عنوان مقاله:

Association of Dietary Patterns during Pregnancy and Cord Blood Nitric Oxide Level with Birth Weight of Newborns

محل انتشار:

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خلاصه مقاله:

Background: Maternal nutrition during pregnancy affects the birth weight of neonates. Some of the undesirable pregnancy outcomes are linked to lower birth weights. This study aimed to assess the relationship between maternal dietary patterns, weight gain during pregnancy and nitric oxide (NO), as an endothelial relaxing factor, and the possible effects on birth weight.Materials and Methods: At first, a pilot study was done, and finally a number of 233 mothers who referred to 4 public and private hospitals in Isfahan, the Central of Iran, during March 2014 to March 2015 via a convenience sampling method, were elected and participant in this study. Dietary patterns were assessed using a Persian version of Food Frequency Questionnaire (FFQ). Gestational weight gain was measured, too. Cord blood nitric oxide (NO) level, and neonate's anthropometric characteristics were measured after delivery.Results: The study participants consisted of 233 mother-neonate pairs. Overall, 4.3% of boys and 11.8% of girls, had low birth weight (< 2.500 gr). Mean gestational weight gain was 12.85 ± 4.37 kg, and there was a statistically significant between three birth-weight categories (Low birth weight, normal birth weight and high birth weight) (P<0.05). Gestational weight gain during pregnancy was associated with consumption of chicken, cereals, sugar, and birth weight of neonates, too (P<0.05). Nitric oxide had an inverse correlation with birth weight; however, this association was not statistically significant (r = -0.10, P > 0.05).Conclusion: Dietary patterns during pregnancy play as a main role in being low birth-weight neonates, in part by having impacts on gestational weight gain. In our samples among some Iranian mother-neonate pairs, endothelial function does not show a direct association with birth weight through releasing NO.

کلمات کلیدی:

Birth weight, Infants, Nitric oxide, pregnancy, Weight gain