

## CASE REPORT



# Lobular capillary hemangioma: A case report

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### Abstract

Lobular capillary hemangioma also known as pyogenic granuloma is a rapidly growing benign neoplasm of oral cavity and mucous membrane. The present case is about a 65-year-old male patient who had reported with a chief complaint of pain in the right posterior back tooth region since 2–3. Lobular capillary hemangioma is normally presented on the gingiva as a response local irritation such as calculus, fractured tooth, minor trauma, rough dental restorations, and foreign materials. Here, in this case, we excised the lesion and the histopathological report confirms the diagnosis.

**Keywords:** Gingiva, hemangioma, vascular malformation

## Introduction

Inflammatory hyperplasia seen in response to tissue hyperplasia, trauma, and due to hormonal imbalance is pyogenic granuloma or lobular capillary hemangioma.<sup>[1]</sup>

Poncet and Dor first described as pyogenic granuloma in human botryomycosis in 1897.<sup>[2]</sup> Hartzell introduced the term pyogenic granuloma.<sup>[3]</sup> The most common site is the gingiva in 75%, followed by the lips, mucosa, and tongue.<sup>[4]</sup> Lobular capillary hemangioma and non-lobular capillary hemangioma are two types of pyogenic granuloma which are differing in histologic features.<sup>[5]</sup> Clinically, they appear as sessile or pedunculated, single or multiple, smooth, lobulated measuring about few millimeters or centimeters in diameter, mucosa covering is tensed and bleed by provocation.<sup>[6]</sup>

## Case Report

A 65 year male patient complained of pain and swelling in the lower left back tooth region since 2-3 months (profile view). The patient gave a history of swelling which was gradually increasing in size and reached the present size and had a history of pain which was gradually increasing, severe, throbbing, had difficulty while having food, gave a history of sleep disturbance, and pain was radiating toward head and neck region.

The patient gave a history of diabetes and hypertension for 15 years and was on medication. The patient was on pregabalin daily 2 times for 3 years for neurological disorder.

On extraoral examination, no asymmetry detected, no TMJ abnormalities elicited, and submandibular lymph node was palpable on the right side which was single, roughly oval, tender, soft in consistency, mobile.

On intraoral examination, a solitary well-defined swelling present on the right buccal mucosa measuring about 2.5\*2 cm extending from mesial surface of 46 to distal surface of 47 and the surface of the lesion appeared smooth and shiny as shown in Figure 2. On palpation, inspeactory findings were confirmed, firm in consistency, non-tender, pedunculated, and on applying gentle pressure at the neck of the tooth revealed discharge of pus and given the provisional diagnosis of periodontal abscess associated with peripheral giant cell granuloma i.r.t to 47 and 48.

Differential diagnosis was given as pyogenic granuloma, peripheral ossifying fibroma, and hyperplastic gingival inflammation.

IOPAR was taken i.r.t to 47 reveals apical migration of alveolar bone till the apex of the roots i.r.t to 46 and 47 with ill-defined radiolucency at the apex of the root measuring about 1\*1 cm with non-corticated borders with endo perio lesion as shown in Figure 3.

Surgical excision was done with removal of 46 and 47 as they are Grade III mobility with poor prognosis as shown in Figure 4 and sent for histologic examination which showed areas of ulceration and necrosis. Connective tissue showed large areas population of inflammatory cells predominantly plasma cells.



**Figure 1:** Profile view



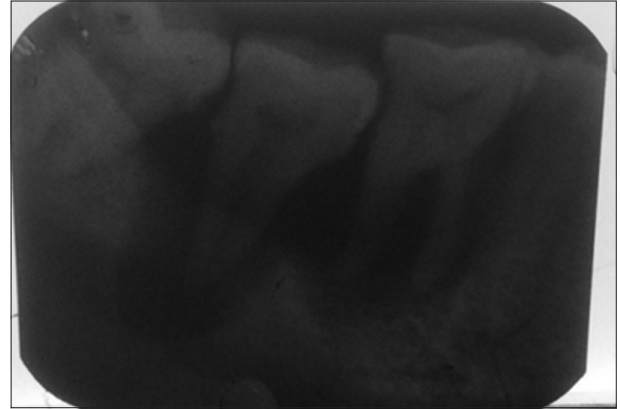
**Figure 2:** Intraoral view

The core of lesion consists of multiple budding capillaries lined with endothelial cells.

