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Vitamin D Supplementation in Acute Ischemic Stroke

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Article Info	A B S T R A C T
<i>Article type:</i> Original article	Background and Aim: Vitamin D deficiency was associated with an increased risk of stroke. Clinical studies have reported improved neurological outcomes in patients who were taking vitamin D supplements. This study proposed to investigate the effect of intramuscular vitamin D treatment in patients with acute ischemic stroke on neurological outcomes, and inflammatory marker levels. Materials and Methods: seventy-three patients with AIS included in the study and were allocated randomly into single dose 300000 UI an intramuscular vitamin D group or a control group. Serum vitamin D concentration, IL-6 and tumor necrosis factor-α (TNF-α) levels, as primary outcomes, and the Modified Ranking Scale (MRS), the National Institute of Health Stroke Scale (NIHSS) and the Mini-Mental State Examination (MMSE), as secondary outcomes, were measured at the base line and at the end of the study. (6 weeks) Results: Eventually, 24 patients with AIS completed the intervention study. A single dose of 300000 UI increased vitamin D and NIHSS and TNF-α after taking vitamin D. However, no statistically significant effect of vitamin D on the TNF-α and IL-6 levels and on neurological score as compare to control. Conclusion: Further randomized controlled trials are urgently needed to prove whether vitamin D supplementation reduces the incidence of strokes, improves the outcome of post-stroke patients, and elucidate the relationship between the timing of treatment with calcitriol and neuroprotection.
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