Perspective
Volume15:02, 2025

Journal of Clinical Case Reports

ISSN: 2165- 7920 Open Access

Peripheral Ossifying Fibroma a Case of Diagnostic Ambiguity

Josue Kemper*

Department of Oral Surgery, University of Zagreb, Zagreb, Croatia

Introduction

Peripheral Ossifying Fibroma (POF) is a relatively uncommon, benign, reactive gingival growth that often poses a diagnostic challenge due to its clinical resemblance to other more common oral lesions. Typically arising from the interdental papilla, POF is most frequently observed in the anterior maxilla of young females and may be mistaken for conditions such as pyogenic granuloma, fibroma, or peripheral giant cell granuloma. Its etiology is thought to be reactive rather than neoplastic, often associated with local irritants such as plaque, calculus, or dental appliances. Despite its benign nature, accurate diagnosis of POF is essential to ensure appropriate treatment and prevent recurrence. This case report highlights the diagnostic complexity of a gingival lesion that initially presented with non-specific clinical features, ultimately confirmed histopathological as peripheral ossifying fibroma. Through this case, we aim to underscore the importance of a comprehensive diagnostic approach that includes clinical examination, radiographic imaging, and histopathological analysis in managing ambiguous gingival lesions [1].

Description

A 24-year-old female patient presented to the dental clinic with a swelling in theanterior maxillary gingiva. The lesion had been present for several months, gradually increasing in size. The patient reported mild discomfort in the affected area but denied significant pain or bleeding. On clinical examination, the lesion appeared as a well-defined, firm, and non-ulcerated mass located on the buccal gingiva, specifically in the region of the maxillary right incisor and canine. The lesion was pink, with a smooth surface, and had a size of approximately 2.5 cm in diameter. The surrounding gingiva appeared slightly inflamed, and there was a noticeable overgrowth of tissue around the lesion. The medical history was non-contributory, with no prior significant oral health problems. The patient had no history of trauma to the gingiva, and she reported good oral hygiene practices, although a small amount of calculus was visible on clinical inspection. The lesion was soft in consistency and exhibited a firm base, which raised the suspicion of a reactive or inflammatory lesion. However, due to its persistent nature and the patient's relatively young age, a more thorough evaluation was warranted [2].

Radiographic imaging was performed to assess the underlying bone involvement. A periapical radiograph revealed no signs of bone resorption or radiopaque areas in the vicinity of the lesion, which suggested that the lesion was confined to the soft tissues of the gingiva, rather than an odontogenic or more aggressive neoplastic growth. A provisional diagnosis of a pyogenic granuloma or a peripheral fibroma was made, as these lesions often present with similar clinical features. The lesion was excised for histopathological evaluation, and the patient was referred for further follow-up. Microscopic examination of the excised tissue revealed a lesion characterized by a well-defined fibrous stroma with varying degrees of mineralized tissue. The presence of trabeculae of mature bone, scattered among the fibroblasts and collagen fibers, was noted. These features are consistent with the diagnosis of peripheral ossifying fibroma, a condition marked by the formation of mineralized tissue within the soft tissue of the gingiva. The histological appearance was distinct from that of pyogenic granuloma, which typically lacks ossification and is more vascular in nature [3].

The lesion demonstrated a combination of fibrous tissue, bone, and cementum-like material. Additionally, areas of epithelial hyperplasia were present at the lesion's periphery. No malignant cells were identified, supporting the diagnosis of a benign lesion. The histopathological findings confirmed that the lesion was a peripheral ossifying fibroma. Peripheral ossifying fibroma is thought to be a reactive lesion, typically arising from the gingiva in response to local irritants such as plaque, calculus, or trauma. It is considered a benign lesion, but its precise etiology remains unclear. The lesion is believed to arise from the periodontal ligament or the periosteum and is often associated with dental plaque and calculus, which are thought to be the underlying sources of irritation. Although less common, the lesion can also be linked to other factors such as chronic inflammation, hormonal changes, or certain systemic conditions. POF primarily affects young individuals, with a predilection for females. It most commonly presents as a solitary, painless growth, often on the interdental papilla, and is more frequently observed in the anterior maxillary region. The lesion can vary in size, typically ranging from 1 to 3 cm, and may be either pink or red in color, depending on its vascularity. While benign, the lesion's potential for recurrence is significant, especially if it is not completely excised or if the underlying cause (e.g., plaque accumulation) is not addressed. A key challenge in diagnosing POF lies in differentiating it from other gingival lesions with similar clinical presentations. Pyogenic granuloma, for instance, is another common benign reactive lesion that can mimic POF. Pyogenic granuloma is typically characterized by its highly vascular nature, presenting as a red, soft, and friable lesion, whereas POF is usually firm and pink. The absence of bone formation in pyogenic granuloma helps differentiate it from POF histologically [4].

