EFFECT OF VITAMIN D REPLACEMENT ON ENDOTHELIAL FUNCTIONS IN RENAL TRANSPLANT RECIPIENTS

ors

Tolga Yildirim, Rahmi Yilmaz, Ercan Turkmen, Mahmut Altindal, Mustafa Arici, Bulent Altun, Yunus Erdem
Hacettepe University Medical Faculty Nephrology Department, Ankara, Turkey

OBJECTIVES

Cardiovascular diseases are the most common cause of mortality in renal transplant recipients (1). Endothelial dysfunction, an early indicator of atherosclerosis, is frequently observed in hemodialysis patients. Although endothelial functions improve after renal transplantation (2), these patients still have worse endothelial functions compared to healthy subjects (3). Vitamin D deficiency is related to endothelial dysfunction in renal transplant recipients (4). Treatment of vitamin D deficiency improves endothelial functions in patients with chronic kidney disease. Aim of this study is to investigate the effect of vitamin D replacement on endothelial functions in renal transplant recipients with vitamin D deficiency.

METHODS

Renal transplant recipients who are regularly followed in Hacettepe University Nephrology Department and under treatment for vitamin D deficiency defined as serum 25 OH vitamin D <20 mcg/L were included in this study. Endothelial functions determined by brachial flow mediated vasodilatation were compared before and after three months of calcitriol treatment (0.5 mcg/day).

RESULTS

Forty renal transplant recipients (23 male, 17 female) were included in this study. Mean age was 41.7±11.0 years. Mean basal serum 25 OH vitamin D level was 10.7±4.5 mcg/L. Brachial flow mediated vasodilatation increased from 5.6±3.2% to 11.9±7.4% after calcitriol replacement ($p<0.001$).

CONCLUSIONS

Correcting vitamin D deficiency may improve endothelial functions in renal transplant recipients. The findings of this study should be confirmed in double blind randomized placebo controlled trials with larger sample size.

REFERENCES:

REFERANSLAR

1. Foley RN, Parfrey PS, Sarnak MJ. Epidemiology of cardiovascular disease in chronic renal disease. J Am Soc Nephrol 1998; 9(12 Suppl): S16.
2. Passauer J, Bussemaker E, Lassig G, et al. Kidney transplantation improves endothelium-dependent vasodilatation in patients with end-stage renal disease. Transplantation 2003; 75: 1907.
3. Hausberg M, Kisters K, Kosch M, et al. Flow-mediated vasodilatation and distensibility of the brachial artery in renal allograft recipients. Kidny Int 1999; 55(3): 1104.
4. Yilmaz MI, Sonmez A, Saglam M, et al. Longitudinal Analysis of Vascular Function and Biomarkers of Metabolic Bone Disorders before and after Renal Transplantation. Am J Nephrol 2013; 37:126.

51ERA-EDTA
750-SP
N) Renal Transplantation. N2) Clinical epidemiology of renal transplantation.
Tolga Yildirim
DOI: 10.3252/pso.eu.51era.2014
Poster presented at: 51 ERA-EDTA CONGRESS AMSTERDAM 2014
PosterSessionOnline.com