吴银侠,袁小燕,陈新胜,王淑媛,黄承芳.参芎葡萄糖注射液对脊髓损伤后一氧化氮合成酶和血管内皮生长因子表达及运动功能恢复的影响[J].中国康复医学杂志,2013,(12):1136~1141

参芎葡萄糖注射液对脊髓损伤后一氧化氮合成酶和血管内皮生长因子表达及运动功能恢复的影响

点此下载全文

吴银侠 袁小燕 陈新胜 王淑媛 黄承芳

武汉科技大学临床学院,430064

基金项目:

DOI:

摘要:

摘要 目的：研究参芎葡萄糖注射液对大鼠脊髓损伤(SCI)后诱导型一氧化氮合成酶(iNOS)和血管内皮生长因子(VEGF)蛋白表达变化，探讨参芎葡萄糖注射液对急性脊髓损伤后运动功能恢复的影响和可能机制。方法：用改良Allen法制作大鼠T12脊髓损伤模型60只，随机分为对照组（30只）和药物组（30只）。术后第1、3、7、14、21天采用BBB评分和斜板试验对大鼠急性脊髓损伤后的运动功能进行评估，病理学检查观察脊髓损伤后病理改变，免疫组织化学方法和免疫印迹方法观察损伤脊髓iNOS、VEGF的表达变化,并进行比较分析。结果：术后各时相点BBB评分和斜板试验,除第1天外，第3、7、14、21天药物组明显高于对照组;药物组各时相点的病理改变明显较轻，药物组各时相点iNOS阳性表达均明显低于对照组，而VEGF的阳性表达均明显高于对照组，两组差异有显著性意义(P<0.05)。结论：脊髓损伤后应用参芎葡萄糖注射液可以抑制iNOS的表达，增强VEGF的表达，抑制脊髓损伤区iNOS的表达和上调脊髓损伤区VEGF的表达可能是参芎葡萄糖注射液减轻继发脊髓损伤，促进损伤脊髓功能恢复的机制之一。

关键词：参芎葡萄糖注射液 脊髓损伤 一氧化氮合成酶 血管内皮生长因子 斜板试验

Effects of Shenxiong glucose injection on expressions of nitric oxide synthase and vascular endodermis growth factor and functional recovery after spinal cord injury

Download Fulltext

Clinical Institute of Wuhan University of Science and Technology,Hubei,430064

Fund Project:

Abstract:

Abstract Objective:To study the changes of protein expressions of induced nitric oxide synthase (iNOS) and vascular endodermis growth factor (VEGF) after the rats with spinal cord injury (SCI) use shenxiong glucose injection, and to investigate the effect of shenxiong glucose injection on the recovery of motor function and it's possible mechanism after acute SCI. Method:Sixty rat models of SCI at T12 level were created by modified Allen's method and randomly divided into a control group (30) and a treatment group (30). After acute SCI the motor function recovery was evaluated through Basso, Beatti, Bresnahan(BBB) score and slanting board test after modeling at the 1st,3rd,7th,14th,21st d, the pathological changes after SCI were observed by pathology examination, and the expression changes of iNOS and VEGF after SCI were observed by immunohistochemistry method and Western blot, and comparative analyses were also carried out. Result: BBB score and slanting board test after operation showed that in treatment group the scores were higher obviously compared with control group on the 3rd,7th, 14th, 21st d, except the 1st d, and in treatment group the pathological changes were significantly lighter, and the positive expression of iNOS was significantly lower, and the positive expression of VEGF was higher than those in control group. The difference between two groups (P<0.05) was statistic significantly. Conclusion:The treatment of Shenxiong glucose injection after SCI can restrain the expression of iNOS, and enhance the expression of VEGF, which may be the mechanism to alleviate secondary damage of SCI and to promote spinal function recovery.

Keywords:Shenxiong glucose injection spinal cord injury induced nitric oxide synthase vascular endodermis growth factor slanting board test

查看全文 查看/发表评论 下载PDF阅读器