STUDY OF BLOOD MAGNESIUM LEVEL IN CHILDREN WITH BRONCHIAL ASTHMA

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Megnesium is involved in a wide range of biological activities including some that may protect against the developmentof bronchial asthma and airflow obstroction. Recently, intravenous magnesium sulfate may represent abeneficial adjunct therapy in patients with mild, moderate and severe asthma who show little improvement with B agonist. The aim of this work was to evaluate the changes (if any) inplasma magnesium level and RBCs magnesium level during acuteasthma exacerbation and in between the attacks in children. This study included 50 children with. bronchial asthma. Their ages ranged from 3 to 12 years. Twenty-five children were chosenduring acute exacerbation of asthma from the emergency room and other 25 children were chosen in symptom free status during their follow up visits to the allergy clinic. Twenty-five healthy children were chosen as control group. They were sex and age matched withthe studied groups and were free from any chronic illness or any acute respiratory tract infection. All children were subiected to the following laboratory investigations;- Plasma magnesium level.- RBCs magnesium level.- Total plasma protein.- Plasma albumin.The worrk revealed the following results;- The mean plasma magnesium level in children during acute exacerbation of asthma was found to be significantly lower than healthy control group.- 32% of children during acute exacerbation of asthma hadplasma magnesium level below normal (hypomagnesemic).- Plasma magnesium level in non-acute asthma children was insignificantly lower than control group and only 4% ofthose children had plasma magnesium level below normal.- No significant difference was found between RBCs magnesium level in asthmatic and control children.- No significant difference was observed in plasma or RBCsmagnesium levels between males and females either in asthmatic or control children.- No correlation between plasma magnesium level and frequency of attacks of asthma.- As regards total plasma proteins, no significantdifference was found in total plasma proteins of asthmatic children and healthy ones. Also levels of plasma albumin wereinsignificantly different.- Positive significant correlation between plasma magnesium level and plasma albumin concentration in acute asthma children, non-acute asthma ones and healthy control.