

Abstract

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Title of Bachelor thesis: Immunohistochemical analysis of the effect of M1043 on endoglin expression in a mouse model of NASH

The morphological and functional changes of the endothelial cells of the hepatic sinusoids and endothelial dysfunction occur during nonalcoholic steatohepatitis (NASH). It has been shown that the expression of adhesion molecules (VCAM-1, ICAM-1) and endoglin increase in NASH. Endoglin affects the activation of hepatic stellate cells, which attenuate the process of fibrotization.

The aim of this bachelor thesis was to detect the expression of endoglin and the adhesion molecule VCAM-1 in a mouse model of NASH after 8 weeks of CDAA diet (choline-deficient and L-amino acid-defined diet). Mice were divided into 2 groups (n=8). The control group was injected with rat IgG antibody (CDAA+rat IgG group) for 4 weeks and the CDAA+M1043 group had anti-endoglin antibody M1043. The analysis of selected proteins expression was performed by immunohistochemical method using avidin-biotin method.

The results of this thesis show that there was not any reduction in the expression of VCAM-1 or endoglin after M1043 treatment compared to the control group. VCAM-1 expression was observed in the endothelial cells of the liver sinusoids. The endoglin expression was observed in endothelial cells and in hepatic stellate cells. In conclusion, M1043 has no effect on the progression of NASH.

Key words: nonalcoholic steatohepatitis (NASH), endothelial dysfunction, endoglin, VCAM-1, M1043, immunohistochemistry