Assessment Of 25-Hydroxyvitamin D Status in Egyptian Patients with Diabetic Foot Disease

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Abstract

Background:

Diabetes mellitus (DM) is a metabolic disease, which is complicated by occurrence of diabetic peripheral neuropathy (DPN).

25-hydroxyVitamin D deficiency contributes to the etiology and progression of type 2 DM and development of micro-vascular complications so in this study we assessed 25-hydroxyvitamin D level in diabetic patients to evaluate the association between 25-hydroxyvitamin D level and occurrence of diabetic neuropathy and to assess if there is relationship with certain subtypes of diabetic neuropathy.

Method:

This cross-sectional study was conducted on 60 type 2 diabetic patients
divided into three groups equally. (A): Diabetic patients with painful diabetic neuropathy. (B): Diabetic patients with painless diabetic neuropathy. (C): Diabetic patients with painless neuropathy, but have neuropathic ulcer.
All patients underwent clinical, neurological examination and nerve conduction study.
Then CBC and25-hydroxyvitamin D were estimated in the studied groups.

Results:

25-Hydroxyvitamin D level among the studied painful diabetic neuropathy group (A) ranged from 5.3 to 40.5 ng/dl with
mean 17.4+/- 10.9. 70% of them had deficient 25-hydroxy vitamin D level. In the painless diabetic neuropathy group (B),25hydroxyvitaminD level ranged from 6.5 to 35.5 ng/dl with mean 18.9 +/- 8. 9. 60% of them had deficient 25hydroxyvitamin D level.
There is significant negative correlation between 25-hydroxyvitamin D level and score of neuropathy where the lower 25-hydroxy vitamin D level the higher neuropathy score.

Conclusion:

Lower25-hydroxy vitamin D levels were found in diabetic patients with neuropathy especially those with painful.
neuropathy.

Keywords:

DPN, Vitamin D, Neuropathic ulcer, DM type 2