

**PYOGENIC GRANULOMA: A CASE REPORT**Maria Jabbar<sup>1</sup>, Hira Butt<sup>2</sup>, Nauman Rauf Khan<sup>3</sup>**ABSTRACT:**

*Pyogenic granuloma is a type of inflammatory hyperplasia of the oral mucosa and skin that occurs commonly. Histopathologically, it mimics an angiomatous lesion instead of granulomatous disease. These lesions generally appear as a sessile papule or solitary nodule and may have a smooth or lobulated surface clinically. These granulomas present in a variety of sizes, ranging from a few millimeters to several centimeters. About 75% of the pyogenic granulomas of the oral cavity are associated with the gingiva. In this case report a 31 years old female presented in the department of oral and maxillofacial surgery with the complaint of abnormal growth of gingiva in maxillary anterior region. The patient was diagnosed with the pyogenic granuloma (pregnancy tumor), which had developed in the second trimester of her pregnancy. Surgical excision was done to remove the lesion.*

**KEYWORDS:** *Pyogenic Granuloma, Oral Mucosa, Gingiva, Abnormal Growth*

**How to cite this article:**

Jabbar M, Butt H, Khan NR. Pyogenic Granuloma: A Case Report. J Gandhara Med Dent Sci. 2021;8(4): 61-64  
<https://doi.org/10.37762/jgm.8-4.261>

**Correspondence:**

<sup>2</sup>Hira Butt, Demonstrator, Sharif Medical and Dental College, Lahore.

Contact: +92-320-4635376

Email: [hira.ah.butt@gmail.com](mailto:hira.ah.butt@gmail.com)

<sup>1</sup>House Officer, Sharif Medical and Dental College, Lahore.

<sup>3</sup>Professor, Sharif Medical and Dental College, Lahore.

**INTRODUCTION:**

Pyogenic granuloma (PG) is a type of vascular hyperplasia that affects the mucosal surfaces and skin. It most commonly affects the face, trunk, and limbs<sup>1</sup>. Pyogenic granulomas in the oral cavity have a particular affinity for the gingiva, and about 70% of cases are associated with the interdental papillae. They seem to be more prevalent in the maxillary anterior region of the oral cavity than in any other part. The main local contributing factors of the pyogenic granuloma include poor oral hygiene, dental plaque and calculus depositions, or overhanging restorations<sup>2</sup>. Oral pyogenic granulomas affect people of all ages, from toddlers to the elderly, although they are more common in women in their second decade due to higher amounts of oestrogen and progesterone in the blood. Gingival enlargements occur most commonly during pregnancy and after menopause<sup>3</sup>. The researchers have found that morphogenetic

factors are greater in pyogenic granulomas than those in healthy gingiva, indicating that angiogenesis occurs in oral pyogenic granulomas<sup>4</sup>. On clinical examination, oral pyogenic granuloma can be a smooth or lobulated exophytic lesion that appears as bright red erythematous papule on a pedunculated or occasionally sessile base and is generally hemorrhagic. Depending on the age of the lesion, the surface might range from pink to red to purple<sup>5</sup>. The treatment of choice for the oral pyogenic granuloma is surgical excision.

**CASE PRESENTATION:**

A 31-year-old female reported in the Department of Oral and Maxillofacial Surgery of Sharif Medical and Dental College, Lahore with the complaint of abnormal swelling in the anterior region of maxilla since last 8-9 months. The patient gave birth 3 months ago. The patient was in the second trimester of pregnancy when she noticed an abnormal growth of gingiva in the anterior region of the maxilla. It was a slowly growing, painless swelling but bled occasionally on applying pressure or due to trauma during mastication. On inspection the swelling was lobulated, exophytic, erythematous and purplish red in color, 2-3 cm in diameter and 4-5 cm in length, attached to the interdental papilla between maxillary right central and lateral

