Vitamin D₂ may help preserve honeymoon phase of type I diabetes

March 12 2024, by Bob Yirka

Fasting Proinsulin, Fasting C-Peptide, and Corresponding Proinsulin to C-Peptide Ratios (PI:Cs). A and B, Observed (A) and model-predicted (B) PI:Cs. Trends were generated from a repeated-measures generalized linear model of fasting PI:Cs. C, Overall analysis of the trends showed that ergocalciferol significantly slowed the decline in percentage AUC C-peptide from baseline compared with placebo. Credit: JAMA Network Open (2024). DOI: 10.1001/jamanetworkopen.2024.1155
A team of medical researchers and doctors affiliated with several universities and two hospitals in the U.S. reports that administration of vitamin D$_2$ to patients newly diagnosed with diabetes type 1 can prolong the so-called honeymoon phase of the disease.

In their study, published in the journal *JAMA Network Open*, the group conducted a clinical trial involving giving vitamin D$_2$ supplements to children newly diagnosed with diabetes.

Prior research has shown that at the time of diagnosis, most diabetes type 1 patients still have approximately 30% to 50% function in pancreatic beta cells (diabetes occurs when such cells stop making insulin). Sometimes the beta cells continue to function for several months or even years. This time period is known as the honeymoon phase because it gives patients time to adjust to their disease and puts off the onset of damaging symptoms.

Most new research involving treatment or prevention of type 1 diabetes involves efforts to prevent beta cells from ceasing production of insulin. In this new effort, the research team has found evidence that giving newly diagnosed patients vitamin D$_2$ can prolong the honeymoon phase.

The work by the team involved carrying out a randomized clinical trial involving 36 young volunteer patients who had been newly diagnosed with type 1 diabetes. Some of the volunteers received vitamin D$_2$ supplements every week for two months, while others received a placebo for the same time period. All the volunteers underwent blood tests on a regular basis.

In looking at the data from the clinical trial, the research team found that those volunteers given the vitamin D$_2$ supplements saw improvements in insulin secretion capacity in beta cells—they observed decreases in the PI:C ratio compared to a placebo. They also found reductions in
%ΔAUC of C-peptide that were slower in those given the vitamin supplements, which led to longer delays in loss of the C-peptide.

It is expected that the benefits derived from vitamin D₂ during the honeymoon phase will vary by patient, though any delay in the onset of symptoms can have beneficial lifelong impacts.


© 2024 Science X Network


This document is subject to copyright. Apart from any fair dealing for the purpose of private study or research, no part may be reproduced without the written permission. The content is provided for information purposes only.