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Vitamin D deficiency and low 25-hydroxyvitamin D level associate with vitiligo: A systemic review and mete-analysis

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Background: Vitiligo is characterized by an autoimmune- cause of complete loss of melanocytes from the epidermis. Many evidences suggest that vitamin D is strongly immunosuppressive and that low levels are associated with autoimmune conditions. This is a systematic review and meta-analysis of observational studies examining association between vitamin D level and prevalence of vitiligo.

Methods: We comprehensively searched PubMed/MEDLINE, EMBASE, and CENTRAL from their inception to August 2014. Inclusion criteria were studies that compared vitamin D level (25- hydroxyvitamin D) or prevalence of vitamin D deficiency in patients with and without presence of vitiligo. Two authors independently assessed article quality and extracted the data.

Results: From 20 full-text articles, 4 observational studies met our inclusion criteria, and 3 studies involving 461 participants were included in the meta-analysis that was based on the random effects model. There was a significant association between vitamin D deficiency and presence of vitiligo with pooled odds ratio of 24.88 (95% CI: 1.45 to 426.08). Participants that had vitiligo, compared with control, and also had lower 25-hydroxyvitamin D level with a standard mean difference of 1.77 (95% CI: -2.55 to -1.00).

Conclusion: Lower vitamin D (25-hydroxyvitamin D) was presence in subjects with vitiligo. This association helps to understand more about role of vitamin D in the pathogenesis of vitiligo and its relevance in the treatment of this dermatologic condition.

Biography

Anawin Sanguankeo completed his medical degree from Faculty of Medicine Siriraj Hospital, Mahidol University in 2011. He worked as a postdoctoral fellow at Welch Center for Prevention, Research and Epidemiology at Johns Hopkins University in 2012. He's currently an internal medicine resident at Bassett Medical Center, Cooperstown.

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