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

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. 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. 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. 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. 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. 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. 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. 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. The granuloma is more common in the maxilla and has predilection for the vestibular aspect of the anterior area. 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. It has been suggested that Nd:YAG laser, cryosurgery, flash lamp pulsed dye, laser intralesional injection of ethanol or corticosteroid, and sodium tetradecyl sulphate sclerotherapy can be used as the treatment modality for pyogenic granuloma. 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.

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