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Title of diploma thesis: Význam transformujícího růstového faktoru beta 1 a endoglinu v aterogenezi

Diplomová práce

Charles University in Prague

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Field: Pharmacy

Abstract

Background: Objective of this diploma thesis is background research using available knowledge about atherosclerosis, TGF – β_1 (Transforming growth factor – β_1) and endoglin and about their roles in atherogenesis.

Main findings: TGF – β_1 promotes atherosclerotic plaque stability, acts as antiinflammatory agent and prevents from development and progression of atherosclerosis. However, at the same time TGF – β_1 restricts endothelial regeneration, lowers production of vasodilators whereas TGF – β_1 promotes production of vasoconstrictors in blood vessel wall. TGF – β_1 supports initiation and progression of hypertension contributing to more progressive atherogenesis. Endoglin is a transmembrane protein, a component of the TGF – β receptor complex and modulates its signalisation. According to recent studies is considered antiatherogenic action of endoglin to blood-vessel endothelium.

Conclusions: These results demonstrate that the role of TGF – β_1 and endoglin in atherogenesis remains still unclear. Further investigation is necessary for determination of exact mechanisms and roles of TGF - β_1 and endoglin in development and progression of atherosclerosis.

KEY WORDS : Atherosclerosis, TGF – β_1 , endoglin