

Mercury toxicity in a sample of autistic children in Cairo

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This work aimed to determine the level of mercury in serum and urine of a sample of autistic patients in Cairo and the possible relation to the emergence of autistic disorder.

Forty patients with autistic disorder (mean, 5.33 years $\pm$ 3.3 std.) and 20 non-autistic matching control subjects were recruited from the outpatient clinic as well as the rehabilitation clinic in the Institute of Psychiatry Ain Shams University, Cairo. Patients with known birth hazards were excluded. Childhood autism rating scale was used to assess the severity of the disorder in patients. Blood samples as well as urine samples were collected from both cases and controls after their parent's consent to detect the serum and urine level of mercury respectively. The results showed that the difference between the mean values in cases and controls for both serum and urine mercury were of a high statistical significance, being higher in the case group. As for serum Hg (normal level < 10 μ g/L), the mean level in cases was 12.02 ($\pm$ 6.06) and in controls 8.7 ($\pm$ 1.7) ; while for urine, Hg level (normal level < 20 μ g/L), mean level in cases was 42.85 ($\pm$ 34.1) and in controls 16.02 ($\pm$ 5.5). The study attempted to find a correlation between mercury level in blood or urine and symptom pattern or severity, but the results were of no statistical significance. The study concluded that serum and urine mercury levels in autistic patients is significantly higher than matching non autistic subjects, which suggests a possible role in the emergence of symptoms of autism.