ALUMINUM AND CADMIUM LEVELS IN MATERNAL AND UMBILICAL CORD BLOOD IN ASSIUT UNIVERSITY HOSPITAL

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Abstract:

Aluminum is widely used in the production of medicines, as a food additive and water purification agent. It is still a metal of choice in the making of various kinds of households cookware and storage utensils. Also cadmium is toxic element for humans and animals. Aluminum and cadmium concentrations were determined in maternal and umbilical cord blood from urban and rural areas (n=20 in each group) in Assiut Governorate. The present results showed that the level of aluminum in maternal and umbilical cord blood was highly statistically significantly in both urban and rural areas. However its concentration was higher in rural area and the maternal blood aluminum was statistically significant in comparison between rural and urban areas. The cadmium in maternal and umbilical cord blood was highly statistically significant in both urban and rural areas. However the cord blood level of cadmium was statistically significant in comparison between rural and urban and cadmium level was higher in urban areas. Therefore it is concluded that the pregnant women should avoid occupations which is considered high risk for cadmium exposure, especially in urban population, and avoid also cooking in aluminum utensils and water pollutants especially in rural population which is considered high risk for aluminum exposure.

Keywords:

Aluminum - Cadmium - Maternal - Umbilical

Published In:

The Medical Journal Of Cairo University , Vol.73, No.2 , 21 -28