pesticides level in human breast milk

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Breast feeding continues to have practical and psycho logical advantages that should be considered when the mother selects the method for feeding her newborn. Human milk is the most appropriate of all available milks for the human infant, since it is uniquely adapted to his (or her) needs. The growing awareness of the problems of contamination of human milk by environmental pollutants has been particularly concentrating on the contamination of milk by polychlorinated biphenyls (PCBs) and organophosphorus compounds (OP).In the present thesis, fourty lactating mothers were submitted to the random cross-section study of this work. They were selected to be without manifestations or signs of toxicity with organophosphorus or chlorinated compounds (i.e. random samples). Twenty cases were selected from urban areas, and the other twenty cases were selected from rural areas (Benha). For each case, the infant was examined for his general condition, weight, length, and head circum-ference.Each milk sample was examined for detecting traces or any residual metabolite of either polychlorinated biphenyls (PCBs) or organophosphorus compounds (OP).Out of the total of 40 samples,- 13 samples were positive for insecticides- 9 cases were positive for PCBs (Kelthane)- 3 cases were positive for OP (dimethoal)- 1 case was positive for both types.This percentage is, to some extent, of value compared to the similar studies in the U.S.A. (Rogan, 1986), and in Taiwan (Hsu, 1984). However, this is the first of such studies to be conducted in Egypt. In our work, we noticed that there is no apparent physical or mental abnormality in the examined infants, except for one case (Case no. 14), who had multiple congenital anomalies, and was of low birth weight. Also, there was no significant association between the residence and the presence of insecticides, with the distribution of Kelthane being more in urban areas, and that of dimethane more in rural areas.We also noticed that, as the age of the mother increased, the level of pesticides increased in the milk. This indicates that environmental pollution is severe in contrast to other studies done in the U.S.A., where the level of pesticide decreased as the age of the mother increased, because among other causes, the use of chlorinated pesticides was stopped, and they have been banned since 1972. In our work, there is a significant difference between the milk samples from the lactating mothers for their first time, and those who have been lactating more than once. As the number of lactation increases in frequency, the samples showed positive results for pesticides. This also indicates an excess of pollution in our country.