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## Determination of relation between mothers blood level lead with blood level of exclusively breast fed infants less than 6 months referred to Imam Reza hospital

Ahmadshah Farhat, Ashraf Mohammadzadeh, Mahdi Balalimood, Morteza Aghajanoor, Yalda Ravanshad  
Mashhad University of Medical Sciences, Iran

Determine the relationship between blood lead levels of mothers and infants under 6 months with exclusively breast-fed referred to Imam Reza hospital Mashhad Northeast Iran

**Introduction:** In adults, approximately 5 to 10% of ingested lead is absorbed by the digestive system. This rate is higher in children, may be as much as 40% lead which is absorbed, is distributed by blood to different organs and tissues. There is partial correlation between blood lead levels of infants and their mothers and also between Infant age and maternal job Also lead poisoning in children has been neglected in Iran. There are not designed screening programs to evaluate lead levels in children to reduce the potential toxicity of lead. In a study on children 1-7 years old in Mashhad south east Iran showed that 74/8% of children had lead levels higher than 100ug/lit. on the other hand we don't have blood lead level of infant less than one year old, thus In this study we measured blood lead levels of mothers and her infants under 6 months exclusively breast-fed referred to Imam Reza hospital (Mashhad-Iran) to evaluate the relation between blood lead level of breast feed infants and their mother blood lead level.

**Methods:** It was a cross-sectional study of 60 mothers and their children who referred to Imam Reza Hospital Mashhad. Lead levels were determined in the laboratory of Imam Reza hospital by atomic absorption spectroscopy method. Data entered into spss16. Data analysis was done by T-Student test, chi-square and Pearson's correlation coefficient. Also KS test was used for normality of data. P value less than 0.05 considered significant.

**Results:** In this study the mean maternal blood lead level was  $75/99 \pm 31/11$   $\mu\text{g/l}$ . The mean level of lead in infants with exclusively breast-fed for first 6 months was  $63/6 \pm 26/89$   $\mu\text{g/l}$ , 80% of children were under one month and 20% between 1 and 6 months of age. 76/7% of the infants were male and 23/3% were female The mean age of children was  $24/63 \pm 31/81$  days. Based on the data a significant relationship between blood lead levels in infants and mothers has been observed. ( $p < 0/001, r = 0/64$ ). This significant relationship also observed to the group below one month. ( $p < 0/001, r = 0/70$ ) But in group of more than one month, this association between mothers and infants lead level was not statistically significant. ( $P = 0/181, r = 0/41$ ).

In our study there weren't any relationship between blood lead level in infants and child gender, economic level, place of residence, age, similar to above study

**Discussion:** Comparing these results with our study showed that the mean blood lead levels in mothers and infants in our study was higher than other studies. There were direct relationship between blood lead levels in mothers and their exclusively fed breast milk infants under one month of age, but in infants between 1-6 months this relationship was not statistically significant. In our study there weren't any relationship between blood lead level in infants and child gender, economic level, place of residence, age, similar to above study.

**Conclusion:** There were direct relationship between blood lead levels in mothers and their exclusively fed breast milk infants under one month of age, but in infants between 1-6 months this relationship was not statistically significant. Thus we advise further studies with larger sample size about effect of age of the exclusive breast

### Biography

Ahmadshah Farhat assistant professor of neonatology has completed neonatology subspecialty in Mashhad University of Medical Sciences, Iran. I am vice chancellor of Neonatal Research Center in this university since 2006 and consultant neonatologist of neonatal intensive care unit since 1992 up to now. I have published 66 papers locally and international journal, 19 books, 71 supervision of thesis in general medicine, pediatric, and neonatology, 120 participation in national and international congress with lecture and poster presentation. I was member of 50 national scientific committee during last 23 years. I have 10 scientific honors in pediatric and neonatology.

farhata@mums.ac.ir