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论文

三七总皂苷对oxLDL诱导的人脐静脉内皮细胞CD40, VCAM-1表达的影响

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摘要：

目的 探讨三七总皂苷(TPNS)对氧化型低密度脂蛋白（oxLDL）诱导的人脐静脉内皮细胞（HUVECs）白细胞分化抗原40（CD40）、血管细胞粘附分子-1（VCAM-1）表达的影响。方法 原代培养HUVECs。细胞分为空白组、刺激组、小剂量（100mg/L）TPNS组、大剂量（200mg/L）TPNS组及辛伐他汀组并予相应处理。采用MTT法测定HUVECs活性，实时定量RT-PCR检测VCAM 1的基因表达，Western blot 分析CD40蛋白表达量。结果 TPNS及辛伐他汀均可以升高HUVECs的活性（P＜0.05, P＜0.001），下调HUVECs表达免疫炎症因子CD40 (P＜0.05, P＜0.01)及VCAM-1（P均＜0.001）的水平。且大剂量TPNS作用优于小剂量TPNS（P＜0.05）。结论 TPNS能够减轻oxLDL对内皮细胞的损伤，降低内皮细胞免疫炎症因子的表达，在防治动脉粥样硬化中具有重要作用。

关键词： 三七总皂苷；氧化型低密度脂蛋白；人脐静脉内皮细胞；白细胞分化抗原40；血管细胞粘附分子-1

Effect of total panax notoginsenosides on expression of CD40, VCAM-1 induced by oxLDL in human umbilical vein endothelial cells

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Abstract:

Objective To explore the effect of total panax notoginsenosides (TPNS) on expression of cell differentiation antigen 40 (CD40) and vascular cell adhesion molecule-1 (VCAM-1) in human umbilical vein endothelial cells (HUVECs) induced by oxidized low density lipoprotein (oxLDL). Methods Primary culture HUVECs cells were divided into five groups: the control, the model, the low dose (100mg/L) the TPNS, high dose (200mg/L) TPNS and the Simvastain group. Apart from the control group, cells in other groups were given corresponding treatment. Cytoactivity was measured by MTT. mRNA expression of VCAM-1 was detected by realtime quantitative RT-PCR. Protein expression of CD40 was measured by Western blot. Results TPNS and Simvastatin could up-regulate the cytoactivity of HUVECs(P＜0.05, P＜0.001), and down-regulate expression of CD40(P＜0.05, P＜0.01), VCAM-1（P＜0.001）in HUVECs induced by oxLDL. In addition, the effect of high dose TPNS was superior to the low dose TPNS (P＜0.05). Conclusion TPNS can relieve injury and lower expression of immune inflammatory factors in HUVECs induced by oxLDL. TPNS has a potential effect in preventing and treating atherosclerosis.

Keywords: Total panax notoginsenosides; Oxidized low density lipoprotein; Human umbilical vein endothelial cells; Cell differentiation antigen 40; Vascular cell adhesion molecule-1

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