

25-hydroxyvitamin D Deficiency, the Neglected Culprit: A Case Report

Shamonica King, Ph.D., MLS (ASCP)^{CM}

Hamed Benghuzzi, Ph.D.

LaToya Richards Moore, Ph.D. MLS(ASCP)^{CM}

Felicia Tardy, Ph.D., MLS(ASCP)^{CM}

University of Mississippi Medical Center

Jackson, MS

In this case report, a 31 year old African American female, presented with ongoing complaints of a skin rash, inflammation, fatigue and chronic joint pain. The patient's initial complaints were of inflammation and sloughing of her oral mucosa, which was generally accompanied by pruritic skin lesions. Previous tests included an oral swab for Herpes Simplex Virus (HSV) 1, which was negative, a skin biopsy which revealed interface dermatitis with focal confluent in the presence of epidermal keratinocytes and associated subepidermal clefting, and blood tests to determine the source of the reaction. These test included rapid plasma reagin (RPR) (*non-reactive*), Epstein-Barr virus (EBV) (*VCA-IgM was negative, VCA-IgG and EBNA antibody were positive*) and Human Immunodeficiency Virus (HIV) (*negative*). New symptoms also included chronic fatigue and debilitating joint pain. Tests were ordered which included a Westergren erythrocyte sedimentation rate (ESR) and antinuclear antibodies (ANA), which were abnormally elevated. The patient was referred to a rheumatologist. Follow-up tests included C-reactive protein (CRP) (*4.1 mg/L*), ANA (*positive*), ESR (*45 mm/hr*) and 25-hydroxyvitamin D (*20.0 ng/mL*). The patient was given a prescription of high dose vitamin D supplementation, but declined inflammatory treatment. A telephone follow up revealed resolution of all symptoms after three days of treatment with vitamin D supplementation. A six-month follow up reveal full resolution of symptoms beginning vitamin D supplementation. Tests results included CRP (*4.3 mg/L*), ANA (*negative*), and ESR (*22 mm/hr*). The one-year follow up revealed no complaints or symptoms and normal test results. Vitamin D supplementation was discontinued and the patient

remained symptom-free. Studies have shown that vitamin D deficiency is known to cause both skeletal and non-skeletal diseases. Non-skeletal diseases include inflammatory diseases, as well as, autoimmune diseases. It has been proven beneficial to test for vitamin D deficiency when inflammatory or autoimmune diseases are suspected.