Micronutrient Supplementation Increases CD4 Count in HIV-infected Individuals

Forty HIV-infected patients taking a stavudine and/or didanosine-based HAART regimen were randomized in double-blinded fashion to receive micronutrients or placebo twice daily for 12-weeks. Data were collected at 4-week intervals including immunologic, metabolic, and clinical measurements. The study examined the effect of a specific micronutrient formula on immunologic parameters as the primary endpoint. The secondary endpoints were metabolic and clinical effects, and distal symmetrical polyneuropathy (DSP).

The mean absolute CD4 count rose by an average of 65 cells in the micronutrient group versus a 6 cell decline in the placebo group at 12-weeks (*P*=0.029). The absolute CD4 count increased by an average of 24% in the micronutrient group versus a 0% change in the placebo group (*P*=0.01). The mean HIV-1 RNA decreased in the micronutrient supplementation group, although not significantly. Neuropathy scores improved in the micronutrient group by 42% compared to a 33% improvement in the placebo arm. This difference did not reach statistical significance. Fasting serum glucose, insulin, and lipids were not adversely affected in the patients taking the micronutrients.

The results of this study show that this specific micronutrient formula can significantly improve CD4 cell count reconstitution in HIV-infected patients taking HAART. The micronutrient supplement tested was well-tolerated and can safely be combined with antiretroviral therapy. Further investigation is warranted.