Global Scientific and Academic Research Journal of Dentistry and Oral Medicine
ISSN: 2584-2382 (Online)
Frequency: Monthly
Published By GSAR Publishers
Journal Homepage Link- https://gsarpublishers.com/journal-gsarjdom-home/

Peripheral Fibroma Mimicking Pyogenic Granuloma in Mandibular Anterior Region: A Diagnostic Dilemma – A Case Report

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Article History

Received: 21/04/2026
Accepted: 04/05/2026
Published: 06/05/2026

Vol – 3 Issue – 5

PP: -01-03

DOI:10.5281/zenodo.20050056

Abstract

Introduction: Reactive gingival lesions frequently present with overlying clinical features, posing a diagnostic challenge. Peripheral fibroma is a benign reactive lesion that may clinically simulate pyogenic granuloma and further gingival overgrowths.

Case Report: A 27-year-old female presented with a painless, gradually enlarging gingival swelling in the mandibular anterior area for two months, related with difficulty in chewing and maintenance of oral hygiene. Clinically a firm, pedunculated, non-ulcerated growth budding from the interdental papilla. A provisional diagnosis of pyogenic granuloma was made. The lesion was removed with surgical excision, and histopathological assessment confirmed peripheral fibroma. Healing was uneventful postoperatively with two months of follow up.

Conclusion: This case highlights the significance of relating clinical and histopathological findings for precise diagnosis of reactive gingival lesions. Complete surgical excision with elimination of local irritants confirms effective management.

Keywords: *Peripheral fibroma, Reactive gingival lesion, Epulis, Pyogenic granuloma, gingival overgrowth*

Introduction

Reactive lesions of the gingiva found a significant proportion of oral soft tissue enlargements and are frequently linked with chronic local irritation such as plaque, calculus, or trauma. These lesions are often clustered under the term “epulis,” which comprises entities such as fibroma, pyogenic granuloma, peripheral ossifying fibroma, and peripheral giant cell granuloma.

Peripheral fibroma, also denoted to as fibrous epulis, is a focal fibrous hyperplasia developing from the gingival connective tissue. Though it is a benign lesion, its clinical appearance often similarities with other reactive lesions, particularly pyogenic granuloma, leading to diagnostic uncertainty.

The current case report describes a peripheral fibroma in the mandibular anterior region that clinically simulated pyogenic granuloma, highlighting the role of histopathological examination in final diagnosis.

Case report

A 27-year-old female patient reported to the department of Dentistry with a chief complaint of Swelling in the lower anterior gingival area for two months. The swelling was insidious in onset and progressively increased in size. The patient reported difficulty while brushing and tongue movements and showed anxiety concerning possible malignancy.

The patient’s medical, dental, and family histories were non-significant. No harmful oral habits were reported. Suboptimal oral hygiene, with irregular teeth brushing and no use of interdental aids.

Clinical Examination

No extraoral deformity was present, with no lymphadenopathy.

Intraoral examination revealed a solitary, well-circumscribed, pedunculated gingival growth budding from the interdental papilla in relation to teeth 31 and 32, extending lingually from 34 to 42. The lesion measured approximately 1.7 cm × 1 cm,

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was firm in consistency, non-tender, and displayed no surface ulceration or bleeding on probing. Adjacent teeth were non-tender and vital.

Provisional Diagnosis

- Pyogenic granuloma
- Fibroma
- Inflammatory gingival hyperplasia

Differential Diagnosis

- Peripheral fibroma
- Peripheral ossifying fibroma
- Peripheral giant cell granuloma

Investigations

Routine blood investigations were within normal range. Random blood sugar was 98 mg/dl. Serological tests for HIV, HBV, and HCV were non-reactive.

Treatment

Initial phase therapy comprised scaling and oral hygiene instructions. Surgical excision of the lesion was performed under local anesthesia with adrenaline using a 15C surgical blade. A full-thickness flap was reflected in the interdental area to confirm complete removal of lesion base and associated fibrous tissue. The flap was repositioned and sutured to attain optimum adaptation in the aesthetic region.

Histopathological Findings

H and E stained sections examined show covering by stratified squamous epithelium. The subepithelial tissue shows dense collagen bundles with intersepresed fibroblast proliferation. Stroma shows mild lymphocytic cells infiltrate, consistent with peripheral fibroma.

Final Diagnosis

Peripheral fibroma

Follow-up

Postoperative healing was acceptable at one week and one month, with no sign of recurrence. Written informed consent was obtained from the patient for publication of clinical details and images.

