[1]王晖,冯华,陈图南,等.细胞外ATP对U87胶质瘤细胞生长和侵袭的作用[J].第三军医大学学报,2012,34(07):589-592.

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细胞外ATP对U87胶质瘤细胞生长和侵袭的作用(PDF)

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Title: Extracellular adenosine triphosphate improves growth and invasion of U87 glioma cells

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摘要: 目的　观察细胞外三磷酸腺苷（adenosine Triphosphate, ATP）对体外培养的U87人脑胶质瘤细胞增殖、侵袭和迁移能力的影响。　方法　采用MTT法检测不同浓度细胞外ATP对U87胶质瘤细胞增殖的影响；以相同条件下不加ATP作为对照组，以加入100 μmol/L ATP作为处理组，采用Transwell细胞侵袭实验检测100 μmol/L细胞外ATP对U87胶质瘤细胞侵袭能力的影响；用时间显微镜动态观察100 μmol/L 的ATP作用下U87胶质瘤细胞的迁移情况。　结果　高浓度（5 000 μmol/L）细胞外ATP对U87胶质瘤细胞增殖有显著抑制作用，较低浓度（50、100、500 μmol/L）细胞外ATP对U87胶质瘤细胞增殖无明显影响，5 000 μmol/L ATP组与其他浓度组比较，差异有统计学意义（$P<0.05$）；Transwell侵袭实验中，处理组细胞跨膜细胞数为（163.83±17.81）明显多于对照组（89.83±13.27）（$P<0.01$）；迁移实验中，处理组细胞运动速度为(163.83±17.81)μm/h，对照组细胞运动速度为(89.83±13.27)μm/h，2组比较，差异有统计学意义（$P<0.05$）。　结论　100 μmol/L的细胞外ATP对体外培养的U87胶质瘤细胞的侵袭和迁移具有明显促进作用。

Abstract: Objectives　To determine the effect of extracellular adenosine triphosphate (ATP) on the growth and invasion of U87 glioma cells *in vitro*.　Methods　Cell counting kit-8 was used to detect the proliferation in U87 cells after the treatment of ATP at different concentrations of 0, 50, 100, 200, 500 and 5 000 μmol/L. Invasion and migration of U87 cells with 100 μmol/L ATP treatment were examined by Transwell and Time microscopy.　Results　The proliferation of U87 glioma was inhibited obviously by high concentration of ATP (5 000 μmol/L). However, there was no significant impact on the proliferation in U87 cells by a lower amount of extracellular ATP (50, 100 and 500 μmol/L). The invasion and migration ability of U87 cells were significantly enhanced by the using of 100 μmol/L ATP.　Conclusion　Extracellular ATP can significantly enhance the ability of invasion and migration in U87 cells.

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本期目录/Table of Contents
下一篇/Next Article
上一篇/Previous Article

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王晖, 冯华, 陈图南, 等. 细胞外ATP对U87胶质瘤细胞生长和侵袭的作用[J].第三军医大学学报,2012,34(7):589-592.

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