MATERNAL DENTAL PLAQUE SCORES PREDICT PRETERM LOW BIRTH WEIGHT IN A GROUP OF SRI LANKAN MOTHERS

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This study tested the hypothesis that periodontal disease is associated with pre-term low birth weight (PLBW). A prospective study was conducted in Matale, using a group of prime pregnant women (n=227) free of prematurity related risk factors. PLBW was defined as live infants delivered before 37 weeks of gestation with birth weight less than or equal to 2500 grams. Periodontal disease was assessed during the third trimester. Pocket depth (PD) was recorded using a pressure controlled periodontal probe, and bleeding on probing, plaque levels were recorded on mesial, distal, facial, and lingual sites of all erupted teeth. Data on educational status, occupation, onset of prenatal care, nutritional status, age, race, height, weight at the last PNC visit, were obtained using a questionnaire and hospital records. Data were analyzed using logistic regression analysis. PLBW (yes or no) was used as the dependant variable while controlling for the independent variables and interaction terms.

Of the 227 deliveries, 17 PLBW (7.5%). The ages of mothers ranged from 18-34 years of age (mean=24.2, SD-4.1). 80% were Sinhala, 12% Tamil, and 8% Muslim. 75% had only primary education, 21%, secondary and 4% tertiary education. The average PD was 2.1 mm (SD=0.6), the plaque score (PL) was 0.31 (SD=0.34), and bleeding score was 0.34 (SD=0.34) in relation to the total sample. PLBW group had a mean PL score of 0.49 (95% CI=0.27-0.71) and the full term normal BW group had a mean PL score of 0.3 (95% CI=0.25-0.34). After controlling for above-mentioned variables (age, race, etc.), there was a significant association between PL score and PLBW (OR=4.8; 95% CI=1.3-18.2). We conclude that higher plaque scores during pregnancy may lead to poor pregnancy outcomes among women who do not have known risk factors for prematurity. These findings can be used in reducing prematurity and low birth weight.