

Vitamin D metabolites as clinical markers in autoimmune and chronic illness

To be presented at the Sixth International Congress on Autoimmunity, 2008

Author: Greg P. Blaney,
Stillpoint Centre, 4419 W. 10th Ave, Vancouver, BC, Canada
email: gregblaney@shaw.ca

Recent research has implicated suboptimal Vitamin D (serum levels of 25-OH Vitamin D < 50nmol/L) with a number of chronic conditions including autoimmune conditions such as multiple sclerosis, lupus, psoriasis and chronic conditions such as osteoporosis, osteoarthritis, metabolic syndrome, fibromyalgia and chronic fatigue syndrome. It has been assumed that low levels of 25OH Vitamin D accurately indicate Vitamin D storage and VDR mediated control calcium metabolism and innate immunity. To evaluate this assumption, 25-OH Vitamin D and 125-OH Vitamin D levels were measured in 100 patients with these conditions. Additionally, other inflammatory markers (CK, CRP, ferritin) were measured. Results showed a strong positive association between these autoimmune conditions and levels of 125-OHD >110 pmol/L. However, there was little association with 25-OHD or the other inflammatory markers. These findings support the use of 125-OH Vitamin D as a clinical marker in autoimmune conditions. It also suggests either a disruption of the controlling cytochrome P450 enzymes and/or reduced VDR responsiveness in these conditions. Finally, the results challenge the assumption that measurement of 25-OH Vitamin D is an accurate index of Vitamin D metabolism.
