



UNCOMMON AGE, CLASSIC PRESENTATION: PYOGENIC GRANULOMA OF THE GINGIVA IN AN ELDERLY FEMALE

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ABSTRACT

Background: Pyogenic granuloma (PG) is a benign, reactive vascular lesion of the oral cavity resulting from chronic irritation, trauma, or hormonal changes. Despite its name, it is neither pyogenic nor a true granuloma. It most commonly affects young adult females, particularly during pregnancy, but can occasionally present in older individuals. **Case Presentation:** A 64-year-old female presented with a 20-day history of swelling in the right maxillary posterior region. The lesion began as a small swelling and progressively increased in size. The patient had a past medical history of untreated gastric ulcer but no other systemic issues. Intraoral examination revealed a solitary, oval-shaped, soft, and tender swelling measuring 3 × 2 cm in the attached gingiva of teeth 16 and 17. Pus discharge and poor oral hygiene were noted, along with severe calculus and mobility of the involved teeth. A provisional diagnosis of periodontal abscess was made, with peripheral giant cell granuloma as a differential. Excisional biopsy and histopathological analysis revealed stratified squamous epithelium with ulceration, a fibro-purulent membrane, and underlying connective tissue showing capillary proliferation and chronic inflammatory infiltrates—features diagnostic of pyogenic granuloma. **Conclusion:** This case emphasizes that pyogenic granuloma can occur in elderly patients and may mimic periodontal or other reactive lesions. Thorough clinical evaluation, histopathological confirmation, and complete surgical excision are key for accurate diagnosis and management. The lesion responded well to excision with no recurrence at follow-up, highlighting the effectiveness of early intervention and oral hygiene maintenance.

INTRODUCTION

Pyogenic granuloma (PG), also known as lobular capillary hemangioma, is a benign reactive lesion commonly seen in the oral cavity. It typically presents as a rapidly growing, erythematous, and often ulcerated nodule prone to bleeding. Although the name suggests an infectious etiology, PG is neither pyogenic nor a true granuloma histologically. It frequently arises in response to chronic local irritation, trauma, or hormonal influences, and is most prevalent among young adult females, particularly during pregnancy. However, its occurrence in elderly patients is relatively rare and may be misdiagnosed. This case report discusses a rare presentation of gingival pyogenic granuloma in a 64-year-old female.

CASE PRESENTATION

A 64-year-old female, a homemaker from Villupuram, Tamil Nadu, reported to the department with a chief complaint of swelling in the right upper posterior gingival region for 20 days. The swelling initially

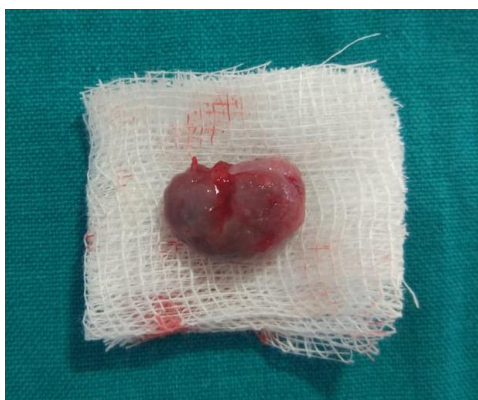
appeared small and gradually increased in size. The patient denied any trauma or pain. Her medical history included a two-year history of gastric ulcer, untreated. Dental history revealed that scaling was performed six years ago.

On general examination, she was moderately built and well-nourished. Vital signs were within normal limits.



Intraoral examination revealed a single, well-defined, oval-shaped swelling measuring approximately 3 × 2 cm in the attached gingiva extending from the mesial aspect of tooth 16 to the distal aspect of tooth 17. The lesion was soft in consistency, tender on palpation, and associated with pus discharge. Periodontal examination revealed severe calculus deposits, moderate stains, and mobility of teeth 16 and 17. No periodontal pockets were noted.

