

Investigation The Amount Of Copper, Lead, Zinc And

Abdoreza Ghoreishia¹, Mehran Mohseni^{2*}

1-Assistant Professor, Department of Neurology, Faculty of Medicine, Zanjan University of Medical Science

2-Assistant Professor, Department of Food and Drug Control, School of Pharmacy, Zanjan University of Medical

Multiple sclerosis (MS) is the most common disease caused by an inflammatory demyelinating process in the central nervous system and characterized by the disseminated demyelination of nerve fibers in the brain and spinal cord. MS is a leading cause of disability in young adults and is accompanied by considerable socioeconomic consequences. It is believed that MS is triggered by as-yet-unidentified environmental factor(s) in a person who is genetically predisposed to respond. It seems that environmental exposure to heavy metals maybe associated with a higher incidence of multiple sclerosis. In this work, a possible relationship between serum zinc, cadmium, lead, and copper levels and the development of multiple sclerosis was found. The serum levels of zinc, cadmium, lead, and copper were measured in 50 Iranian MS patients and 50 healthy persons as the control group. Sample preparation serum concentrations of zinc, cadmium, lead, and copper were determined by polarography. Significantly higher serum Cu, Zn, and Cd levels were found in MS patients than in the controls ($p < 0.05$). Serum levels of zinc, cadmium, and copper were significantly higher in MS patients than in the controls ($p < 0.05$).

Keywords: Heavy metal; Nervous disease; Assessment; Neurologic disease; Differential pulse polarography