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论文

同种异体单核细胞活化血管内皮细胞产生IP-10、I-TAC的体外研究

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摘要：

目的 研究单核细胞对异体血管内皮细胞（VEC）的活化作用以及产生干扰素诱导蛋白10（IP-10）、干扰素诱导的T细胞α型趋化因子（I-TAC）的效果。方法 人外周血中分离单核细胞，酶消化法分离人主动脉内皮细胞，建立单核细胞与VEC共培养系统。用流式细胞仪（FACS）检测VEC表面粘附分子CD54、CD62E表达的情况，用RT-PCR检测VEC内I-TAC和IP 10 mRNA的表达情况。结果 RT-PCR 检测结果表明，VEC与同种异体单核细胞共培养24h后，细胞内IP-10和I-TAC mRNA表达水平显著增加（P<0.05），且在48、72h的表达维持在较高的水平。FACS检测结果表明，正常培养的VEC少量表达CD54分子，不表达CD62E分子。与同种异体单核细胞共培养24h后，VEC表面CD62E和CD54的表达水平明显上调（P<0.05）。结论 在同种异体单核细胞 血管内皮细胞免疫反应中，单核细胞能活化血管内皮细胞，使内皮细胞表达IP-10、I-TAC等趋化因子和CD54、CD62E等粘附分子，参与对移植器官的排斥反应。

关键词： 单核细胞；血管内皮细胞；粘附分子；趋化因子；排斥反应

Activation of endothelial cells and expression of IP-10 and I-TAC chemokines initiated by allogeneic monocytes

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Abstract:

Objective To investigate the effects of endothelial cells activation as well as chemokines expression of IFN-γ inducible protein 10 (IP-10) and IFN-γ inducible T cell α chemoattractant (I-TAC) initiated by allogeneic monocytes. Methods Human monocytes were isolated and purified from healthy human peripheral blood mononuclear cells, endothelial cells were isolated form human aorta. A co-cultured system of endothelial cells and allogeneic monocytes was established. Endothelial cells chemokine expression of IP-10 and I-TAC were analyzed by RT-PCR before and after co-culture. The level of CD54 and CD62E on endothelial cells was detected by florescence activated cell scanning (FACS). Results RT-PCR demonstrated that IP-10 and I-TAC mRNA levels elevated markedly at 24 hours(P<0.05), remained at high level at 48 hours and at 72 hours after co-culture（P<0.05）. FACS analysis revealed low level expression of CD54 and CD62E molecules on single cultured endothelial cells. When endothelial cells were co-cultured with allogeneic monocytes, the expression of CD54 and CD62E were significantly upregulated.（P<0.05）. Conclusion It is suggested that immunoreaction between allogenic monocytes and endothelial cells leads to activation of endothelial cells, which induces the expression of cell adhesion molecules and chemokines which may play a critical role in graft rejective reaction.

Keywords: Monocytes; Endothelial cells; Adhesion molecules; Chemokine; Rejection

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