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天麻素对脑外伤大鼠认知功能的影响及机制研究 [点此下载全文](#)

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摘要:

摘要目的: 观察天麻素对脑外伤大鼠认知功能的影响, 并探索其作用机制。**方法:** 70只SD大鼠随机分为正常对照组(n=10)、假手术组(n=20)、自然恢复组(n=20)和天麻治疗组(n=20)。采用控制性皮质撞击的方法制作大鼠脑外伤模型。手术大鼠在术后第1、2、3、4周进行行为学评价并利用RT-PCR技术对海马区的脑源性营养因子(BDNF)和突触素(Syn I)的mRNA表达情况进行检测。使用SPSS 16.0对实验数据进行统计分析。**结果:** 天麻治疗组第3、4周逃避潜伏期同自然恢复组相比差异有显著性(P<0.05)。两组游泳时间百分比在第4周时差异有显著性(P<0.05)。**BDNF mRNA:** 造模后第2、3、4周自然恢复组同天麻治疗组相比差异有显著性(P<0.05)。**Syn I mRNA:** 自然恢复组第1、2周时同天麻治疗组相比差异无显著性(P>0.05), 第3、4周时两者差异存在显著性(P<0.05)。**结论:** 天麻素能够影响脑外伤大鼠海马区的神经重塑, 从而改善脑外伤大鼠的认知功能。

关键词: [天麻素](#) [脑外伤](#) [认知功能](#)

The influence of gastrodin on cognitive disorder of rats with traumatic brain injury and underlying mechanisms: a pilot study [Download Fulltext](#)

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Fund Project:

Abstract:

Abstract Objective: To observe the effectiveness of gastrodin on cognitive disorder of rats with traumatic brain injury (TBI) and explore the underlying mechanisms. **Method:** Seventy SD rats were randomized into normal group (n=10), sham operated group (n=20), untreated group (n=20) and gastrodin group (n=20). Controlled cortical impact (CCI) device was utilized to establish TBI model. The cognitive functions of rats in every group were evaluated at the 1st, 2nd, 3rd, 4th week time points post operation. The rats were sampled to test the expressions of brain derived neurotrophic factor (BDNF) mRNA and synaptophysin I (Syn I) mRNA in hippocampus with RT-PCR technique. The collected data were analyzed with SPSS 16.0. **Result:** There were significant differences between untreated group and gastrodin group in escape latency at the 3rd, 4th week time points post operation (P<0.05). The swimming time percentage in untreated group was significantly lower at the 4th week post operation than that in gastrodin group (P<0.05). The expressions of BDNF mRNA in gastrodin group were significantly higher at the 2nd, 3rd, 4th week time points than that in untreated group (P<0.05). The expressions of Syn I mRNA in untreated group and gastrodin group were similar at 1st, 2rd week time points (P>0.05) but significantly different at the 3rd, 4th week time points (P<0.05). **Conclusion:** Gastrodin may affect the neuroplasticity in hippocampus to improve the cognitive disorders of TBI rats.

Keywords: [gastrodin](#) [traumatic brain injury](#) [cognitive disorder](#)

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