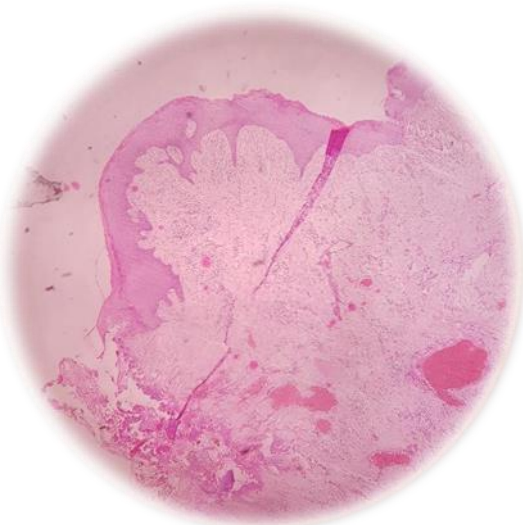
A provisional diagnosis of periodontal abscess was made, with peripheral giant cell granuloma considered in the differential diagnosis. An excisional biopsy was performed under local anesthesia, and the specimen was submitted for histopathological analysis.



Gross examination showed an ovoid tissue specimen measuring 3 × 2 cm, with a whitish-grey color and smooth surface.

Histopathological Findings

Microscopic examination of hematoxylin and eosin-stained sections revealed stratified squamous epithelium of variable thickness, exhibiting areas of hyperplasia, atrophy, and ulceration. In ulcerated regions, the surface epithelium was replaced by a thick fibro-purulent membrane.



The underlying connective tissue showed a rich proliferation of capillaries and blood vessels, along with dense infiltration of chronic inflammatory cells, predominantly lymphocytes. The histopathological features were diagnostic of pyogenic granuloma.

DISCUSSION

Pyogenic granuloma (PG), also known as lobular capillary hemangioma, is a benign vascular lesion characterized by a rapid proliferation of granulation tissue in response to various stimuli. Despite its name, PG is neither pyogenic (pus-producing) nor a true granuloma histologically. It predominantly affects the oral cavity, with the gingiva being the most common site, accounting for approximately 75% of cases.^[1]

Etiology and Pathogenesis

The exact etiology of PG remains unclear; however, it is widely accepted that the lesion represents an exaggerated localized connective tissue reaction to minor injury or irritation. Common contributing factors include poor oral hygiene, dental plaque, calculus, trauma, and hormonal influences. Hormonal changes, particularly during pregnancy, have been implicated in the pathogenesis of PG, leading to the term "pregnancy tumor" for lesions occurring in pregnant women.^[2]

Histologically, PG is characterized by a lobular arrangement of capillaries set in a loose stroma, often accompanied by a mixed inflammatory infiltrate. The surface epithelium may be ulcerated, and the lesion is typically highly vascular, which accounts for its tendency to bleed easily.^[3]

Clinical Presentation

Clinically, PG presents as a painless, exophytic, erythematous mass that bleeds easily upon manipulation. The lesion may be sessile or pedunculated and varies in size. While PG commonly affects younger individuals, particularly females in the second decade of life, it can occur at any age. The occurrence of PG in elderly patients, as in the present case, is relatively rare and may pose a diagnostic challenge.^[4]

Diagnosis

The diagnosis of PG is primarily clinical, supported by histopathological examination. Differential diagnoses include peripheral giant cell granuloma, peripheral ossifying fibroma, hemangioma, and, in rare cases, malignancies such as Kaposi's sarcoma or angiosarcoma. Histopathological analysis is essential to confirm the diagnosis and rule out other entities.^[5]

Treatment and Prognosis

The treatment of choice for PG is complete surgical excision, including the base of the lesion, to minimize the risk of recurrence. Elimination of local irritants, such as dental plaque and calculus, is also crucial. Alternative treatment modalities include laser excision, cryotherapy,

and sclerotherapy, although surgical excision remains the most commonly employed method.^[6]

Recurrence rates for PG vary, with some studies reporting rates as high as 16%. Factors contributing to recurrence include incomplete excision and failure to remove etiological factors. Therefore, meticulous surgical technique and maintenance of oral hygiene are paramount in preventing recurrence.^[7]

Case Significance

The present case highlights the occurrence of PG in an elderly female, emphasizing the need for clinicians to consider PG in the differential diagnosis of gingival lesions across all age groups. The lesion's presentation, characterized by rapid growth and bleeding tendency, underscores the importance of prompt diagnosis and management. Histopathological examination confirmed the diagnosis, and surgical excision led to successful resolution without recurrence.

CONCLUSION

Pyogenic granuloma is a common benign lesion of the oral cavity, often associated with local irritants and hormonal influences. While it predominantly affects younger individuals, clinicians should be aware of its occurrence in the elderly population. Accurate diagnosis, complete surgical excision, and elimination of contributing factors are essential for effective management and prevention of recurrence.

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