

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

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## ABSTRACT

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 1, which was negative, a skin biopsy that 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 (nonreactive), Epstein-Barr virus (virus capsid antigen [VCA]-immunoglobulin [Ig] M was negative, VCA-IgG and Epstein-Barr virus nuclear antigen antibody were positive) and human immunodeficiency virus (negative). New symptoms also included chronic fatigue and debilitating joint pain. Tests were ordered that 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/h) 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/h). 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 nonskeletal diseases. Nonskeletal 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.

**ABBREVIATIONS:** ANA - antinuclear antibodies, CRP - C-reactive protein, ESR - erythrocyte sedimentation rate, Ig - immunoglobulin, VCA - virus capsid antigen.

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