

Maternal Periodontal Disease And Its Relationship To Preterm Birth And Low Birth Weight

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Abstract

Background: The gingival changes are noticeable in pregnant women from the 2nd months of gestation, reaching a maximum in the 8th month, due to increased levels of estrogen and progesterone. Periodontal disease in pregnancy could potentially influence pregnancy outcomes through indirect mechanisms involving inflammatory cytokines or direct translocation of bacteria and its products to the fetoplacental unit.

Aim of this study: The objective of this study was to determine the effect of maternal periodontal disease (gingivitis and periodontitis) both in terms of prevalence and severity on preterm birth (PTB) and low birth weight (LBW).

Materials and methods: Ninety pregnant women were included in the study, and they were divided into 3 groups:

Group 1: 30 pregnant women suffering from gingivitis.

Group 2: 30 pregnant women suffering from periodontitis.

Group 3: 30 pregnant women control showing healthy periodontal condition matched with age.

The sample was selected from the Alkaradha Primary Health Care Center, Maternity Hospital and private clinic, the following parameters were measured during two visits, first visit at second trimester and the second at third trimester.

1-Plaque Index (PLI).

2-Gingival Index (GI).

3-Periodontal pocket depth (PPD).

4-Gingival crevicular fluid flow (GCF) using paper point sizes 30 and stained with ninhydrin for measurement by vernier.

5-Bleeding on probing (BOP) was determined and scored 0 for the absence of bleeding and scored 1 for the presence of bleeding.

Results: The results showed that plaque was present in all groups with varying degree and the highest in the second visit than the first visit for periodontitis and gingivitis , and control groups. Gingivitis was more severe in the periodontitis and gingivitis groups and to a lesser extent for control group , and it is more in the second visit than first visit for all groups which mean more prevalent during the second and third trimesters .The highest percentage of PPD was mostly found during periodontitis group and then in the gingivitis and high prevalent of no pocket in the control groups, comparison between the first and second visits for three groups showed non-significant difference, Chi-square was used for the comparison between three groups, which showed high significant difference in the first and second visits. For BOP the highest percentage was found in the periodontitis group, followed by gingivitis and finally control group, the comparison between three groups showed high significant difference. GCF was more during the second visit than first, and it was increased in flow in periodontitis followed by gingivitis and least in the control group, high-significant difference was detected when comparison between three groups.

Conclusion : Our study revealed that there was no relation between periodontal disease in pregnant women and preterm birth and low birth weight .