Discussion

Reactive gingival lesions describe a scale of non-neoplastic proliferative overgrowths arising in response to chronic irritation. Among these, peripheral fibroma is considered by fibrous connective tissue proliferation and is usually observed in young adults with a female predilection.

Clinically, peripheral fibroma characterize as a firm, smooth-surfaced, non-ulcerated growth, typically arising from the interdental papilla. In contrast, pyogenic granuloma is more vascular, soft in consistency, and likely to spontaneous bleeding. Though, disparities in presentation can lead to diagnostic muddle, as observed in the present case.

The lesion in this case clinically look like pyogenic granuloma due to its location and pedunculated nature. However, the absence of bleeding and firm consistency suggested a fibrous lesion. Such overlying features require histopathological confirmation for definitive diagnosis. Complete surgical excision extending to the periosteum, along with elimination of local irritants, is the treatment of choice for peripheral fibroma. Failure to eliminate the etiological aspects may result in recurrence. In the present case, thorough debridement and thorough surgical technique contributed to effective management with no recurrence.

Current literature highlights the significance of distinguishing among reactive gingival lesions due to dissimilarities in recurrence rates and biological behavior. Peripheral fibroma generally shows a low recurrence rate compared to peripheral ossifying fibroma.

Conclusion

Reactive gingival enlargements often present with overlying clinical features, posing a diagnostic challenge. This case underlines the importance of clinical and histopathological evaluation in establishing a conclusive diagnosis. Early intervention, complete excision, and elimination of local irritants are essential for successful management and prevention of recurrence.

FIGURES

Figure 1: Preoperative image

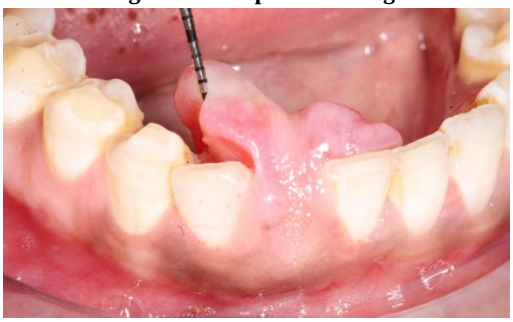

Figure 2: Intraoperative image

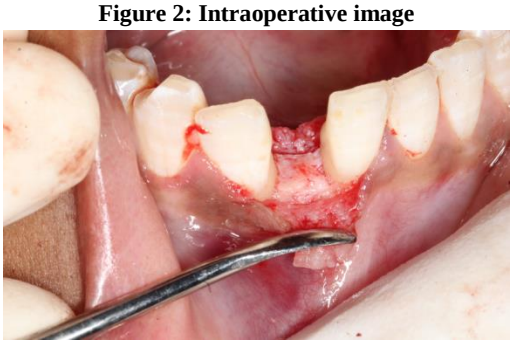

Figure 3: Excised specimen

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Figure 4: IOPAR image

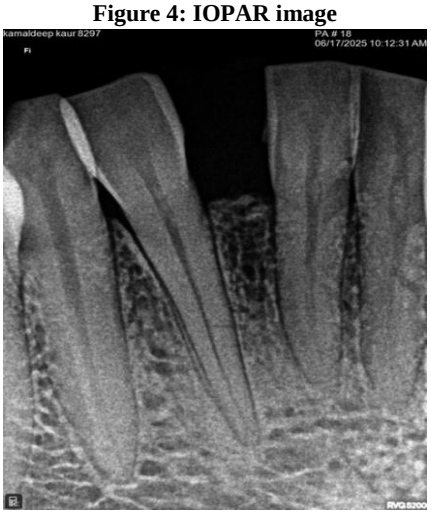

Figure 5: Histopathology image

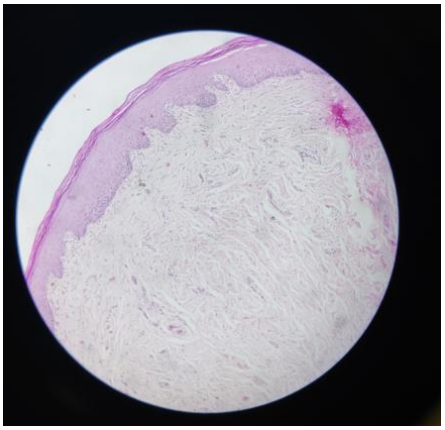

Figure 6: Follow-up image

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