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论著

腺苷促进人脐静脉内皮细胞bFGF的表达

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摘要 目的：探讨腺苷对人脐静脉内皮细胞合成和分泌碱性成纤维细胞生长因子(bFGF)蛋白及bFGF mRNA的影响。 方法： 免疫组化法检测bFGF蛋白质表达；逆转录-聚合酶链反应测定bFGF mRNA。 结果： 对照组（腺苷0 mol/L）bFGF染色阳性细胞少，染色程度轻；10-4mol/L、10-6 mol/L腺苷组作用48 h后阳性细胞多，染色深，平均吸光度值与对照组比较有显著差异(P<0.05)，10-8mol/L、10-10mol/L腺苷组与对照组比较无显著差异(P>0.05)；RT-PCR分析显示10-4mol/L、10-6mol/L腺苷组bFGF mRNA表达显著高于对照组(P<0.05)；10-8mol/L腺苷组与对照组bFGF mRNA表达无显著差异(P>0.05)。 结论： 腺苷可能部分通过促进内皮细胞合成和表达bFGF而实现其促进内皮细胞生长和血管新生的作用。

关键词 血管生成； 腺苷； 成纤维细胞生长因子2； 脐静脉内皮细胞

分类号 R363

Adenosine promotes bFGF protein and bFGF mRNA expression in human umbilical vein endothelial cells in vitro

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Abstract

<FONT face=Verdana>AIM: To investigate the influence of adenosine on human umbilical vein endothelial cells (HUVEC) bFGF protein production and bFGF mRNA expression. METHODS: Immunohistochemistry staining was performed to detect bFGF protein. RT-PCR was performed to detect bFGF mRNA expression. RESULTS: Immunohistochemistry study demonstrated that there was only a small amount of bFGF positive cells and the color was weak in control group (without adenosine). In groups treated with 10-4 mol/L and 10-6 mol/L adenosine, bFGF protein was significantly higher than that in control group (P<0.05). In 10-8 mol/L and 10-10 mol/L adenosine groups, there were no significant differences compared with control group (P>0.05). RT-PCR showed that in 10-4 mol/L and 10-6 mol/L adenosine groups, bFGF mRNA expression was higher than that in control group (P<0.05), while the difference between 10-8 mol/L adenosine group and control group was not significant (P>0.05). CONCLUSION: Adenosine may promote HUVEC proliferation and angiogenesis partly through inducing bFGF expression.</FONT>

Key words Angiogenesis Adenosine Fibroblast growth factor 2 Umbilical vein endothelial cells

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