

3 months evaluation of the effects of vitamin D usage in patients with heart failure

Abstract:

Introduction: *Chronic heart failure is a common and serious disease with a high mortality rate. There is a decrease in serum levels of vitamin D in Heart failure patients which may be a effective factor in pathogenesis of the disorder. Considering newly performed studies, Vitamin D, has an effective role in adjusting the cardiovascular system; According to studies, it is hypothesized that increasing the Serum levels of Vitamin D, may increase performance of the heart in CHF patients. In this study, we evaluate effectiveness of compensation levels of vitamin D on Ejection Fraction of CHF patients.*

Materials and Methods: *The current study is an interventional one. A total of 50 patients with heart failure and deficiency of vitamin D, entered the study and their medical information including the patient's cardiac output were recorded. Patients received vitamin D supplements for three months until their vitamin D Serum levels returned to normal. After his intervention, cardiac output was recorded again and compared with initial values.*

Results: *The average age of the participants in this study was 77.1 ± 7 years. 23 patients (46%) were female. Diabetes mellitus, hypertension, dyslipidemia were common among the cases. Half of the patients reported a family history of heart problems. All of the patients were using Diuretics. 94% of them were using Digoxin and 88% of them were using Beta blockers. The initial vitamin D levels in patients were 14.62 IU / ml which reached to 33.56 IU/ml 33.56 IU/ml among the intervention. Also, the mean EF in patients were 23.55 which raised by 2.3 percent due to the intervention.*

Conclusions: *Finally, it appears that increased levels of vitamin D in patients with heart failure increases the EF of them by about 2.3% which seems not to be significant difference clinically. It is possible that the high average age in this study be effective in achieving this result.*

Keywords: *Vitamin D, heart failure, echocardiography*