



Gingival Enlargement in an HIV Positive Woman in Sri Lanka

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Abstract

Gingival enlargement is a clinical condition which is due to various causes. Pregnancy is a well-known cause due to formation of plaques, calculus and increased hormonal changes. Here we report a case of gingival enlargement in an HIV positive pregnant woman who responded well, with improvement of oral hygiene, prophylaxis during pregnancy and parturition

Keywords: Gingival Enlargement, Pregnancy, Human Immunodeficiency Virus

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Introduction:

Gingival enlargement is a clinical condition perhaps associated with specific conditions. It has been associated with variety of local and systemic factors. Therefore, differential diagnosis becomes an important aspect in the management. Hormonal changes can significantly potentiate the effects of local irritants on gingival tissues during pregnancy⁽¹⁾. Improvement of oral hygiene and prophylaxis is need to minimize the enlargement of gingiva in pregnant women especially when they are immune-compromised. The gingival changes in pregnancy were reported in 1898, even before knowledge about hormonal changes was available¹. It has been stated that tissue response to plaque is due to depression of the maternal T lymphocytes which is already low in HIV infection². In all forms of

gingival enlargements improvement of oral hygiene is necessary to minimize the effects of systemic factors.

Case history

A 22-year married pregnant woman was referred to Sexual Transmitted Disease Clinic (STD) Negombo, Sri Lanka in April 2015 from a nearby medical officer of health (MOH) clinic with a positive HIV result at the period of amonnhoria (POA) of 14 weeks. She had undergone a right temporo-parietal craniotomy for astracytoma in January 2013, since then on carbamazepine prophylaxis. At first visit to clinic her intra oral examination was normal and all the systems were normal. She did not have any symptoms or signs of opportunistic infections in spite of low CD4 counts which was 206 cell/ μ L. She has no family history of gum disorders. Venereal Disease Research Laboratory test (VDRL) Treponema Pallidum Particle Agglutination test (TPPA), Hepatitis B Surface antigen were negative. Urine full report, liver function tests, and renal function tests were normal. Full blood count showed a WBC of 8.8×10^3 , with N-73% L-23% E-03% M-02%. RBC- 4.0×10^5 /L, Hb-12.0 g % and platelets 390×10^3 / μ L. Her ESR was 8 mm^{1st} hour. Viral load was 26,419 copies/ml.

She was started on tenofovir300mg, emtricitabine200mg, efavirenz 600mg once daily regime at the POA of 17 weeks. Her adherence to the drug regime was excellent in spite of mild side effects such as nausea. She was followed up closely at the STD clinic and the antenatal clinic with series of CD4 counts, viral load and ultra sound scan of abdomen and pelvis. At the POA of 30 weeks she noticed her both lower and upper gums were swollen, painful and touch to bleed while brushing teeth. Her gingiva is inflamed non- stippled, soft and bled easily. She was referred to consultant oral and maxillofacial surgeon. She was diagnosed with pregnancy induced gingival enlargement and treated with oral augmentin 625 mg three times daily for five days, 0.2% chlorhexidine mouth washes 10 ml kept in mouth for 1 minute and brushing of teeth twice a day after breakfast and dinner with soft brush was advised. Local scaling was done on the same day.



Figure1. Both lower and upper gingival enlargement during pregnancy



Figure2. Both lower and upper gingiva two months after parturition

Discussion

Incidence of gingivitis in pregnancy varies from 50% to 100%². Gingivitis in pregnancy is caused by bacterial plaque, like in non-pregnant individuals. Pregnancy accelerates the gingival response to plaque. High hormonal levels during pregnancy lead to more pronounced gingivitis and possible marginal enlargement, depending on the level of plaque control prior to pregnancy. An overgrowth of *Prevotella intermedia*, together with vascular change and oedema associated with high levels of oestrogen/progesterone is the primary explanation for the gingival inflammation and gingival enlargement³. There is an increase in gingival inflammation between 14th and 30th weeks of pregnancy. Our patient noticed gingival enlargement at 30 weeks of pregnancy. It was confirmed that there are marked increases in the plasma levels of oestradiol and progesterone between the 14th and 30th weeks of pregnancy⁴. It is stated that increase in gingival inflammation typically begins in the second month and reaches the maximal level during the eighth month of pregnancy⁴. These inflammatory changes may lead to gingiva that appear oedematous, hyperplastic and erythematous, may be localized or generalized and are usually noted on the marginal gingiva and interdental papilla⁴. Among the drug-induced gingival enlargements, carbamazepine is one of the drugs to cause gingival enlargement⁵. However, in this patient, gingival enlargement was not apparent after two years of carbamazepine treatment. She developed gingival enlargement around 30 weeks of pregnancy and was totally disappeared after parturition. Hence, we can firmly say this patient's gingival enlargement is related to her pregnancy.

Conclusion

The local factors such as plaque and calculus are known to be responsible for gingival enlargement during pregnancy. Hormonal factors also play a major role in aggravating gingival enlargement. Regular check-up and improvement of oral hygiene can prevent surgical intervention in most of the patients.

Conflict of interest: Authors claim no conflicts of interest

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