

# The protectiveness of the treatment of vitamin D insufficiency in the development of diabetes

*O efeito protetor do tratamento da insuficiência de vitamina D no desenvolvimento do diabetes*

Omer Kurt<sup>1</sup>, Sevket Balta<sup>2</sup>, Mustafa Cakar<sup>1</sup>,  
Erol Arslan<sup>1</sup>, Murat Unlu<sup>2</sup>, Sait Demirkol<sup>2</sup>

We read the article “High prevalence of vitamin D deficiency among newly diagnosed youth-onset *diabetes mellitus* in north India” written by Daga and cols. with interest (1). We find it is very valuable for the literature, as the study design was a prospective one. The authors showed that vitamin D levels were lower in patients with young-onset diabetes compared with healthy controls. They also showed the relationship between vitamin D deficiency and the development of diabetes.

Vitamin D is a major regulator of mineral homeostasis by means of its action in the kidneys, intestines, bones, and parathyroid glands. Apart from its traditional actions related to calcium, vitamin D and its synthetic analogs are being increasingly recognized for their anti-proliferative, pro-differentiative, insulin-secretagogue, and immunomodulatory activities (2). Vitamin D insufficiency has now reached epidemic proportions, even in healthy individuals living in tropical regions. Recent data suggest association of hypovitaminosis D with metabolic syndrome, immune diseases, inflammatory bowel diseases, hypertension and diabetes (3-5).

Accurate measurement of vitamin D levels is of great importance in such studies. Radioimmunoassay (RIA) was chosen in the study to measure vitamin D levels. The gold standard test for measuring vitamin D levels is liquid chromatography-tandem mass spectrometry (LC-MS/MS). In a study about the consistency of measurement methods of vitamin D, the accuracy of the RIA was determined as insufficient compared with LC-MS/MS, and HPLC was found to be adequate (6). We think that measuring the levels with HPLC instead of RIA could contribute to the study.

In addition, while converting to the active form, vitamin D gets hydroxylated in the liver and kidneys. Therefore, liver diseases, renal failure, and use of anticonvulsant drugs may affect the levels of vitamin D (7). In the present study, there was no exclusion criteria or basal characteristics defined for these situations. It would be better if these conditions were excluded from the study.

Finally, diabetes became a widespread, insidious, progressive epidemic disease, and has a high mortality and morbidity. We think that the best way to prevent this high mortality is to prevent diabetes from developing. Although many studies have been made about the protectiveness of the treatment of vitamin D insufficiency/deficiency in the development of diabetes, results is not clear yet. More comprehensive studies may be needed in this respect (8).

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<sup>1</sup> Gulhane Medical Academy,  
Department of Internal  
Medicine, Ankara, Turkey  
<sup>2</sup> Gulhane Medical Academy,  
Department of Cardiology,  
Ankara, Turkey

**Correspondence to:**  
Sevket Balta  
Department of Cardiology  
Gulhane School of Medicine,  
Tevfik Saglam St.  
06018 – Etilik-Ankara, Turkey  
drsevkettb@gmail.com

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