

## Vitamin D levels in Saudi children with type 1 diabetes

To the Editor

I read with interest the paper by Bin-Abbas et al<sup>1</sup> on the Vitamin D levels in Saudi children with type 1 diabetes. In spite of affluent living condition, vitamin D (VD) deficiency<sup>2</sup> and type 1 diabetes mellitus (T1DM)<sup>3</sup> are increasingly reported among Saudi children. Bin-Abbas et al<sup>1</sup> reported no correlation between glycemic control, measured by glycosylated hemoglobin (Hb A1c), and serum 25-hydroxy vitamin D (25OHD) level among the studied children with T1DM. However, various studies have shown a close correlation between serum 25OHD level and insulin effect. On one hand, insulin might have a stimulatory effect on the hepatic 25 hydroxylase activity, and hence, serum 25OHD level.<sup>4</sup> On the other hand, pancreatic tissue (more specifically the insulin-producing beta-cells) as well as numerous cell types of the immune system express the VD receptor (VDR) and VD-binding protein. Also, some allelic variations in genes involved in VD metabolism and VDR are associated with glucose intolerance, insulin secretion, and sensitivity, as well as inflammation.<sup>5</sup> Apart from modifying life styles and dietary habits, VD supplementation has been recently noticed to improve beta cell function and glycemic control in patients with T1DM who have VD deficiency.<sup>6</sup>

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Although, some basic science researches reported a correlation between 25OHD level and insulin effect, however no clinical studies showed a correlation between 25OHD level and glycemic control in children with type 1 diabetes.

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### References

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### Related topics

Matthana MH. The relation between Vitamin D deficiency and fibromyalgia syndrome in women. *Saudi Med J* 2011; 32: 925-929.

Asemi Z, Taghizadeh M, Sarahroodi S, Jazayeri S, Tabasi Z, Seyyedi F. Assessment of the relationship of vitamin D with serum antioxidant vitamins E and A and their deficiencies in Iranian pregnant women. *Saudi Med J* 2010; 31: 1119-1123.