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Vitamin D Levels in Migraine and Headache Patients Compared to Patients with Pain Disorders

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Objectives: We studied Vitamin D (25-OH) levels in our migraine and headache clinic population and compared them with our patients who had chronic pain disorders without and with headache.

Background: Vitamin D levels have been found to be low in musculoskeletal and fibromyalgic pain syndromes but its role is undefined in these clinical conditions. A recent poster at AHS showed low Vitamin D levels in migraineurs, but included a significant percentage of patients with co-existent pain disorders as well. We tried to separate, as much as possible, headache and migraine patients from patients with predominantly chronic pain syndromes in order to measure and document Vitamin D levels in both groups.

Methods: Serum Vitamin D levels [total Vitamin D level= D2 + D3] were drawn on over 500 consecutive new migraine and headache patients, as well as as in chronic pain disorders of many types, including neuropathic pain. We present data on a portion of our patients (n= 100) with migraines/headaches and pain, from the clinic. This study does not compare Vitamin D levels in patients without headaches and pain, as controls, and is an open study looking at these 2 populations for comparisons between them.

Results: We compared 100 patients with headache and pain conditions [34 with predominantly migraines/headache, 33 with pain syndromes with regard to their Vitamin D levels drawn just after their first visit. The average Vitamin D level in patients with predominantly migraine and mixed headache disorders, including CDH, was 29.3 ng/. Only 15% had any other pain disorder in their history. This compared to Vitamin D levels of 28.2 mg/ml in a variety of pain patients, with no headache symptoms. No statistical significance was found between the 2 groups of patients ($P < .8$), although neither group was compared to persons without either of the clinical conditions.

Conclusions: We conclude that Vitamin D levels are low in both migraine and headache patients and are comparable to low levels seen in our chronic pain patients. This potential biomarker should be studied in double-blind trials, both for epidemiological and clinical reasons, and for potential treatment effects. Vitamin D may play some yet unknown role in multiple painful and possibly headache and migraine disorders.