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联合应用NGF、CNTF和GDNF对大鼠坐骨神经结构和功能恢复的影响 [点此下载全文](#)

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摘要:

目的: 探讨联合应用NGF、CNTF和GDNF对大鼠坐骨神经结构和功能恢复的影响。方法: 采用大鼠坐骨神经离断模型, 实验动物按NGF、CNTF、GDNF单独使用, 两两组合使用, 三种因子同时应用以及对照组共分为8组。测量各组坐骨神经功能指数、神经电生理参数、腓肠肌湿重恢复率、再生神经纤维形态参数。结果: 三种因子联合治疗组坐骨神经功能指数、神经传导速度、动作电位波幅、腓肠肌湿重恢复最佳; 除髓鞘厚度略小于NGF和CNTF联合治疗组外, 神经纤维直径、再生轴突数量及神经组织面积均大于其他各组。结论: 联合应用NGF、CNTF和GDNF对再生神经结构和功能恢复的作用优于其中一种因子单独使用或两种因子联合应用。

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A study on the effect of NGF, CNTF and GDNF applied in combination on the structure and function recovery of sciatic nerve of rats [Download Fulltext](#)

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Abstract:

Objective: To investigate the effect of NGF, CNTF and GDNF in combination on the structure and function recovery of sciatic nerve of rats. Method: The model of sciatic nerve gap defect of rats was used. The sciatic nerve function index (SFI), nerve electrophysiological parameter (nerve conduction velocity, NCV; compound muscle action potential, CMAP), recovery rate of gastrocnemius muscle wet weight and the morphological parameter of regenerated nerve fiber were measured under various kinds of treatment of NGF, CNTF, GDNF, NGF+CNTF, CNTF+GDNF, NGF+GDNF, NGF+CNTF+GDNF and in control group respectively. Result: In the group of NGF, CNTF and GDNF applied in combination, SFI, NCV, CMAP, and recovery rate of gastrocnemius muscle wet weight were better than those in all other groups; the average diameter of nerve fiber, amount of regenerated axon and area of nerve tissue were greater than those in other groups, except the thickness of myelin sheath. Conclusion: The effects of NGF, CNTF and GDNF applied in combination on the structure and function recovery of regenerated nerve were better than single or two neurotrophic factors.

Keywords: [nerve growth factor](#) [ciliary neurotrophic factor](#) [glia cell line-derived neurotrophic factor](#) [sciatic nerve](#) [function recovery](#)

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