

Vitamin D Deficiency and Stroke

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Accumulating evidence suggests that Vitamin D deficiency has a link and is associated with the presence of hypertension, diabetes mellitus, atherosclerosis and now with stroke. However, the evidence is conflicting at present.

Dubail B *et al.* (1) in their study indicated that a low serum 25(OH)D level at stroke onset may be associated with higher mortality at 1 year in patients less than 75 years old.

Wang *et al.* (2) pointed out that Serum 25(OH) D levels reduce with increasing severity of stroke. Serum 25(OH) D levels are a predictor of both severity at admission and favourable functional outcome in patients with acute Ischemic Stroke.

Pilz *et al.* (3) established that low levels of 25(OH)D and 1,25(OH)2D are independently predictive for fatal strokes, suggesting that vitamin D supplementation is a promising approach in the prevention of strokes.

Witham *et al.* (4) established that low vitamin D levels are associated with increased incidence of future cardiovascular events and are common in stroke patients. However, they documented that high dose oral vitamin D supplementation did not improve blood pressure but produced short-term improvement in endothelial function in stroke patients with well-controlled baseline blood pressure.

Yue *et al.* (5), established an independent relationship between 25-hydroxyvitamin D (25[OH] D) and post-stroke depression.

Kojima *et al.* (6) documented that low dietary vitamin D intake was an independent risk factor for 34-year incidence of all stroke and thromboembolic stroke.

An Indian study however, reported contrary findings by recording no significant difference in the prevalence of vitamin D deficiency/insufficiency, mean 25(OH) D

levels and iPTH levels between cases and controls. Thereby, suggesting that no association of vitamin D deficiency/insufficiency exist with ischemic stroke or its risk factors. (7)

Thus, existing studies definitely points towards the relation between Vitamin D deficiency and stroke. Although Indian study failed to establish any such relationship. But it highly warranted to have Indian data on the subject in view of high number of stroke patients presenting in Indian hospitals. Further studies are needed to confirm these findings and to determine whether vitamin D supplementation could improve survival in stroke patients.

References

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