Serum mercury level and multiple sclerosis

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Introduction and background: Exposure to heavy metals has been associated to a higher incidence of multiple sclerosis. In this work we present a possible relationship between serum mercury levels and development of multiple sclerosis in Isfahan, the third largest city in Iran.

Methods and materials: 99 patients affected by multiple sclerosis were retrieved from MS clinic in Isfahan, Iran. by matching sex and age, 99 healthy volunteers were chosen as control group. Blood samples were collected and serum mercury content was determined.

Results: Amount of serum mercury in male MS patients with ages from 5 to 9 differs significantly from control subjects. Serum mercury level in female MS patients with age 5 to 9 was significantly higher than controls. Concerning all MS patients serum mercury value was significantly higher than the mercury concentration founded in control subjects (odd ratio: 9.99).

Disscution: Serum mercury level is higher in MS patients with odd ratio equal to 9.99 compare with healthy individuals. More studies with larger sample size are needed to confirm this hypothesis.

Conclusion: It may reveal that high mercury levels in serum may help MS development in susceptible individuals.

Key words: heavy metals, Hg, etiology.