Crianças com déficit de atenção - hiperatividade possuem baixos níveis de Zinco, ferritina e magnésio com cobre normal

**Zinc, ferritin, magnesium and copper in a group of Egyptian children with attention deficit hyperactivity disorder.**

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**Source**

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**Abstract**

**BACKGROUND:**

Attention deficit hyperactivity disorder is a behavioral syndrome of childhood characterized by inattention, hyperactivity and impulsivity. There were many etiological theories showed dysfunction of some brain areas that are implicated in inhibition of responses and functions of the brain. Minerals like zinc, ferritin, magnesium and copper may play a role in the pathogenesis and therefore the treatment of this disorder.

**OBJECTIVE:**

This study aimed to measure levels of zinc, ferritin, magnesium and copper in children with attention deficit hyperactivity disorder and comparing them to normal.

**METHODS:**

This study included 58 children aged 5-15 years with attention deficit hyperactivity disorder attending Minia University Hospital from June 2008 to January 2010. They were classified into three sub-groups: sub-group I included 32 children with in-attentive type, sub-group II included 10 children with hyperactive type and sub-group III included 16 children with combined type according to the DSM-IV criteria of American Psychiatric Association, 2000. The control group included 25 apparently normal healthy children.

**RESULTS:**

Zinc, ferritin and magnesium levels were significantly lower in children with attention deficit hyperactivity disorder than controls (p value 0.04, 0.03 and 0.02 respectively), while copper levels were not significantly different (p value 0.9). Children with inattentive type had significant lower levels of zinc and ferritin than controls (p value
0.001 and 0.01 respectively) with no significant difference between them as regards magnesium and copper levels (p value 0.4 and 0.6 respectively). Children with hyperactive type had significant lower levels of zinc, ferritin and magnesium than controls (p value 0.01, 0.02 and 0.02 respectively) with no significant difference between them as regards copper levels (p value 0.9). Children with combined type had significant lower levels of zinc and magnesium than controls (p value 0.001 and 0.004 respectively) with no significant difference between them as regards ferritin and copper levels (p value 0.7 and 0.6 respectively).

CONCLUSIONS:

Children with attention deficit hyperactivity disorder had lower levels of zinc, ferritin and magnesium than healthy children but had normal copper levels.

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