



An Usually Large Irritational Growth of the Anterior Gingiva: A Case Report

Chanchal Dharia*

Department of Dental Surgery, MGM Dental College, MUHS, India

***Corresponding Author:** Chanchal Dharia, Department of Dental Surgery, MGM Dental College, MUHS, India.

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Abstract

Gingival lesions are very common, often called a pathological miscellany. Majority of these lesions are reactive in nature, but can also be neoplastic or developmental. This article presents a rare complication of a commonly found lesion: pyogenic granuloma. It has a peculiar affinity for the anterior gingiva in females, usually due to local irritants, low grade chronic inflammation and hormones.

Clinically, the lesion appeared as a smooth pedunculated mass, which bled on touching and had an unusual size of 4x4. The lesion was big enough to keep the patient from closing her mouth. Pyogenic granulomas larger than 2cm are seldom reported.

Keywords: Gingiva; Pyogenic Granuloma; Gum Bump; Reactive Gingival Lesion; Gingival Fibroma

Introduction

The term 'pyogenic granuloma' is a misnomer, since the lesion does not contain any pus and is not strictly speaking a granuloma. About a third of these lesions occur due to trauma or due to difficulty in maintaining oral hygiene [1].

Pyogenic granuloma is a hyperactive benign inflammatory lesion that occurs on the mucosa and mostly in females, due to high levels of steroid hormones. Also it may arise in response to various stimuli such as low-grade local irritation, traumatic injury, hormonal factors [2] or certain kinds of drug [3]. Also, there is a definite relation between pyogenic granuloma and hormones. Studies show that pregnant and post menopausal women are show increased susceptibility, which questions role of estrogen as an etiological factor [4].

The uniqueness of this case lies in its unusual size and presentation. Readers will be able to include pyogenic granuloma in their differential diagnosis when they come across such a finding. Usually, we would simply eliminate it given the size and age.

Case Report

A 65 year old female patient reported to the department of Oral and maxillofacial surgery with a chief complaint of a swelling in

the upper front region of the jaw since 3-4 months. Patient was apparently alright 3-4 months ago, when she noticed a small swelling in her upper front jaw, which gradually increased in size, over the previous 3 months and had a sudden increase in size over the previous 10 days, before reporting. There was a history of bleeding, and the patient was unable to close her mouth, chew or even clean her gums and teeth. There was no relevant medical or dental history reported. The lesion was suspected to be a pyogenic granuloma, given the location and the age of the patient.

On examination, the swelling extended from the gingiva over the upper left lateral incisor to the upper left first premolar. It was about 4x4 sq.cm in size, pedunculated and erythematous. It had a relatively firm consistency, was tender, and bled profusely on touching. Associated to the lesion, root pieces of 21, 22 were found and 23 was grade 3 mobile. This explained the inflammatory nature of the lesion. Overall oral hygiene was poor and associated with halitosis. Physical examination revealed no other abnormalities or lymphadenopathies while the patient was conscious, cooperative and well oriented to time, place and person.

Figures 1, 2 and 3 show pre operative photographs.



Figure 1

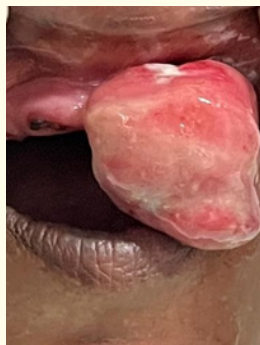


Figure 2



Figure 3

Patient's consent was taken first and she was admitted and intravenous medications were started, i.e., Amoxicillin-clavulanate, metronidazole, diclofenac sodium and pantoprazole. Under all aseptic precautions, Surgical excision of the lesion was performed under local anaesthesia. 2% lignocaine with 1:2,00,000 adrenaline was infiltrated at the margins of the growth. The stalk of the growth was excised with a 15 number B.P. blade and electrocautery. To prevent any remnants from growing again, the teeth involved with the mass were extracted and thorough irrigation was performed. Her mouth closure was ensured and then three 3-0 Silk sutures were placed. Hemostasis was achieved and the procedure was unevent-

ful. After ensuring that the patient's vitals were stable, she was shifted to the ward for post operative observation and the sample obtained was sent to the department of Oral pathology.



Figure 4



Figure 5



Figure 6

Figures 4,5 and 6 show post operative photographs.

Discussion

Pyogenic granuloma is an inflammatory response that follows chronic irritation (poor oral hygiene, calculus/plaque, excessive restorations, etc.), trauma or a hormonal change in pregnant women. Certain medications, such as cyclosporine, may also be involved in its genesis [5]. The gingival location represents more than 75% of reported cases, with a predilection to the interdental papilla region [5-7]. This pathology is more common in the second and third decades of life, but also seen in old age, seeming to be bimodal in occurrence. The level of estrogen in the blood affects angiogenesis since it is a vasculomorphogenetic factor, which explains its etiology and its other name, "pregnancy tumor".

Clinical appearance of a pyogenic granuloma is a smooth or lobulated, sessile or pedunculated mass which is erythematous and bleeds on touching. It grows to a few millimeters but rarely over 2.5cm [8]. Pyogenic granulomas can also cause significant bone loss. They are found only around natural teeth but also implants. About 40 cases of pyogenic granulomas associated with implants have been reported.

Histopathologically, the tumor is more granulomatous in nature. The lobular form is characterized by the presence of a larger number of proliferating blood vessels with little or no specific changes. The non-lobular form is characterized by the presence of dilated capillary channels and aligns with the endothelial cells [7]. The connective tissue is fibrous and often oedematous.

Inflammatory cells are present and may include polymorphonuclear neutrophils, lymphocytes and plasma cells. There may be an underlying epithelial cuff [5].

Treatment of choice is usually a wide excision to prevent recurrence. But, many surgeons choose alternatives such as diode or CO2 laser resection, nitrogen cryosurgery, intralesional injection of corticosteroids or sclerosing agents [5]. The recurrence rate for pyogenic granuloma is said to be 16% of the treated lesions and so re-excision of such lesions might be necessary [9]. Various other benign soft tissue lesions need to be differentiated from pyogenic granuloma. A few of these include peripheral giant cell granuloma, pregnancy tumor; and conventional granulation tissue [9,10]. Differentiation is done on clinical and histological features which help in providing adequate treatment and therefore a good prognosis.

Conclusion

There is a variety of etiological factors that can cause the inflammation to go from regular gingivitis to a 4x4 large granuloma. An important note to make is that it can be seen in post menopausal females and can have a large tumour like appearance and shouldn't be mistaken for carcinomatous growths. That being said, only a biopsy and a histopathological analysis can make an accurate diagnosis of the same. To conclude, a careful diagnosis can preserve the mucogingival complex.

Acknowledgements

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