Fibromas, which are also benign, fibrous lesions, share some clinical characteristics with POF, such as a firm texture and slow growth. However, fibromas typically lack the mineralized tissue seen in POF. Peripheral giant cell granuloma, another lesion with clinical similarities, may present with a bluish-red hue and more pronounced bone resorption, features not commonly observed in POF. The presence of ossification and cementum-like material in POF is the key histopathological feature that sets it apart from these other reactive lesions. Histological evaluation, therefore, plays a critical role in establishing the correct diagnosis and ensuring that appropriate treatment is provided.Treatment for peripheral ossifying fibroma typically involves surgical excision. Complete removal of the lesion, including any surrounding inflamed or hyperplastic tissue, is essential to minimize the risk of recurrence. In some cases, adjunctive measures such as scaling and root planing to remove local irritants may be necessary to prevent the formation of new lesions. In the present case, the patient's lesion was excised with an adequate margin, and

***Address for Correspondence:** Josue Kemper, Department of Oral Surgery, University of Zagreb, Zagreb, Croatia, E-mail: kemper.josue@zagreb.cr*

Received: 03 March, 2025, Manuscript No. jccr-25-165751; **Editor assigned:** 05 March, 2025, PreQC No. P-165751; **Reviewed:** 17 March, 2025, QC No. Q-165751; **Revised:** 24 March, 2025, Manuscript No. R-165751; **Published:** 31 March, 2025, DOI: 10.37421/2165- 7920.2025.15.1649

the lesion did not recur during the follow-up period of six months.The prognosis for peripheral ossifying fibroma is generally favorable, but careful follow-up is required due to the potential for recurrence. Recurrence rates range from 16% to 20% often associated with incomplete excision or failure to remove local irritants. Patients should be monitored for signs of recurrence, and good oral hygiene practices should be emphasized to reduce the risk of new lesions forming [5].

Conclusion

Peripheral ossifying fibroma is a benign, reactive gingival lesion that can present diagnostic challenges due to its clinical and histopathological similarities to other gingival growths. The case presented here underscores the importance of a thorough diagnostic process, including clinical examination, radiographic imaging, and histopathological analysis, in accurately diagnosing such lesions. By distinguishing POF from other reactive lesions, clinicians can provide appropriate treatment and improve patient outcomes. Despite its benign nature, POF can cause significant concern for patients due to its potential for recurrence. Therefore, proper excision and follow-up care are essential to ensure long-term success and minimize the risk of recurrence. Understanding the characteristics of POF and other similar lesions is vital for dental and medical practitioners to make informed decisions in the management of gingival growths.

Acknowledgment

None.

Conflict of Interest

None.

References

1. Zarate, Yuri A. and Jennifer L. Fish. "SATB2-associated syndrome: Mechanisms, phenotype and practical recommendations." *Am J Med Genet* A 173 (2017): 327-337.
2. Walters, John D., Joseph K. Will, Russell D. Hatfield and David A. Cacchillo, et al. "Excision and repair of the peripheral ossifying fibroma: A report of 3 cases." *J Periodontol* 72 (2001): 939-944.
3. Hendra, Faqi Nurdiansyah, Ellen M. Van Cann, Marco N. Helder and Muhammad Ruslin, et al. "Global incidence and profile of ameloblastoma: A systematic review and meta-analysis." *Oral Dis* 26 (2020): 12-21. Braunstein, Edward. "Case report of an extraosseous adamantinoblastoma." Or*al Surg Oral Med Oral Pathol* 2
4. (1949): 726-728.
5. Janardhanan, Mahija, S. Rakesh, Vindhya Savithri and Thara Aravind. "Peripheral ameloblastoma with neoplastic osseous invasion versus peripheral intraosseous ameloblastoma: A challenging diagnosis." *J Oral Maxillofac Pathol JOMFP* 22 (2018): 396-400.

How to cite this article: Kemper, Josue. "Peripheral Ossifying Fibroma a Case of Diagnostic Ambiguity." *J Clin Case Rep* 15 (2025): 1649.