

Relationship Between Vitamin D Deficiency And Depression in Acute Stroke Patients

Min-Ji An^{1*}, Bong-Yeon Lee¹, Woo-Yong Shin¹, Yu-Ri Choe¹, Su-Ra Rheu¹, Seo-Ra Yoon^{1†}

Gwangju Veterans Hospital, Department of Rehabilitation Medicine¹

Objective

Recent studies show low serum vitamin D levels are associated with depression in the general population. However, the study about relationship between vitamin D levels and depression in acute stroke patients is rare. The aim of this study is to evaluate whether the serum level of 25(OH)D was associated with depression in people with acute stroke patients.

Subjects and Method

We analyzed 36 patients who were diagnosed with acute stroke (within 3 months) retrospectively from July 2017 to May 2018. Patient underwent functional and biochemical evaluation, including assessment of 25(OH)D levels (within 24hrs of onsets) and depressive symptom was used the self-report questionnaire, Beck Depression Inventory-II (BDI-II). Depression was defined as BDI-II score ≥ 14 , and patients were divided into depressive and non-depressive groups.

Results

Depression was observed in 18 of 36 of the study population. Basic characteristic including sex, age, education level, BMI, K-MMSE, K-MBI, mRS and seasonal variation showed no statistical differences between groups. BDI-II scores were 34.8 ± 12.6 in depressive group and 6.45 ± 4.3 in non-depressive group. The mean level of 25(OH)D was lower in the depressive group than in the non-depressive group. (10.1 ± 2.6 vs 20.7 ± 8.9 ng/mL ; $p < 0.05$)

Conclusion

The levels of 25(OH)D were significantly lower in depressive group with respect to non-depressive group in acute stroke patients. This study suggests that serum vitamin D is significantly associated with the depression in acute stroke patients.