

A Survey on some of the effective factors in premature birth: a case-control study

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Abstract

Background and objectives: Preterm birth (birth that occurs before the 37th week of pregnancy) is the major factor affecting a child's health and survival. Compared with term infants, these infants are at higher risk of mortality and incidence of health problems. The aim of this study was to identify risk factors associated with preterm birth.

Material and Methods: A case-control study was conducted in Hamadan Fatemieh hospital, Iran, from 23rd October, 2011 to 21st June, 2012. Convenience sampling was performed and a total of 110 cases of preterm births and 132 full-term births as group control were screened and enrolled in the study. Data were collected through interview and patient medical record.

Finally, the results were compared using logistic regression analysis and odds ratio (OR) in the analysis. Several significant risk associations between preterm birth and the following risk factors were identified.

Results: Significant risk factors for preterm births were: preeclampsia (OR = 2.42) cesarean delivery (OR = 2.61), previous history of stillbirth or abortion (OR = 2.75), multiple pregnancies (OR = 1.03), recurrent low birth weight delivery (OR = 4.10), prenatal care in private sector (OR = 2.47), employed women (OR = 5.70), hospitalization during pregnancy for more than 2 days, multiple gestation deliveries (OR = 5.79), diabetes in first-degree relatives and birth order higher than 3 (OR = 1.03) show a significant relationship with premature births. The logistic regression analysis indicated that odds of preterm birth increases with the number of pregnancies ≥ 3 (OR=0.03 95% CI: 1.07- 3.75).

Conclusion: The main determinants of preterm birth in study were: previous history of stillbirth or abortion, cesarean delivery, multiple pregnancies, employed women, preeclampsia, and health care in the private sector. Applying special attention to the caring of high-risk pregnancies and health services for mothers and improvement of maternal health services in the private sector, the number of preterm births and the infant mortality can be reduced. More comprehensive studies in this regard are recommended.

Key Words: pregnancy, preterm birth, health care

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