

## CASE REPORT

# Localized Gingival Hyperplasia Associated with Pregnancy

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## Abstract

Localized gingival hyperplasia associated with pregnancy is a polypoid form of capillary hemangioma seen as a small, deep red or purplish lesion with a pedunculated base and a lobulated surface, which grows up to several centimeters in size. Its significant incidence of occurrence (1.5-8%) during pregnancy warrants the need for a meticulous oral hygiene care so as to reduce and eliminate the exuberant tissue response to local irritation or trauma seen in such cases. The manuscript highlights one such case report seen in our department.

**Keywords:** Gingival hyperplasia, gingiva, pregnancy.

## INTRODUCTION

Localized gingival hyperplasia (synonyms: pyogenic granuloma, pregnancy tumor, pregnancy epulides) occurs in 1.5 to 8% of pregnancies. It appears often during 2nd or 3rd month of pregnancy, presenting clinically<sup>1</sup> as a tumor like gingival enlargement due to an exaggerated conditioned response to minor trauma.<sup>2</sup> It manifests as a painless, sessile or pedunculated, ulcerated lesion sized a few millimeters to several centimeters with a smooth or lobulated surface and purplish red to deep blue color according to the vascularity.<sup>3,4</sup> These lesions are due to the hormonal variations during pregnancy which induces change in the vascular permeability leading to gingival edema.

## CASE REPORT

A 34-year-old pregnant patient referred from outpatient department, Department of Obstetrics and Gynecology, KLE Dr Prabhakar Kore Hospital and Research Center, reported to the outpatient department, Department of Periodontics, KLE VK Institute of Dental Sciences, Belgaum, with the complaint of swollen gums (overgrowth) in the lower front region since a period of 2 months. Small at onset the swelling had grown rapidly over the last one month to attain its present size, accompanied by dull, continuous pain. It was causing her considerable discomfort during speaking and chewing food. She was in her second trimester (4th month) of pregnancy (Fig. 1).

The mobility of the teeth (mandibular left central and lateral incisors) in this region had considerably increased adding to her discomfort. The patient did not have any other systemic disease.

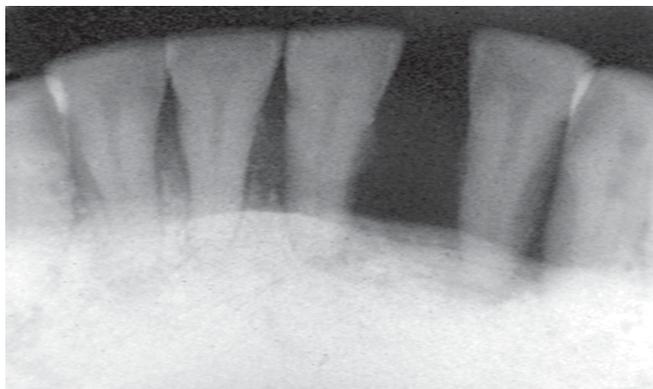
Clinical examination revealed an exophytic, sessile, roughly square shaped, bluish red swelling in the interdental region of

mandibular left central and lateral incisors, extending buccally and lingually. The lesion measured approximately 1.7 cm (length) and 1.3 cm (width) on the facial aspect and 0.3 cm faciolingually. The lingual component of the swelling measured 0.8 cm occluso-incisally and 0.6 cm mesiodistally. The swelling was tender, fibrotic with a firm base and an ulcerated surface. Hard tissue examination revealed severe mobility in mandibular central and lateral incisors. Poor oral hygiene was appreciated during clinical examination. Radiographic examination revealed extensive bone loss in the mandibular left central and lateral incisor region with widened periodontal ligament space and hazy trabecular pattern (Fig. 2).

Excision of the lesion was done with a wide margin along with extraction of mandibular left central and lateral incisors. The excised specimen was sent for histopathologic evaluation.



**Fig.1:** Intraoral preoperative view showing gingival overgrowth in the interdental region of mandibular left central and lateral incisors



**Fig. 2:** Intraoral periapical radiograph of mandibular left central and lateral incisors showing severe bone loss



**Fig. 3:** Histological picture (4X magnification) showing typical appearance of pyogenic granuloma

The histopathologic section showed epithelium encircling the major part of fibrovascular stroma and at one end ulcerated epithelium was evident under higher magnification. Epithelium was of stratified squamous parakeratinized type showing pseudoepitheliomatous hyperplasia. The stroma showed numerous dense bundles of collagen fibers with areas of hyalinization. Numerous endothelial lined blood vessels with red blood corpuscles (RBCs) and capillaries were seen. Numerous chronic inflammatory cells predominantly lymphocytes and a few plasma cells were seen. These features were consistent with a histopathological diagnosis of pyogenic granuloma (Fig. 3).

Evaluation of the patient at recall visits revealed uneventful healing with no recurrence of the lesion.

## DISCUSSION

Gingiva is a common site for either neoplastic or non-neoplastic lesions. The great majority of localized overgrowths of gingiva are considered to be reactive and non-neoplastic lesions which are usually inflammatory or represent a reaction to trauma or low grade injury.<sup>4</sup>

These lesions show a predilection for the interdental papillae region, the maxillary anterior region being affected the most.<sup>5</sup>

This conditioned gingival enlargement seen in pregnancy demonstrates a definite exacerbated response of the tissues to local irritants attributed to an underlying increase in circulating female sex hormones as occurring in pregnancy.

These lesions however have been confused in the past to clinically similar enlargements seen in nonpregnant females as well as males.<sup>6</sup> These lesions have been coined by the term pyogenic granulomas.

Comparison of histopathological features of the two conditions reveals that the surface epithelium in pregnancy enlargements tends to be thickened with prominent rete pegs in contrast to an atrophic rete pegs seen in pyogenic granuloma, though clinical appearance of the two is strikingly similar. Another differentiating feature between the two conditions is the increased levels of the pigmented rods. *Prevotella intermedia* in the gingival crevice of areas showing the enlargement in pregnant individuals. This gram negative anaerobic rod is known to utilize the increased steroid levels as a source of nourishment and growth and the inflammatory factors released by it may be partly responsible for eliciting the exacerbated response.

Treatment of such enlargements consists of elimination of irritating local factors and conservative surgical excision, which is usually curative.<sup>4</sup> In the present case, poor oral hygiene and periodontally compromised mandibular left central and lateral incisor seemed to be the precipitating factors. Therefore, extraction of these teeth along with excision of the lesion was performed. Furthermore oral prophylaxis and oral hygiene instructions were reinforced to avoid recurrence of the lesion as pyogenic granuloma has a relatively high rate of recurrence (15%). This is true especially in pregnant patients.<sup>2</sup>

## CONCLUSION

The pyogenic granuloma though benign in nature may grow to an alarming size and cause pain and discomfort to the patient. Thus early intervention through reinforcement of adequate oral hygiene measures along with surgical excision of the lesion is deemed necessary.

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