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Oral Capillary Hemangioma Resembling A Gingival Polyp: A Case Report

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Abstract

Oral capillary hemangiomas (OCH) are rare benign vascular tumors that commonly present as red or bluish swellings in the oral cavity, often mistaken for more common conditions like gingival polyps. This case report describes an unusual presentation of an oral capillary hemangioma that mimicked a gingival polyp, highlighting the importance of accurate diagnosis through clinical, histological, and surgical evaluation. A 32-year-old female patient presented with a gingival growth, initially diagnosed as a polyp, which was later confirmed to be an oral capillary hemangioma upon histopathological examination. This report aims to discuss the diagnostic challenges and appropriate management of OCH.

Keywords

Oral Capillary Hemangioma, Gingival Polyp, Case Report, Diagnosis, Treatment, Histopathology, Laser Surgery

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Introduction

Oral capillary hemangiomas are benign vascular lesions characterized by the proliferation of capillaries within the soft tissues of the oral cavity. These lesions typically appear as red, purple, or blue, soft, and compressible swellings generally painless[1]. Although rare, they may occur on the gingiva, mimicking other more common gingival growths, such as gingival polyps or fibromas. The distinction between these lesions is crucial, as treatment protocols differ significantly. Gingival polyps are usually benign and non-vascular, while capillary hemangiomas may require more careful management due to their vascular nature[2].

In this case report, we present a patient who was initially diagnosed with a gingival polyp but was later found to have an oral capillary hemangioma. The aim is to highlight the clinical and histopathological challenges of differentiating these two entities and discuss the treatment options available, particularly the use of laser surgery in managing such lesions.

Case Report

Patient Presentation

A 32-year-old female presented to the Department of Periodontology with a complaint of a painless swelling on her upper right front tooth region of gingiva. The lesion had been present for approximately 6 months and had grown gradually in size. The patient reported no history of trauma or bleeding associated with the lesion and no family history for the presenting complaint but was concerned about its aesthetic appearance. On examination, a well-defined, soft, reddish- white swelling was noted on the attached gingiva in the right maxillary front region. The lesion measured approximately 6.0 8.0 cm and was non-tender to palpation. The overlying mucosa was smooth, and no signs of ulceration were observed.

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Fig.1&2: Soft , sessile , reddish-white in color gingival growth in between 12 & 13 tooth

The clinical presentation suggested a benign gingival polyp, a common benign soft tissue growth. The differential diagnosis included gingival fibroma, pyogenic granuloma, and capillary hemangioma.

Procedure

After obtaining informed consent from the patient, the lesion was surgically excised using **laser surgery** under local anesthesia. The laser procedure was chosen to minimize bleeding and improve postoperative recovery. A diode laser was used, and the lesion was removed with precision, ensuring minimal damage to surrounding healthy tissue. Hemostasis was achieved during the procedure due to the coagulating effect of the laser, and the surgical site was covered with the coe-pak. The excised tissue was sent for histopathological examination.


Fig.3: Incision with laser tip. **Fig.4: Complete excision of tissue**

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Fig.5: Surgical site covered with coe-pak.

Fig.6: Excised tissue

Fig.7: post operative 1 week.

Fig.8: Post operative 1 month

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Fig.9: Post operative 3 month

Histological Findings:

Histopathological examination of the excised tissue revealed a well-circumscribed lesion composed of proliferating small capillaries arranged in a lobular pattern. The capillaries were lined by a single layer of endothelial cells, and the stroma contained varying amounts of collagen and scant inflammatory cells. The histological features were consistent with **oral capillary hemangioma**, confirming the diagnosis.

