

The study was designed in the Department of Periodontics and conducted in the Free labour ward, KLE Hospital, Belgaum. A written informed consent was obtained from all patients prior to oral examination.

The observational study included 770 mothers as per the inclusion criteria. The data regarding the mothers' age, hemoglobin %, obstetric history, gestational age, sex and weight of the infant was collected from hospital case records. A structured questionnaire survey was carried out to obtain information pertaining to literacy, adverse oral habits and history of previous dental treatment. Information regarding antenatal care was recorded from antenatal records provided by the mothers. Community periodontal index was recorded with a WHO probe (CPI probe) to measure the amount of local factors like plaque, calculus, bleeding on probing and the probing pocket depth to assess the periodontal status of all the mothers.

The parameters, mothers' age, hemoglobin %, obstetric history, gestational age, sex and weight of the infant literacy, adverse oral habits and history of previous dental treatment and ante natal care were assessed with periodontal status and low birth weight.

Within the limitations of this study, the following conclusions were drawn:

Periodontal status

1. The prevalence rate of periodontal disease was 86.6% among the mothers.
2. The age of the mothers showed no positive relation with periodontal disease.

3. Mothers with high literacy levels had good periodontal status.
4. Adverse oral habits aggravated the periodontal disease status among mothers.
5. Mothers with a history of professional dental treatment showed improvement in the periodontal disease status.
6. Mothers with a history of abortion showed a poor periodontal status.
7. Ante natal care did not affect the periodontal status.
8. Mothers with Hb% > 11g showed better periodontal health.

Low Birth Weight

1. The prevalence of LBW infants was found to be 25.6% among the mothers.
2. Age, literacy, adverse habits and history of previous dental treatment of mothers showed no association with LBW infants.
3. The Hb% concentration, history of abortion and ante natal care had no correlation with LBW infants.

Gestational age

1. The prevalence of preterm delivery increased with severity of periodontal disease and decreased with term delivery.
2. Mothers who had preterm delivery showed a high prevalence of LBW infants.

Periodontal status and Low Birth Weight

1. The prevalence of LBW infants was considerably less in mothers with a healthy periodontium and increased with progressive periodontal disease.

Thus, in this study, periodontal status and gestational age emerged as risk factors for LBW infants. This result emphasizes the importance of periodontal care in perinatal health programs.

Several surveys and clinical research have been carried out on this subject and data from studies are exciting; but more importantly, biologic and plaque microbial exposure during pregnancy still remains a question. Hence, future perspectives should be aimed at conducting large epidemiological studies and clinical trials to further explore the nature of this association which appears to be present in some, but not all, population.