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[The role of vitamin D in the development of cardiac failure].

[Article in Hungarian]

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Abstract

Congestive heart failure is a chronic disease, whose incidence is especially growing in the subpopulation of elderly people. The majority of these patients have vitamin D levels in the insufficient range. Skin synthesis is the most important vitamin D source for humans. Congestive heart failure patients have relatively low outdoor activities. Consequently, a disease-related sedentary lifestyle is an important cause for the insufficient vitamin D status in patients. However, there is an accumulating body of evidence that vitamin D insufficiency plays a role in the etiology and pathogenesis of congestive heart failure. Vitamin D has direct effect on heart cells and indirect effect on the risk factors of the disease. Four major potential mechanisms may be important to explain the direct effects of vitamin D against congestive heart failure: the effect on myocardial contractile function, the regulation of natriuretic hormone secretion, the effect on extracellular matrix remodelling and the regulation of inflammation cytokines. It has been demonstrated that vitamin D has a high impact on congestive heart failure main risk factors as hypertension, renin-angiotensin system malfunction and atherosclerosis. In spite of the robust preclinical data only few clinical observations prove the positive effect of vitamin D on congestive heart failure.

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