

李 哲, 方征宇, 黄晓琳. 不同剂量U0126抑制低频磁刺激引起星形胶质细胞迁移的实验研究[J]. 中国康复医学杂志, 2010, (3): 195-199

不同剂量U0126抑制低频磁刺激引起星形胶质细胞迁移的实验研究 [点此下载全文](#)

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基金项目: 国家自然科学基金资助项目(30801220)

DOI:

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摘要:

摘要目的: 研究不同剂量U0126对低频磁刺激促进星形胶质细胞迁移作用的影响, 以选择合适的阻滞剂量。方法: 24只SD大鼠按U0126剂量被随机分为对照组(0mg/kg U0126, n=6)、低剂量组(0.1mg/kg U0126, n=6)、中剂量组(0.2mg/kg U0126, n=6)、高剂量组(0.4mg/kg U0126, n=6), 四组的刺激参数都为频率1Hz, 强度1.52T, 刺激量为30脉冲; 均采用溴己锭注射入脊髓左侧背索复制局灶性的脊髓损伤模型。刺激后第14天, 大鼠被处死, 采用图像分析系统观察GFAP、MAP-2和ERK1/2的表达及脊髓损伤空洞体积的变化。结果: 随着U0126剂量的增加, 在第14天时空洞的体积逐渐增大, GFAP、ERK1/2的阳性表达逐渐减弱, 与对照组相比具有显著性差异(P<0.05), U0126中剂量组和高剂量组作用则无明显差异(P>0.05); 病灶区域MAP-2均呈阴性表达。结论: 不同剂量的U0126可翻转磁刺激引起的星形胶质细胞的迁移, 0.2mg/kg是较合适的剂量。

关键词: [低频](#) [磁刺激](#) [星形胶质细胞](#) [迁移](#)

The effects of U0126 of different doses on the ability of low frequency magnetic stimulation promoting astrocyte migration [Download Fulltext](#)

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Fund Project:

Abstract:

Abstract Objective: To investigate the effects of U0126 of different doses on the ability of low frequency magnetic stimulation promoting astrocyte migration and to select suitable dose of U0126. Method: Twenty-four adult healthy SD rats were selected to receive injection of 0.5ml of 1% ethidium bromide (EB) in PBS into the dorsal spinal cord funiculus on the left side at T10-11 level to make located spinal cord injury models and randomly divided into four groups. The four groups were exposed to magnetic stimulation(1Hz, 1.52T, 30pulses) at the following dose respectively: 0mg/kg U0126(control group), 0.1mg/kg U0126(low-dose group), 0.2mg/kg U0126(middle-dose group), 0.4mg/kg U0126(high-dose group). On the day 14 after stimulation, the rats were sacrificed and the expressions of glial fibrillary acidic protein(GFAP), microtubule associated protein-2 (MAP-2), extracellular signal-regulated kinase1/2 (ERK1/2) and the volume of holes were detected with immunohistochemistry. Quantitative analysis of the expressions of GFAP, MAP-2 and ERK1/2 were performed with the image analysis system. Result: With the increase of U0126 dose, the volume of hole increased on day 14(P<0.05). In the lesion area, the expressions of GFAP and ERK1/2 could be found, while MAP-2 could not. Significant differences were revealed in the expressions of GFAP、ERK1/2 among the four groups, it was significantly lower in U0126 groups than that in control group(P<0.05). while the middle-dose group had similar effect with the high-dose group (P>0.05). Conclusion: U0126 of different doses all could resupinate astrocyte migrations which were caused by low frequency magnetic stimulation, and 0.2mg/kg was the suitable dose.

Keywords: [low frequency](#) [magnetic stimulation](#) [astrocyte](#) [migration](#)

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