

The Effect of Vitamin D Deficiency on Endothelial Function in Atherosclerosis Patients Living in Saudi Arabia

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Abstract : Vitamin D is an essential fat-soluble vitamin that is required for the maintenance of good health. It is obtained either through exposure to sunlight (ultraviolet B radiation) or through dietary sources. The role of vitamin D is beyond bone health. Indeed, it plays a critical role in the immune system and a broad range of organ functions such as the cardiovascular system. Moreover, vitamin D plays a critical role in the endothelial function, which is one of the main indicators of atherosclerosis. This study is investigating the correlation between vitamin D status and endothelial function in preventing and treating atherosclerosis especially in country that has ample of sunshine but yet, Saudis from suffering from this issue vitamin D deficiency and insufficiency. Ninety participants from both genders and aged 40 to 60 will be involved. The participants will be categorised into three groups: the control group will be healthy persons, patients at risk of developing atherosclerosis, patients formally diagnosed atherosclerosis. Half of the participants in each group should already have been taking vitamin D supplementations. Fasting blood samples will be taken from the participants for biochemical assays. Endothelial function will be assist by flow-mediated dilation of the brachial artery. Participants will be asked to complete a questionnaire on their social and economic status, education level, daily exposure to sunlight, smoking status, consumption of supplements and medication, and a food frequency of vitamin D intake. The data will be analysed using SPSS.

Keywords : atherosclerosis, endothelial function, nutrition, vitamin D

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