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探索学习对局灶性脑梗死大鼠梗死灶周围皮质巢蛋白及神经生长因子表达的影响

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摘要：

目的：观察探索学习对局灶性脑梗死大鼠巢蛋白（nestin）及神经生长因子(NGF)表达的影响。方法：健康雄性SD大鼠70只，其中60只以电凝法造成右侧大脑中动脉阻断（MCAO）模型后，随机分为探索学习组（n=30）居于探索笼，对照组（n=30）每5只一组群居于标准笼，假手术组（n=10）仅开颅不电凝大脑中动脉，居于标准笼。探索学习组和对照组分别于术后第1天、第1周、第2周、第4周各组随机选取5只大鼠处死，假手术组分别于MCAO第1周、第4周时随机选取5只大鼠处死，即进行巢蛋白及NGF免疫组化染色，测定其在脑梗死灶周围皮质巢蛋白及NGF的表达情况。结果：探索学习组巢蛋白及NGF阳性神经元数在MCAO术后第7天、第14天明显多于手术对照组（P<0.05）。结论：探索学习能促进梗死灶周围皮质巢蛋白及NGF的表达。

关键词：探索学习 脑梗死 大鼠 巢蛋白 神经生长因子

The effects of learning on nestin and nerve grouth factor expressions in peri-ischemic cortex of rats after unilateral local cerebral infarction

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Abstract:

Objective: To study the effects of learning on nestin and nerve growth factor(NGF) expressions in peri-ischemic cortex of rats after unilateral local cerebral infarction. Method: Seventy male Sprague-Dawley rats were adopted. After the models of middle cerebral artery occlusion(MCAO) were estabilished by electric coagulation successfully, the rats were randomly divided into learning group(n=30, living in exploratory cages) and control group(n=30, every 5 rats as a group living in large standard cages). Other 10 rats without coagulation as sham group lived in standard cage. At the 1st, 7th, 14th, 28th d after MCAO, every 5 rats in learning group and control group were randomly sacrificed separately. At the 7th, 28th d after operation 5 rats in sham group were randomly sacrificed separately. The expressions of nestin and NGF in peri-ischemic cortex were examined by immunohistochemistry staining. Result: The nestin and NGF labeled neuron cells in learning group were more than those in control group at the 7th and 14th d after MCAO(P<0.05). Conclusion: Learning could enhance nestin and NGF expressions in peri-ischemic cortex of rats after unilateral local cerebral infarction.

Keywords:learning cerebral infarction rat nestin nerve growth factor

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