

Study of STAT3 gene expression in peripheral leukocytes of coronary artery disease patients

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Background: Coronary artery disease (CAD) is the most common leading cause of death in most regions of the world and the most dangerous manifestations of atherosclerosis which affects coronary arteries. Whereas CAD categorize as a chronic inflammatory diseases, inflammation and its involved mechanisms are unknown clearly . In many studies alteration in the expression levels of Inflammatory-related genes has been shown in CAD. The Janus kinase/signal transducers and activators of transcription (JAK/STAT) signaling is one of the most important pathways that associate with inflammatory processes.

Objectives: comparison of STAT3 gene expression in CAD+ patients with CAD- individuals.

Methods: Expression level of STAT3 mRNA, in the peripheral leukocytes of CAD+ patients (n=25) and CAD- patients (n=27) was examined at transcription levels with qRT-PCR.

Results: STAT3 gene expression level was higher in CAD+ patients, compared with CAD- patients.

Conclusions: Our results revealed that JAK/STAT signaling pathway may has an important role in the pathogenesis of CAD+ disease.

Keywords: Coronary artery disease, STAT3, Inflammation, JAK/STAT signaling pathway