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The potential effect of *MT1A* (A>G) and *MT1A* (C>G) SNPs of metallothionein gene on whole blood mercury levels in Iranian populations

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One of the toxic heavy metals is mercury which is found in three forms in environment and leads to renal and brain toxicity in the human body. This metal carries out by a protein named metallothionein that synthesizes in the liver and other organs. Polymorphism in metalloproteins may lead to changes in heavy metal levels in the body. We study the effect of *MT1A* (A>G) and *MT1A* (C>G) polymorphisms on blood mercury level in Iranian population. 300 non exposure people to control group and 150 exposure people to case group were used. DNA extraction and PCR-RFLP and DNA sequencing was done and blood mercury level was measured via AAS technique by DMA-80, blood mercury concentration in case group was higher than control group (p value<0.001). There was no significant differences in case and control groups by the effect of *MT1A* (A>G) and *MT1A* (C>G) polymorphism on blood mercury levels and P value were 0.69 and 0.44, 0.59 and 0.56 for case and control groups, respectively. Our results and other studies in the entire world show that genetic polymorphism may affect some toxins in the body. We can prevent more toxicity in human by having genetic information about people.

Biography

Javad Babaei has completed his PhD from Ahvaz Jundishapur University of Medical Sciences and PharmD studies from Mashhad University of Medical Sciences. He is the Supervisor at Valiasr Hospital Research Office. He has published more than 4 papers in reputed journals and has served as an Editorial Board Member of journal of hospital.

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