



Role of Zinc Supplementation on Metallothioneine System and Cognitive Motor Performance in Children with Autism

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Abstract: The study was carried out on 30 children with autism, their ages ranged between 3-8 years. The aim of the study was to evaluate the effect of zinc supplement for 12 weeks according to their body weight (daily dose of zinc equal to weight (lbs) plus 15-20 mg.), on the level of plasma MT-1 and on the severity of the disease symptoms specifically cognitive motor performance in addition to studying MT1ARNA expression, that might reflect the response to zinc supplement.

Our data revealed significant improvement in cognitive motor performance, increased plasma metallothionein in addition to significant decrease in plasma level of copper after zinc supplement. The expression of MT-1 was high in autistic children before taking zinc supplement which would be related to decreased baseline zinc levels in those children, significant decrease was observed after zinc supplementation. We concluded that zinc supplement may be an important component of a treatment protocol for children with ASD and that it requires attention to motivators and facilitators of exercise adherence.

Key words: Autism spectrum disorder, Cognitive motor performance, Zinc, Metallothionein.