

Pregnancy Associated Gingival Enlargement

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ABSTRACT

In this report, we present a case of gingival enlargement related to pregnancy causing chewing, speaking, breathing and cosmetic problems. The patient was a 23-year old woman in the eighth month of her first pregnancy, with localized gingival enlargement affecting both buccal and lingual aspects of the area between right maxillary lateral incisor and canine. Hormonal changes occurring during pregnancy have long been known to be associated with generalized or localized gingival enlargements. Pregnancy does not cause the condition but altered tissue metabolism in pregnancy accentuates the response to the local irritants.

KEYWORDS

Pregnancy, Gingival enlargement, Altered tissue metabolism

INTRODUCTION

Gingival enlargement is a common clinical entity, but finds a unique place in literature, because it has been associated with a variety of local and systemic factors so differential diagnosis

becomes an important aspect for complete management of the lesion. Most of the causative factors lead to an unusual hyperplastic tissue response to chronic inflammation associated with local irritants such as plaque, calculus or bacteria (1).

PREGNANCY ASSOCIATED GINGIVAL ENLARGEMENT

Hormonal changes occurring during pregnancy and puberty, however, have long been known to be associated with varying types of gingival enlargement. Hormonal changes can significantly potentiate the effects of local irritants on gingival connective tissue (2). In all forms of enlargements, good oral hygiene is necessary to minimize the effects of systemic factors, Gingivoplasty or Gingivectomy may be required, but should be done in combination with prophylaxis and oral hygiene instructions(3). Lesions that do not cause significant functional or esthetic problems should not be excised during pregnancy because, first, they may reoccur and, secondly they may resolve spontaneously post-partum (2). This paper presents a case report of a typical pregnancy associated gingival enlargement.

CASE REPORT

A female patient of 23 years age reported to the Department of Periodontics, National Dental College & Hospital, Dera Bassi, with localized gingival overgrowth around the corner tooth on right side of upper jaw.

There was no history of drug intake and hereditary reasons. Patient was eight months pregnant and revealed that her gums used to bleed on brushing since three months of pregnancy, but the enlargement came to the present size at this time. She had consulted a local dental surgeon, who gave her a fear of cancer of mouth in this region.

On examination, there was slight elevation of upper lip due to presence of enlargement. Intraoral examination showed enlargement encroaching between teeth 12 and 13, and extending from facial to lingual side, measuring about 1.5 X 1.5 cm on palatal side (Figure1). Lesion was bright red in colour, soft and bleeds on slightest provocation. Surface appeared to be ulcerated on palatal side. Subgingival calculus and plaque were present. Patient was unable to maintain oral hygiene in this area, because of gingival enlargement, rest of the oral cavity showed normal gingiva and satisfactory oral hygiene.

Oral prophylaxis was performed after routine haematological investigation. Instructions regarding maintenance of oral hygiene were given. She was advised to visit the department after parturition. Patient reported one month after an uneventful first pregnancy. Enlargement had slightly reduced and colour also changed from bright red to reddish pink.

OPG was taken and the radiograph revealed slight crestal bone loss in interdental areas. After reduction in inflammation, lesion was excised along with raising of periodontal flap in area of 12, 13 and open curettage of area was performed. Excised lesion was sent for histopathological examination, which revealed epithelial proliferation and underlying capillary proliferation along with marked inflammatory cell infiltration seen in



Figure: 1 Preoperative Photograph Showing Localized Gingival Enlargement



Fig 2: Postoperative Photograph Showing Healthy Gingiva After Six Months.

connective tissue. Early healing was uneventful as patient reported after one week for suture removal. Patient reported opening of interdental space. Patient was instructed for maintenance of oral hygiene.

After six months postoperatively gingival contour was normal and patient was able to maintain her oral hygiene and there was no recurrence of the growth. (Figure 2)

DISCUSSION

Gingival changes in pregnancy were described as early as 1898, even before knowledge about hormonal changes was available.

Gingivitis in pregnancy is caused by bacterial plaque, like in non-pregnant individuals. Pregnancy accentuates the gingival response to plaque. The correlation between gingivitis and the quantity of plaque was greater after parturition than during pregnancy, which suggests that pregnancy induces other factors that aggravate gingival response to local irritants.

Incidence of gingivitis in pregnancy varies from around 50% to 100% (Maier & Orban 1949) (3). Pregnancy does not alter healthy gingiva; it affects the severity of previously inflamed area. In the present case patient also had the history of bleeding gums before pregnancy (4). Cohen et al (1971) reported that there was partial reduction in the severity of gingivitis two months post partum and after one year the condition of the gingiva is comparable to that of patient who has not been pregnant. In some cases the inflamed gingiva forms a discrete mass referred to as pregnancy tumor.

Kornman & Loesch (1980) have reported that the subgingival flora changes to a more anaerobic flora as pregnancy progresses (5). *Prevotella intermedia* is the only microorganism that increases significantly during pregnancy. They also stated that the increase is due to elevations of levels of systemic estradiol and progesterone. O'Neil (1979) suggested that the altered tissue response to plaque is due to depression of the maternal T-lymphocyte (6).

Formicola & Associates (1970) have shown that gingiva is

a target organ for female sex hormones (7). Radioactive estradiol injected into female rats appears in the genital tracts and the gingiva.

Therefore, the maintenance of oral hygiene before and during pregnancy is very important in order to reduce the incidence and the severity of gingival inflammation.

It is generally accepted that increase in gingival inflammation typically begins in the second month and reach the maximal level during the eighth month of pregnancy (2, 8, 9). These inflammatory changes may lead to gingiva that appears edematous, hyperplastic and erythematous; the changes may be localized or generalized, and are usually noted on the marginal gingiva and interdental papilla. Gingival enlargement does not occur without clinical evidence of local irritation. Pregnancy does not cause the condition, but the altered tissue metabolism in pregnancy accentuates the response to local irritants (10).

SUMMARY & CONCLUSION

The local factors i.e. plaque and calculus are known to be responsible for gingival enlargement during pregnancy. The hormonal factors also play a role in aggravating the hyperplasia. Therefore, the importance of regular check up and oral prophylaxis cannot be overlooked.

In all forms of gingival enlargements, good oral hygiene is necessary to minimize the effects of systemic factors. Although spontaneous reduction in the size of gingival enlargement commonly occurs following childbirth, complete elimination of residual inflammatory lesions requires the removal of all forms of local irritants(2). In the present case, size of the hyperplastic tissue was reduced but the mass was still interfering with the patient's ability to chew, speak and was causing serious esthetic problems so it was excised completely one month after delivery.

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