Calcitriol and Immunity In Chronic Regular Haemodialysis Patients

Thesis
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ABSTRACT

Introduction: The role of vitamin D in the regulation of calcium and bone metabolism is well established. Newer physiologic functions for vitamin D have been identified. Vitamin D plays a vital and complex role in immune system function and regulation.

Aim: study the effect of intravenous calcitriol treatment on the immune system in chronic regular haemodialysis patients through the study of serum levels of IL-6 and IL-8 before and after calcitriol therapy in addition to study the changes in serum level of total calcium & ionized calcium & phosphorus & alkaline phosphatase and intact parathyroid hormone before and after calcitriol therapy.

Methods: This study was conducted on 45 subjects randomized into three groups. 15 subjects control group (group 1) and thirty end stage renal disease patients on chronic hemodialysis will be randomized into two groups group 2(not receiving calcitriol) and group 3(receiving calcitriol) Blood samples were withdrawn before entering the study and after 1 and 3 months for the measurement of serum levels of Total calcium,Ionized calcium,Phosphorus,Intact PTH (iPTH),Alkaline phosphatase (ALP). , Interleukin – 6 (IL-6) andInterleukin – 8 (IL-8).

Results: Calcitriol treatment effectively suppresses iPTH , significant increases in the serum total calcium and ionized calcium, increases in the serum phosphorus , decreases serum ALP levels significant decrease in the serum level of IL-6and significant decrease in the serum level of IL-8.

Conclusion: we propose that haemodialysis patients with secondary hyperparathyroidism should be treated with intravenous calcitriol not only due to its role in the regulation of calcium and bone metabolism but also vitamin D plays a vital and complex role in immune system function and regulation

KEY WORDS:

Calcitriol -immunity -chronic kidney disease.