

大黄、苍术对正常大鼠胃肠激素水平的影响

投稿时间: 2012/3/6 [点此下载全文](#)

引用本文: 高杰, 曹春雨, 贺蓉, 徐启华, 彭博, 黄璐琦, 李建荣. 大黄、苍术对正常大鼠胃肠激素水平的影响[J]. 中国实验方剂学杂志, 2012, 18(9): 220~224

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基金项目: 国家重点基础研究发展计划(973)项目(2006CB504701)

中文摘要:目的: 观察以大黄和苍术为代表的寒、温热属性药物对生理条件下大鼠胃肠激素水平的影响。方法: 将大鼠随机分为大黄组和苍术组, 每组设两个给药剂量, 给药1, 7, 14, 28 d时, 用放免法检测各组动物血清和胃组织中胃动素(MTL), 胃泌素(GAS)水平, 放射配基受体结合法检测各组动物胃组织中MTL和GAS的受体数及受体结合常数。结果: ①单次给药: 大黄高、低剂量组大鼠血清MTL水平降低, 苍术高、低剂量组大鼠血清MTL水平均显著升高($P<0.05$); 大黄高剂量组血清GAS水平显著性降低($P<0.05$), 苍术组变化不显著。大黄低剂量组GAS受体数和结合常数均明显增加($P<0.05$), 苍术高剂量组GAS受体数明显增加($P<0.01$)。两药对组织MTL水平和受体结合常数影响不显著。②多次给药: 除苍术低剂量组给药7 d时血清MTL水平明显升高($P<0.05$)外, 二者对血清MTL水平影响均不显著; 大黄低剂量组在给药7 d时血清GAS水平显著下降($P<0.05$), 苍术低剂量组略有升高。二者给药14, 28 d对血清GAS水平影响均不显著。二者各给药周期对大鼠胃组织MTL, GAS受体结合常数影响均不显著, 仅影响受体数。其中给药28 d时大黄高剂量组、14 d时苍术高、低剂量组大鼠胃组织MTL受体数明显增加, 给药14 d时大黄剂量组和苍术高剂量组、28 d时大黄、苍术高、低剂量组大鼠胃组织GAS受体数明显增加。结论: ①二者对大鼠血清胃肠激素水平的影响差异主要体现在给药1次后, 表现为对大鼠血清MTL水平的作用趋势相反。随着给药时间的延长, 两者对血清MTL和GAS水平的影响趋势逐渐相近。②二者对大鼠胃组织激素水平的影响差异主要体现在给药28 d时对胃组织GAS水平的影响相反。③二者对胃组织受体的影响趋势相近, 均可增加大鼠胃组织GAS受体数, 不影响受体结合常数。

中文关键词: [大黄](#) [苍术](#) [寒热](#) [大鼠胃肠激素](#) [胃动素](#) [胃泌素](#)

Effect of Rhubarb and Atractylodis on Gastrointestinal Hormone Levels in Rats

Abstract: Objective: To observe the effect of Chinese herbs with cold and heat characteristics represented by rhubarb and atractylodis on gastrointestinal hormone levels in normal rats. Method: The rats were divided into the rhubarb group and the atractylodis group randomly, each group included two doses, drug administration after 1, 7, 14, 28 d, the MTL, GAS in both serum and gastric tissue were analyzed using radioimmunoassay method. The relevant hormone receptors including receptor binding constants(k_1), receptor binding numbers(q_1) in gastric tissue were analyzed using radioligand receptor binding method assay. Result: ① After single time drug administration, the MTL level in serum of rats in Rhubarb groups with both high and low doses were decreased, the MTL level in serum of rats in atractylodis groups with both high and low dose were increased; the GAS level in serum of rats in rhubarb-high dose group were decreased significantly($P<0.05$), and the rats in atractylodis groups showed no significant change. Both the GAS receptor binding numbers and constants of rats in rhubarb-low dose groups were increased significantly($P<0.05$), the GAS receptor binding numbers of rats in atractylodis-high dose group were increased significantly($P<0.01$). Both characteristics of herbs effect on the levels of receptor binding constants and MTL level in gastric tissue showed no significant change. ② After multiple times drug administration, both characteristics of medicines effect on the MTL level in serum were not significantly change, except the rats in atractylodis-low dose group were increased significantly($P<0.05$) after 7 d; the GAS level in serum of rats in rhubarb-low dose group were decreased significantly($P<0.05$), and rats in Atractylodis

groups with both high and low dose were increased slightly. Both characteristics of herbs effect on the GAS level in serum were not significantly change after 14,28 d. Both characteristics of medicines effect on MTL, GAS receptor binding constants were not significantly changed,except the effect on the receptor binding numbers. The MTL receptor binding numbers in gastric tissue of rats in rhubarb-high dose group after 28 d,and atractylodis groups with high and low dose after 14 d were increased significantly($P<0.05$),the GAS receptor binding numbers in gastric tissue of rats in both rhubarb group and atractylodis group with high dose after 14 d,and both characteristics of medicines groups with each doses after 28 d were increased significantly($P<0.05$).

Conclusion : ① The difference in effects of rhubarb and atractylodis on rat gastrointestinal hormone is mainly reflected in serum MTL level with opposite trend. As the drug administration goes on, the influence of the two herbs on serum MTL and GAS are getting closer. ② The main difference in effects of rhubarb and atractylodis on rat gastrointestinal hormones is mainly reflected in serum MTL level with opposite trend after administration for 28 days.③ The effects of rhubarb and atractylodis on receptors in gastric tissue are similar reflected by the increase in number of GAS receptors with stable binding constant.

keywords: [rhubarb](#) [atractylodis](#) [cold and heat characteristics of medicines](#) [gastrointestinal hormones in rats](#) [MTL](#) [GAS](#)

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