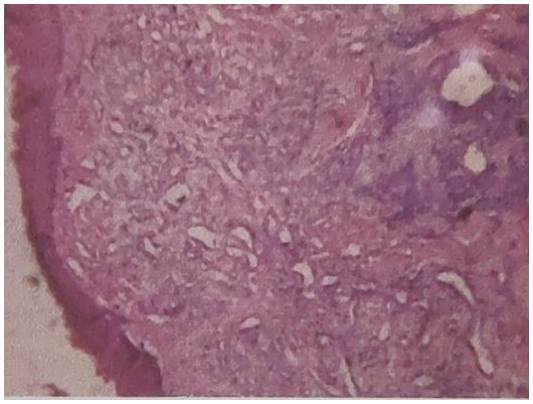

Fig.10:Histological examination

Discussion:

Oral capillary hemangiomas are rare, benign vascular tumors that can present in various regions of the oral cavity. They are often mimicking for more common conditions such as gingival polyps, fibromas, or pyogenic granulomas due to their similar clinical presentation[3]. The gingiva is a frequent site of occurrence, and these lesions may present as well-defined, red , white or purple swellings, which are often asymptomatic unless traumatised[1].

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The clinical diagnosis of oral capillary hemangioma can be challenging due to its similarity with other gingival lesions. Gingival polyps, for example, are typically non-vascular, well-defined, and painless, which often leads to a misdiagnosis when a similar-looking lesion occurs[4]. However, key differentiating features such as the color of the lesion, its compressibility, and a tendency to bleed may suggest the presence of a vascular lesion like capillary hemangioma.

Histopathological examination remains the gold standard for definitive diagnosis. The characteristic finding in capillary hemangioma is the presence of numerous small capillaries in the stroma. These capillaries are typically arranged in a lobular pattern, distinguishing them from other benign lesions, such as fibromas or pyogenic granulomas, which do not exhibit this distinctive vascular architecture.

Laser surgery has become an increasingly popular treatment modality for oral lesions like capillary hemangiomas due to its precision, minimal bleeding, and faster recovery times. The diode laser, in particular, is effective in removing vascular lesions as it coagulates the tissue and minimizes hemorrhage, making it an ideal choice for treating lesions in highly vascular areas like the gingiva[5]. The advantages of laser surgery include reduced postoperative discomfort, faster healing, and less scarring compared to traditional scalpel techniques. However, it is essential to ensure complete excision of the lesion to prevent recurrence.

Conclusion

This case highlights the importance of considering oral capillary hemangioma in the differential diagnosis of gingival swellings that resemble gingival polyps. A thorough clinical evaluation and histopathological confirmation are essential for accurate diagnosis. Laser surgery is an effective treatment option for oral capillary hemangiomas, offering benefits such as precision, minimal bleeding, and rapid recovery. Clinicians should be aware of the clinical and histological features of oral capillary hemangiomas to prevent misdiagnosis and ensure appropriate management.

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References

1. Mitra D, Dutta S, Paul J, Kumar N. Central capillary hemangioma of the maxilla: case report and a review of literature. The Saudi Journal for Dental Research. 2016;7(1):64-8.
2. Dilsiz A, Aydin T and Gursan N. Capillary hemangioma as a rare benign tumor of the oral cavity:a case report. Cases journal. 2009;2:8622.
3. Vasantha Kumari V R, Vallabhan C G, Geetha S, Nair M S, Jacob T V. Atypical presentation of capillary hemangioma in oral cavity- A case report. J Clinic and Diagnos Res. 2015;9(10):26-8.
4. Shafer WG, Hire MK, Levy BM. A textbook of oral pathology. 4th ed. Philadelphia: WB Saunders Co. 1983; 154–57.
5. Jain PR, Jain S, Awadhiya S, Sethi P. Excision of traumatic fibroma by diode laser. Journal of Dental Lasers. 2018; 12:67-9
6. Genovese WJ, dos Santos MT, Faloppa F, de Souza Merli LA. The use of surgical diode laser in oral hemangioma: A case report. Photo med Laser Surgey. 2010; 28:147-51. Neville BW, Damm DD, Allen CM, Bouquot JE. Oral &Maxillofacial Pathology. 2nd ed. Saunders Philadelphia. 2002; 390-2,
7. Enzinger FM, Weiss SW. Soft tissue tumors. 3rd ed. St Louis: Mosby; 1995; 581–6.

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