WASHINGTON, DC – A new study, “An Autism Cohort Study of Cobalt Levels Following Vitamin B12 Injections”, published in the most recent issue of the peer-reviewed Toxicological & Environmental Chemistry, confirms a significant association between the frequency of methylcobalamin (vitamin B12) injections and blood/urinary cobalt levels in subjects diagnosed with an autism spectrum disorder as well as a significant association between cobalt exposure and damage to human neurons.

It was previously suggested by investigators that methylcobalamin (the methyl form of vitamin B12 [methyl B12]) injections may play an important role in the treatment of subjects diagnosed with an autism spectrum disorder. It was determined that the typical dosage of injected methyl B12 (75 µg/kg bodyweight) utilized in subjects diagnosed with an autism spectrum disorder results in an instantaneous exposure to cobalt equal to about 25% of the entire normal body-burden of cobalt, and that this exposure is to be repeated every several days for an indefinite period of time. The aim of this new study was to evaluate the potential effects of methyl B12 injections on cobalt levels in a cohort of subjects diagnosed with an autism spectrum disorder.

The results of the study showed subjects diagnosed with an autism spectrum disorder receiving injected methyl B12 at least once every three days had significant increased average levels of cobalt in the blood (6.83-fold) and urine (51-fold) in comparison to subjects not receiving injected methyl B12. Further, the more frequently the methyl B12 was injected, the higher the observed cobalt levels in the blood and urine were. Overall, the subjects receiving injected methyl B12 every second day had average blood and urinary cobalt levels in excess of the cobalt maximal occupational exposure limits. Finally, the study also found that inorganic cobalt was able to induce significant damage to human neurons in a dose-dependent manner.

The present study is the first of its kind to evaluate the potential distribution patterns of cobalt in the human body following injected methyl B12, as well as the potential toxic consequences of cobalt to human tissue culture cells. The investigators concluded, “...there may be significant potential benefits to the administration of methylcobalamin to subjects diagnosed with an ASD …” but, “… it is important that physicians prescribing methylcobalamin injections for subjects should routinely monitor blood and urine cobalt levels, and, to be safe, ensure that their dosing regimens do not result in blood and/or urine cobalt levels in excess of maximal exposure safety limits. These concerns and caveats are all important in light of the rapid expansion of the use of methylcobalamin injections in the treatment of a number of different conditions.”

These investigators commented that sublingual preparations containing 50 µg of methyl B12 per dose administered to subjects diagnosed with an autism spectrum disorder on a daily basis were found to induce apparently adequate blood levels of vitamin B12 in the recipients even though their blood/urine levels were usually below the limits of detection in the lab testing of their blood/urine samples.

This landmark study was supported by the not-for-profit 501(c)3 corporations: CoMeD, Inc and the Institute of Chronic Illnesses, Inc.

Your generous tax-free donations will help us to fund additional research, similar to the present study.

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