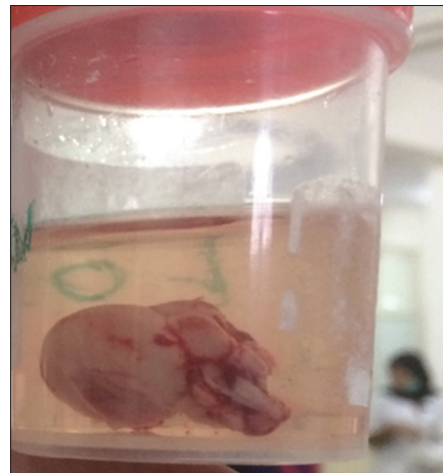
### Discussion

Pyogenic granuloma arises due to chronic irritation or low-grade infection, poor oral hygiene, overhanging restoration, and changes in hormonal level and due to some drugs. There is an excessive proliferation of vascular connective tissue.<sup>[7]</sup> Gingiva and interdental papilla are commonly involved. Common factors such as basic fibroblastic growth factor, connective tissue growth factor, nitric oxide synthase, and vascular endothelial growth factor are involved in rapid growth and angiogenesis in pyogenic granuloma.<sup>[2]</sup> Color may vary from deep red, reddish purple to pink and show increased tendency of bleeding on mild provocation or spontaneously.<sup>[8]</sup> Attains a size of 0.5–2 cm which was soft in consistency.<sup>[8]</sup>

In 5% of pregnancy, chances of pyogenic granuloma are seen, hence called pregnancy tumor or granuloma gravidarum.<sup>[9]</sup>



**Figure 3:** Intraoral radiograph



**Figure 4:** Excised mass of tissue

Histologically, it appears similar to granulation tissue. The overlying epithelium is thin, atrophic, or hyperplastic. The typical features are as follows:

1. Vast number of endothelium-lined vascular spaces
2. Budding endothelial cells.

Inflammatory cell containing neutrophils, lymphocytes, and plasma cells is present.<sup>[9,10]</sup>

Differential diagnosis: Peripheral giant cell granuloma, peripheral ossifying fibroma, metastatic cancer, hemangioma (developmental origin), hyperplastic gingival enlargement, bacillary angiomatosis, angiosarcoma.

Radiographs are taken to rule out any underlying destructive lesion.

Treatment: If the lesion is large enough, surgical excision is the choice of treatment. Other treatment options available are laser surgery with Nd:YAG, CO<sub>2</sub>, and cryosurgery. Recurrence rate is less when the underlying etiologic factor is removed.<sup>[11]</sup>

Flashlamp pulsed dye laser is used when lesion is not responding to usual treatment.<sup>[12]</sup>

## Conclusion

Although it is non-neoplastic overgrowth of the oral cavity which arises due to response to various stimuli such as chronic irritation, hormonal changes, and traumatic injury, removal of the etiology and surgical intervention is the major line of treatment. Surgical excision is the major line treatment. Dental surgeons should be aware of the risks during diagnosis and management and should take proper precautions while performing surgery.

## References

1. Mahajan A, Singhal P. Poonam lobular Capillary Hemangioma in a Child: A Case Report and Literature Review. *Open Access Sci Rep* 2012;1:265.
2. Singh H, Singh A, Shukla B, Das G, Agarwal N, Gauravi GS. Pyogenic granuloma (lobular capillary hemangioma) of the Tongue: A case report. *J Appl Dent Med Sci* 2015;1:101-5.
3. Hartzell MB. Granuloma pyogenicum (botryomycosis of French authors). *J Cutan Dis* 1904;22:520-3.
4. Jafarzadeh H, Sanatkhani M, Mohtasham N. Oral pyogenic granuloma: A review. *J Oral Sci* 2006;48:167-75.
5. Epivatianos A, Antoniadis D, Zaraboukas T, Zairi E, Pouloupoulos A, Kiziridou A, *et al.* Pyogenic granuloma of the oral cavity: Comparative study of its clinicopathological and immunohistochemical features. *Pathol Int* 2005;55:391-7.
6. Al-Khateeb T, Ababneh K. Oral pyogenic granuloma in Jordanians: A retrospective analysis of 108 cases. *J Oral Maxillofac Surg* 2003;61:1285.
7. Shafer WG, Hynes MK, Levy HM. *Shafer's Textbook of Oral Pathology*. 4<sup>th</sup> ed. Philadelphia, London, Toronto: WB Saunders; 1983.
8. Ramirez K, Bruce G, Carpenter W. Pyogenic granuloma: Case report in a 9-year-old girl. *Gen Dent* 2002;50:280-1.
9. Neville BW, Damm DD, Allen CM, Bouquot JE. *Oral and Maxillofacial Pathology*. 2<sup>nd</sup> ed. Philadelphia: WB Saunders; 2002. p. 437-95.
10. Eversole LR. *Clinical Outline of Oral Pathology: Diagnosis and Treatment*. 3<sup>rd</sup> ed. Hamilton: BC Decker; 2002. p. 113-4.
11. Moon SE, Hwang EJ, Cho KH. Treatment of pyogenic granuloma with sodium tetradecyl sulphate sclerotherapy. *Arch Dermatol* 2005;141:644-6.
12. Meffer JJ, Cagna DR, Meffert RM. Treatment of oral granulation tissue with the flashed pump pulsed dye laser. *Dermatol Surg* 1998;24:845-8.

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