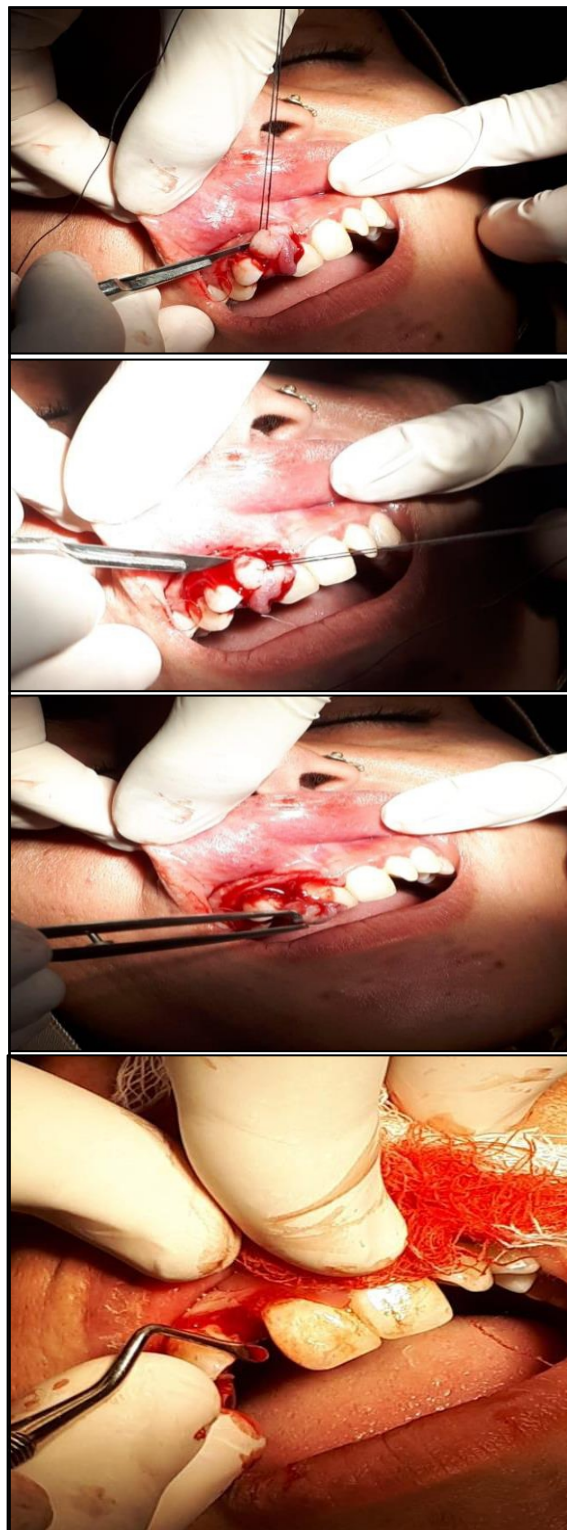
incisor. On palpation it was a non-tender and pedunculated mass as shown in Figure 1. It was attached to the interdental papilla on both buccal and palatal sides. A diagnosis of pyogenic granuloma (pregnancy tumor) was made and simple surgical excision with curettage was planned.



**Figure 1: Clinical Picture Showing Pedunculated Mass in Maxillary Right Anterior Region**

After giving local anesthesia by infiltration in buccal and palatal mucosa, using #15 surgical blade the pedunculated mass was separated from the buccal side and then the mass was excised from the palatal aspect. After complete excision of the mass a deep curettage was done in order to clean the area thoroughly. Hemostasis was maintained throughout the procedure. Suturing was not done to promote secondary healing as shown in Figure 2.

Patient was discharged on the same day as the procedure was done without any complications. After the surgical procedure a course of antibiotics and painkillers was prescribed. The patient was advised to use a soft diet, avoid hot and spicy food and use of straw, and to avoid spitting for at least 24 hours of surgery. The patient was advised to maintain oral hygiene and to get scaling and root planing done in order to reduce the local factors leading to formation of oral pyogenic granuloma.



