

عنوان مقاله:

Maternal and Neonatal Zinc and Copper Levels and Birth Weight

محل انتشار:

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خلاصه مقاله:

Introduction Minerals and trace elements such as zinc and copper have significant influence on development and growth of the fetus and newborn. The purpose of this study was to determine the relationship between low birth weight and maternal and neonatal zinc, copper levels. Materials and Methods This case – control study was done from September 2006 to Sep 2007 consisted of 65 infants with birth weight < 2500 g and 65 infants weighing \geq 2500g. Cord and maternal blood samples collected at delivery were analyzed by atomic absorption spectrophotometry for zinc and copper levels. Results Mean serum zinc levels in maternal ($P=0.001$) and the cord blood ($P=0.49$) were $6.35 \pm 2.09 \mu\text{mol/l}$, $12.77 \pm 3.83 \mu\text{mol/l}$ and $7.57 \pm 1.75 \mu\text{mol/l}$, $13.18 \pm 2.69 \mu\text{mol/l}$ of cases and control groups, respectively. The mean copper levels in maternal ($P=0.62$) and cord blood ($P=0.005$) were $21.82 \pm 4.45 \mu\text{mol/l}$, $5.12 \pm 1.54 \mu\text{mol/l}$ and $21.19 \pm 5.34 \mu\text{mol/l}$ and $3.65 \pm 2.04 \mu\text{mol/l}$ of control and case group, respectively. Conclusion This study indicated that there is a relationship between birth weight less than 2500 gr and maternal zinc levels ($P<0.001$). Mothers with zinc levels less than $6.4 \mu\text{mol/l}$ were 3.8 time more at risk of having an infant with birth weight less than 2500 g. Lower maternal weight (less than 55kg), was associated with 4.2times increase risk of having low birth weight infants.

کلمات کلیدی:

neonate, Mother, Copper, zinc, Low birth weight

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