

P-277 - TOXIC METALS AND ESSENTIAL MINERALS AND SEVERITY OF SYMPTOMS AMONG CHILDREN WITH AUTISM

H.Dessoki¹, O.Raafat², B.-B.Blaurock-Busch³, T.Rabah⁴

¹Psychiatry, Beni Suef University, Beni Suef, ²Cairo University, Cairo, Egypt, ³Germany, Munich, Germany, ⁴National Research Center, Cairo, Egypt

Objective: The objective of this study was to assess the levels of 10 toxic metals and essential minerals in hair samples of children with autism. Another purpose of this study was to evaluate whether the level of these elements could be correlated with the severity of autism.

Method: The participants were 44 Autistic spectrum disorder (ASD) children according to Diagnostic and Statistical Manual of Mental Disorders 4th Edition, (DSM-IV). The age of 3 and 9 years. The severity of autistic symptomatology was measured by the Childhood Autism Rating Scale (CARS). Hair analysis was done to evaluate the long term metal exposure and minerals level. Sample preparation and testing were performed in Germany.

Results: There was increase in some metal level such as: lead, aluminium, vanadium and mercury. Also, the level of zinc, and iodine was deficient. There was a significant positive correlation between Arsenic & Fear and Nervousness ($P = 0.020$). Also, There was a significant negative correlation between Zinc & Fear and Nervousness ($P = 0.022$).

Conclusion: Several elements such as: lead, aluminium, vanadium and mercury showed significant relationship, not only the etiology of autistic disorder but also, to the severity of the symptoms. Iodine and zinc seemed seem to have high nutritional value among autistic children.