

论著

胃泌素对大鼠胃粘膜环氧合酶及生长因子表达的影响

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摘要 目的: 探讨胃泌素对大鼠胃粘膜环氧合酶(COX)及生长因子表达的影响。方法: 雄性SD大鼠皮下注射胃泌素1 μg/kg、10 μg/kg或100 μg/kg, Western blot和免疫组化检查胃粘膜COX-1、COX-2、肝细胞生长因子(HGF)和肝素结合表皮生长因子样生长因子(HB-EGF)表达。评价胃泌素受体拮抗剂YM022对COX-1、COX-2、HGF和HB-EGF表达的影响。结果: 胃泌素剂量依赖性增加大鼠胃粘膜COX-2和HB-EGF表达, 而对COX-1和HGF表达无明显影响; YM022阻断胃泌素诱导的COX-2和HB-EGF表达。结论: 胃泌素调节大鼠胃粘膜COX-2和HB-EGF蛋白表达, 提示COX-2和HB-EGF参与与胃泌素相关联的胃粘膜增生和胃癌等的发病过程。

关键词 [胃泌素类](#); [前列腺素内过氧化物合酶](#); [肝细胞生长因子](#)

分类号 [R363](#)

Effects of gastrin on expression of cyclooxygenase and growth factors in rat gastric mucosa

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Abstract

AIM: To clarify the effects of gastrin on the expression of cyclooxygenase (COX) and several growth factors in rat gastric mucosa. METHODS: Male Sprague Dawley rats were fasted for 24 hours and subcutaneously injected with saline or gastrin 17 at doses of 1 μg/kg, 10 μg/kg and 100 μg/kg, respectively. The expression of COX-1, COX-2, heparin-binding epidermal growth factor-like growth factor (HB-EGF) and hepatocyte growth factor (HGF) in the gastric mucosa were examined using Western blotting and immunohistochemical staining. Effects of a potent gastrin receptor antagonist YM022 on the expression of COX-1, COX-2, HB-EGF and HGF in gastric mucosa were also evaluated. RESULTS: Gastrin dose-dependently increased the expression of COX-2 and HB-EGF in rat gastric mucosa while the expression of COX-1 and HGF did not change significantly after treatment with gastrin. However, pretreatment with YM022 dose-dependently abolished the up-regulation of COX-2 and HB-EGF expression induced by gastrin. CONCLUSIONS: This study demonstrates that gastrin up-regulates COX-2 and HB-EGF expression in rat gastric mucosa, indicating that COX-2 and HB-EGF are involved in pathogenesis of the gastrin-related gastric mucosal hyperplasia and carcinoma of stomach.

Key words [Gastrins](#) [Prostaglandin-endoperoxide synthase](#) [Hepatocyte growth factor](#)

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