

Effect of Vitamin D on functionality of Endothelial Colony forming Cells (ECFC) Cultured from Coronary Artery Disease Patients

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Abstract:

Coronary artery disease (CAD) is a leading cause of mortality worldwide and is characterized by endothelial dysfunction and impaired vascular repair. Endothelial colony-forming cells (ECFCs), a proliferative subset of progenitor cells, are vital for vasculogenesis and endothelial repair. In patients with CAD, ECFCs show reduced proliferative and angiogenic potential. Vitamin D, a secosteroid hormone with cardiovascular protective effects, modulates endothelial function via vitamin D receptor (VDR). This study aimed to evaluate whether vitamin D could restore the functional capacity of ECFCs from patients with CAD.

Keywords:

Coronary artery disease (CAD), Endothelial repair, Endothelial colony-forming cells (ECFCs), Vitamin D, VDR (Vitamin D Receptor).