**Figure 2: Surgical Excision and Curettage of the Lesion**

**DISCUSSION:**

Pregnancy is a crucial stage in a woman's life. During pregnancy, the body undergoes several physiological and hormonal changes. These alterations are not caused by the pregnancy itself. Such alterations are caused by metabolic changes in tissues and enhanced immune system responses to local and etiological causes<sup>5</sup>. The involvement of estrogen and progesterone in the development of pathologic alterations in the gingiva has recently been discovered to be rather interesting. For a long time, it has been observed that these hormones play a role in gingival vascular alterations during pregnancy<sup>6</sup>. Besides these more widespread gingival alterations, pregnancy can also cause tumor-like growths (epulides) along the margin of gingiva. Pregnancy granulomas are reported to occur at an incidence from 0% to 9.6% of the time<sup>7</sup>. The granuloma is more common in the maxilla and has predilection for the vestibular aspect of the anterior area<sup>8</sup>. The treatment of choice for oral pyogenic granuloma is surgical excision with a scalpel. If hemostasis is required, electrocautery or a laser may be used. Lasers have a propensity to minimise the amount of bleeding that occurs when a pyogenic granuloma is removed<sup>9</sup>. It has been suggested that Nd:YAG laser, cryosurgery, flash lamp pulsed dye, laser intralesional injection of ethanol or corticosteroid, and sodium tetracycline sulphate sclerotherapy can be used as the treatment modality for pyogenic granuloma<sup>10</sup>. If it is not excised properly, re-occurrence can occur frequently.

**CONCLUSION:**

Pyogenic granuloma is a prevalent skin and oral cavity lesion, particularly of the gingiva. This case report discusses the diagnosis and management of a large gingival pyogenic granuloma in a pregnant patient.

**CONFLICT OF INTEREST:** None

**FUNDING SOURCES:** None

**REFERENCES:**

1. Wollina U, Langner D, França K, Gianfaldoni S, Lotti T, Tchernev G. Pyogenic granuloma—a common benign vascular tumor with variable clinical presentation: new findings and treatment options. *Maced J Med Sci.* 2017;5(4):423.
2. Siriwardena BS, Crane H, O'Neill N, Abdelkarim R, Brierley DJ, Franklin CD, et al. Odontogenic tumors and lesions treated in a single specialist oral and maxillofacial pathology unit in the United Kingdom in 1992-2016. *Oral Surg Oral Med Oral Pathol Oral Radiol.* 2019;127(2):151-66.
3. Nirola A, Batra P, Kaur J. Ascendancy of sex hormones on periodontium during reproductive life cycle of women. *J Int Clin Dent Res Organ.* 2018;10(1):3.
4. Park SH, Lee JH, Tak MS, Lee HJ, Choi HJ. A research of pyogenic granuloma genesis factor with immunohistochemical analysis. *J Craniofacial Surg.* 2017;28(8):2068-72.
5. Regan D, Garcia K, Thamm D. Clinical, pathological, and ethical considerations for the conduct of clinical trials in dogs with naturally occurring cancer: a comparative approach to accelerate translational drug development. *ILAR J.* 2018;59(1):99-110.
6. Robinson P, Schmerman M. Influence of pregnancy on the oral cavity. *Glob Libr Women's Med.* 2015;10:38-43.
7. Koo MG, Lee SH, Han SE. Pyogenic granuloma: a retrospective analysis of cases treated over a 10-year. *Arch Craniofacial Surg.* 2017;18(1):16.
8. Bandeira RH, de Brito TC, Domingues JE, Câmara J, Pereira JV, de Oliveira Conde NC. Pyogenic granuloma: clinical case report. *J Oral Diagn.* 2019;4(1):1-5.
9. Luk K, Zhao IS, Gutknecht N, Chu CH. Use of carbon dioxide lasers in dentistry. *Lasers Dent Sci.* 2019;3(1):1-9.
10. Scaravaggi I, Borel N, Romer R, Imboden I, Ulbrich SE, Zeng S, et al. Cell type-specific endometrial transcriptome changes during initial recognition of pregnancy in the mare. *Reprod Fertil Dev.* 2019;31(3):496-508.

**CONTRIBUTORS**

1. **Maria Jabbar** - Drafting Manuscript; Critical Revision; Supervision; Final Approval
2. **Hira Butt** - Drafting Manuscript; Critical Revision; Supervision; Final Approval
3. **Nauman Rauf Khan** - Drafting Manuscript; Critical Revision; Supervision; Final Approval



**LICENSE:** JGMDS publishes its articles under a Creative Commons Attribution Non-Commercial Share-Alike license (CC-BY-NC-SA 4.0).  
**COPYRIGHTS:** Authors retain the rights without any restrictions to freely download, print, share and disseminate the article for any lawful purpose. It includes scholarly networks such as Research Gate, Google Scholar, LinkedIn, Academia.edu, Twitter, and other academic or professional networking sites.