中南大学学报(医学版) 2011, 36(8) 733-738 DOI: 10.3969/j.issn.1672-7347.2011.08.006 ISSN: 1672-7347 CN: 43-1427/R

精神病学与精神卫生专栏

海洛因成瘾者停止吸毒后的脑功能变化

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摘要:

目的:探讨海洛因成瘾者在戒断期的脑功能的变化。方法:用功能磁共振检测15位海洛因成瘾者停止吸毒3 d和1个月的静息状态下脑功能情况,并与16位正常对照者进行比较。结果:海洛因成瘾者在停止吸毒3 d后功能磁共振成像显示其额叶出现血氧水平依赖(blood oxygen level dependent, BOLD)信号增加;而停止吸毒1个月后,BOLD信号的增加恢复正常。结论: 海洛因成瘾者戒断后仍有脑功能的异常,其中部分异常可以随着戒断时间的延长而恢复。

关键词: 海洛因 戒断 功能性磁共振成像 血氧水平依赖

Brain function of heroin addicts after withdrawal

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Abstract:

Objective To explore what brain regions are modulated by heroin addiction and withdrawal. Methods We used functional magnetic resonance imaging to investigate the brain function in 15 heroin-dependent patients 3 days (acute) and 1 month (protracted) after heroin abstinence. Sixteen normal controls were included. Results The blood oxygen level-dependent signal in the orbitofrontal cortex of the brain of heroin-dependent patients was significantly elevated 3 days after the withdrawal. Hyperfunction of the orbitofrontal cortex declined 1 month after the withdrawal. Conclusion Heroin-dependent subjects at both 3 days and 1 month abstinence have persistent abnormalities in the brain function. Although some tangible beneficial effects are noted following 1 month of detoxification, possible permanent damage to the brain caused by heroin use is suggested.

Keywords: heroin abstinence functional magnetic resonance imaging blood oxygen level dependent

收稿日期 2011-07-18 修回日期 网络版发布日期

DOI: 10.3969/j.issn.1672-7347.2011.08.006

基金项目:

This work was supported by the National Key Basic Research and Development Program (NKBRDP) of China (2009CB522000), the National Natural Science Foundation (30971050), and Doctoral Fund for New Teacher Project of Ministry of Education of China (20070533068).

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