

Oral Pyogenic Granuloma: A Case Report

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ABSTRACT

Pyogenic granuloma is a common benign vascular tumor found to occur in all ages. Both skin and mucous membranes can be affected. Its most common etiology is trauma. The tumor consists of capillary proliferations, venules, and fibromyxoid stroma. The development of a lesion occurs in three stages in which bleeding is a common symptom. The tumor can also mimic like other vascular lesions, solid tumors, and soft tissue infections. This case report is about pyogenic granuloma managed by surgical intervention.

Keywords: Gingival lesion, Hyperplastic lesion, Pyogenic granuloma.

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INTRODUCTION

Pyogenic granuloma (PG) is an inflammatory hyperplasia which shows nodular growth in the oral mucosa that histologically resembles inflamed fibrous granulation tissues.¹ In oral cavity, it manifests as a tumor-like growth which is considered to be non-neoplastic. The lesion does not contain pus and strictly speaking it is not a granuloma; hence the term pyogenic granuloma is considered as a misnomer.

CASE DESCRIPTION

A 41-year-old female patient reported to our college with a primary complaint of growth in the right upper back region for the past 20 days. She was apparently normal before 20 days; later she noticed a growth which was smaller in size and slowly increased to the present size.

On intraoral examination (Fig. 1), a single, well-defined swelling which is oval in shape of size 3 × 2 cm was present near the 16 and 17 regions. The growth was extending from the mesial aspect 16 to the distal aspect of 17 and anteroposteriorly from buccal vestibule to the marginal gingival of 16 and 17. On palpation the growth was soft in consistency and tender on palpation with evident pus discharge. Oral hygiene status of the patient was poor. Based on clinical findings, the diagnosis of PG was made. Orthopanthomogram (OPG) (Fig. 2) revealed no bony involvement. Excision of the lesion was done and on microscope it revealed (Fig. 3) connective tissue infiltrated with a plenty of capillaries and blood vessels. A plenty of chronic inflammatory cells especially lymphocytes were also noticed. The overlying surface epithelium is of stratified squamous and is atrophic in nature. Most of the epithelium was ulcerated and covered by a meshwork of fibropurulent membrane. Based on histopathology examination the final diagnosis was suggestive of PG.

DISCUSSION

Low-grade local irritation, traumatic injury, and hormonal factors are found to be the common factors that contribute to PG. They appear most commonly after trauma. Poor oral hygiene may be a precipitating factor in many of the patients. They are most common in the second decade of life, because of the vascular effects of the female hormones. They are found most commonly in gingiva, accounting for 75% of all cases, due to calculus or foreign material accumulation within the gingival crevice, followed by the tongue and buccal mucosa.

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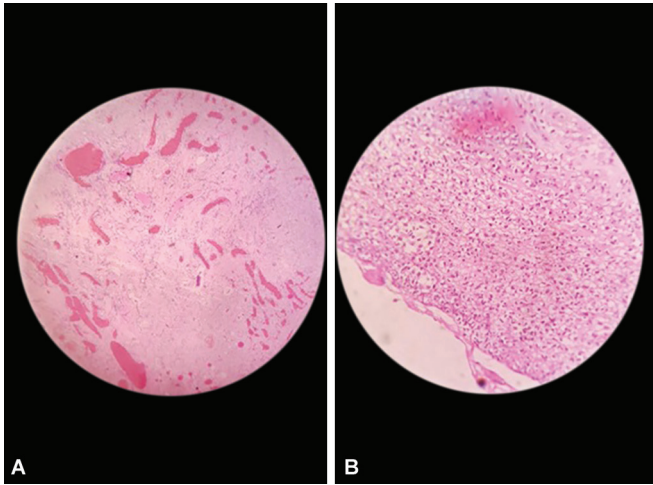
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Fig. 1: Clinical picture showing well- defined swelling in relation to 16 and 17



Fig. 2: Orthopanthamogram showing no bony involvement in relation to 16 and 17



Figs 3A and B: Microphotographs showing numerous capillaries and dense chronic inflammatory cells

Lips are uncommon. Size is of few millimeters to centimeters, with a peak incidence of occurrence in the sixth decade of life.² Pyogenic granuloma has been associated with certain medications such as oral contraceptives, retinoids, gefitinib, capecitabine, and afatinib.³⁻⁵

Pyogenic granuloma appears as a smooth or lobulated exophytic lesion manifesting as small, red erythematous papules, and may be sessile or pedunculated. The lesion is a slow, asymptomatic, and painless swelling. The term “pregnancy tumor” and “granuloma gravidarum” are often used. Pregnancy granuloma is a localized hyperplasia of gingiva, which appears in the 2nd or 3rd month of pregnancy, with frequency of bleeding as they interfere with mastication.^{3,6}

Regarding the epithelium, if overlying epithelium is present, it is generally thin and atrophic and may be hyperplastic. If the lesion is ulcerated, it shows a varying thickness of fibrinous exudate over the surface. Endothelium-lined vascular spaces, fibroblastic proliferation and budding endothelial cells, moderately intense infiltration of polymorphonuclear leukocytes, lymphocytes, and

plasma cells are also seen, but this finding will vary, depending upon the presence or absence of ulceration. The connective tissue stroma is typically delicate, with collagen fibers. If the lesion is not surgically excised, it assumes a more fibrous appearance.^{6,7}

TREATMENT

Pyogenic granulomas are treated with surgical excision. By nonsurgical approach, irritant factors debridement under local anesthesia in combination with strict oral hygiene instructions is followed. Recurrence of the lesion will be seen if it not encapsulated. Curettage of the underlying tissue is recommended in the surgical excision of PG.^{8,9}

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