Epulis gravidarum mimicking a neoplasm

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Introduction

Pregnancy is a delicate condition, involving complex physical and physiological changes. Modification of metabolism, immunology, and high level of hormones make it possible for fetus to grow & develop, ending up with labor. Variations of these hormones cause some changes on skin and oral mucosa. The changes progress due to increased level of sex hormones in blood and saliva. These hormones are thought to be the reasons for occurrence of inflammatory process and the epulis gravidarum.

The progesterone & estrogen receptors are situated in basal and spinous stratum of the epitelium, and in the connective tissue. That is why those cells are influenced by a high level of pregnancy hormones. Progesterone dilates blood vessels, makes them more permeable, and increases proliferation of capillary vessels. Estrogen regulates the proliferation, differentiation, and keratinization of the gingival tissue. These hormones increase gingival bleeding, cause gingival growth, and lead to deepening of periodontal pockets as well.

Epulis gravidarum is a quite rare gingival disorder occurring in 1.8 to 5% of pregnant women, and it affects more commonly the anterior region of the upper jaw. It is a smooth or lobulated exophytic lesion and manifests as a pink, red, or purple erythematous papule with pedunculated or sessile base. It usually arises in the 2nd trimester, grows gradually over a few months time, and it also tends to bleed. After delivery of the child, it may regress and disappear entirely.

The purpose of this article is to describe a gingival swelling in a five months pregnant 26-year-old woman, which grew very rapidly unlike for this kind of tumor mimicking a malignant neoplasm.

The lesion was not painful and grew very rapidly over a three week period. The histopathological examination revealed granulation tissue with non-neoplastic proliferation of endothelial cells, suggestive of epulis gravidarum.

Case Description

A 26-year-old female was referred with the chief complaint of an extensive gingival enlargement on the lower right anterior tooth region. The lesion was of negligible size when the patient first noticed it three weeks ago, but had grown rapidly over the past twenty days to attain the present size. The patient's medical history revealed that she was at five months of gestation with no systemic disease.

Clinical examination revealed an isolated exophytic, pedunculated lesion on the mandibular right buccal side between the interdental gingival of lateral incisor and canine. It measured approximately 2.5 cm in diameter with some areas of erythema. The lesion was rough and firm in consistency on palpation that bled minimally (Fig. 1). The swelling also interfered with eating and speech. On examination, patient's oral hygiene was found good.

Excisional biopsy of the swelling with a wide margin was performed (Figs. 2 & 5). The histopathological examination revealed young granulation tissue with non-neoplastic proliferation of endothelial cells and the enlargement of blood capillaries. Infiltration of acute and chronic inflammatory cells in a collagenous matrix was also present. Surface of the lesion showed hyperplastic parakeratinised stratified squamous epithelium with areas of atrophy and ulcer. These findings were consistent with a histopathological diagnosis of epulis gravidarum.

After three weeks of post-operative followup, clinical appearance of normal gingiva was present at the site of the lesion (Fig. 4).

Discussion

Epulis gravidarum is a well-known benign condition occurring in pregnant women, characterized by a non-neoplastic proliferation of capillary vessels. Infiltration of acute and chronic inflammatory cells in a collagenous matrix is also present. Surface of the lesion shows hyperplastic parakeratinised stratified squamous epithelium with areas of atrophy and ulcer. These findings are consistent with a histopathological diagnosis of epulis gravidarum.

Differential diagnosis includes peripheral giant cell granuloma, epulis, peripheral ossifying fibroma, metastatic cancer, hemangiomatous, conventional granulation tissue, hyperplastic gingival inflammation, angiosarcoma, kaposi’s sarcoma and non-hodgkins lymphoma.  

Conclusion

Epulis gravidarum represents an important differential diagnosis of oral masses and can behave in a very aggressive fashion, mimicking a malignant tumor. Excised specimens should be sent for histopathological reports to exclude malignancy. It is acceptable practice to excise aggressive variants of this lesion during pregnancy to avoid disturbing side effects.

References


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