

## Prevalence and Association of Preterm Birth and Low Birth Weight with Maternal Periodontitis and Gingivitis in Bahrain- A Cross-Sectional Study

Mehek Panjwani, BDS, MDS\* Neeta Bokade, BDS, MDS\* Madhavi Alamanda, BDS, MDS\* Alaa S.Hadi, BDS, MGDS\*\* Manar Alkhashram, BDS, MGDS\*\* Manahel Alwadaei, ABFM, MPH\*\* Mai Sarhan, ABFM, MPH\*\* Manal Alwadaei, MGDS, MDS\*\*

### ABSTRACT

**Background:** Preterm birth (PTB) and low birth weight (LBW) infants are a burden to healthcare system in developed countries while in developing countries they are a source of long standing social, economic and psychological stress to their families. Periodontal disease has been identified as an independent risk factor for both PTB and LBW infants. There is absence of data on above-mentioned association, in Bahrain.

**Objective:** To determine the prevalence and association of PTB and LBW with maternal periodontitis and gingivitis in Bahrain.

**Setting:** Primary care health centers, Bahrain.

**Design:** Retrospective, observational cross-sectional study.

**Methods:** The current study was conducted at 11 primary health care centers in the Kingdom of Bahrain. Pregnant women;(18-42) years > 28 weeks of gestation, were administered a questionnaire to record their demographic data, relevant medical, obstetric and oral hygiene practices. A full mouth periodontal examination was performed on all the participants. The gestational age at time of delivery and birth weight of neonates were recorded. The association of maternal periodontitis and gingivitis with PTB and LBW was analyzed.

**Results:** Periodontitis was associated with increased frequency of PTB and LBW as compared to participants with gingivitis and healthy periodontium, although not statistically significant. Higher mean plaque score values were associated with increased frequency of PTB (P value 0.037) and LBW (P value <0.001). Prevalence of PTB and LBW were 11.4% for each, whereas combined PLBW entities was 5.1%. Prevalence of periodontitis and gingivitis was 52% and 40%, respectively.

**Conclusion:** No definite association between maternal periodontitis/gingivitis and PTB or LBW was demonstrated in the studied population.

**Keywords:** Preterm birth, low birth weight , periodontitis, gingivitis, pregnancy.

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\* Specialist; Primary Care Health Centers  
Ministry of Health, Specialist Periodontology  
Yousif Engineer Health Centre, Bahrain. E-mail: panjwanimehek@gmail.com

\*\* Consultant  
Primary Care Health Centers