5 x 2 cm (approx.) oval growth was seen with the right anterior segment of the hard palate with smooth margin along with well-defined margins & pinkish purple colour.



Figure 2: Surgical excision was done by electro cauterization and sub periosteal curettage was done

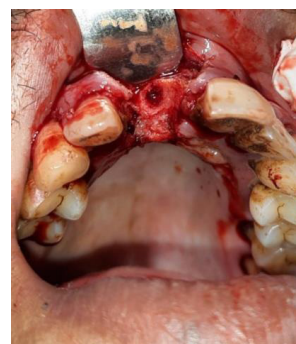


Figure 3 : Extraction of offending tooth 11 was done



Figure 4 : Closure with simple interrupted suture with 3-0 silk suture



Figure 5 : Excised tissue specimen.

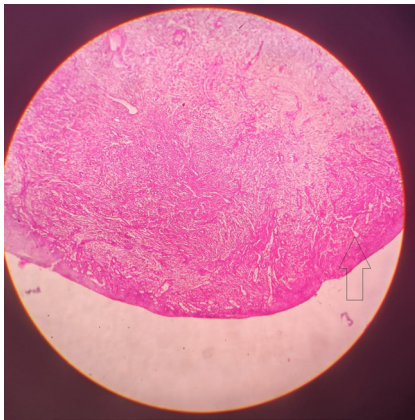


Figure 6 : Thin rete-pegs and inflammatory cells present (10x)

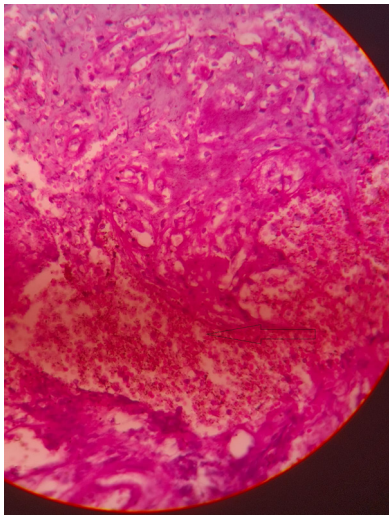


Figure 7 : Highly vascularized proliferation of blood vessels seen (40x)

DISCUSSION:

Pyogenic granuloma is an inflammatory hyperplasia formed as a result of an exaggerated reaction of connective tissue to some localized minor lesion or any underlying irritation. The differential diagnosis of pyogenic granuloma includes peripheral giant cell granuloma, peripheral ossifying fibroma, hemangioma, Kaposi's sarcoma, bacillary angiomatosis, non-Hodgkin's lymphoma, angiosarcoma and metastatic cancer. Peripheral giant cell granuloma is clinically similar to pyogenic granuloma, but presence of bone resorption and appearance of the multi-nucleated giant cell are differentiating features. Peripheral ossifying fibroma can be distinguished by the consistency, texture and the lighter colour.

Hemangioma is a developmental disorder, commonly seen on the tongue. It be easily diagnosed by a chair side "Diascopy" procedure. Kaposi's sarcoma and bacillary angiomatosis can be differentiated as they are AIDS related and show specific histopathological picture.

A gingival non-Hodgkin's lymphoma is usually found to be an asymptomatic gingival enlargement or mass resembling a pyogenic granuloma which requires histopathological confirmation for diagnosis.

Pyogenic granuloma can be differentiated from angiosarcoma by its lobular growth pattern and histopathological picture showing well-formed vessels and cytological bland endothelial cells. Metastatic tumors also resemble same but microscopically it has a distinct tumor of origin.^[13]

In small children, topical or oral medical therapy with beta adrenergic receptor antagonists' timolol or propranolol seems to be effective.^[14] Periungual PG's have been treated off label with 1 % topical propranolol cream.^[15] For PG's on ocular surfaces medical treatment with topical 0.5 % timolol eye drops twice daily for a minimum of 21 days is an option.^[16] Since systemic absorption can also occur from these topical medications, patients should be monitored for bradycardia, hypotension, hypoglycaemia and bronchoconstriction. In elderly patients even syncope and falls are reported.^[17]

CONCLUSION

Pyogenic granuloma despite being benign in nature, the discomfort it causes to the patient as well as other associated symptoms like bleeding or obstruction of other structures, results in the need for appropriate treatment. The most effective method for reducing the lesion is still surgical excision. Therefore effective treatment planning and accurate diagnosis should also be taken into account. The mucogingival complex is to be kept in mind and preserved while doing treatment. In our case no recurrence healing was good and no recurrence found after 21 days follow up (FIG 8).



Figure 8 : Follow up after 21 days with no recurrence.

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