·论著·

慢性萎缩性胃炎、胃癌患者血清PGⅠ、PGⅡ及胃泌素17水平变化及意义

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【摘要】**目的** 探究慢性萎缩性胃炎、胃癌患者血清PGⅠ、PGⅡ及胃泌素17水平变化及意义。**方法** 选取2020年1月至2021年6月本院收治接受胃镜检查患者76例。根据胃检查结果分组，即慢性萎缩性胃炎组 48 例，胃癌组 28例。另选取同期健康体检者 30 例为对照组。13C尿素呼气诊断试验鉴定 H.pylori 的感染，ELISA法检测血清PGⅠ、PGⅡ、胃泌素 17 水平。**结果** 3组患者一般资料对比，*P*>0.05。慢性萎缩性胃炎组和胃癌组PGⅠ、PGⅡ水平显著低于对照组(*P*<0. 05)，胃癌组PGⅠ、PGⅡ水平显著低于慢性萎缩性胃炎组(*P*<0.05)，胃癌组gastrin-17 水平显著高于慢性萎缩性胃炎组和对照组(*P*<0.05)。 HP阳性患者PGI、PGⅡ水平显著低于HP阴性(*P*<0.05)， HP阳性患者gastrin-17水平显著高于HP阴性(*P*<0. 05)。**结论** 检测PGⅠ、PGⅡ和 G-17 的方式可用于临床胃癌及萎缩性胃炎的筛选中，值得在临床中推广应用。

【关键词】慢性萎缩性胃炎；胃癌；PGⅠ；PGⅡ；胃泌素17
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Changes and Significance of Serum PGⅠ, PGⅡ and Gastrin 17 Levels in Patients with Chronic Atrophic Gastritis and Gastric Cancer

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Abstract: ***Objective*** To explore the changes and significance of serum PGⅠ, PGⅡ and gastrin 17 levels in patients with chronic atrophic gastritis and gastric cancer. ***Methods*** A total of 76 patients who underwent gastroscopy in our hospital from January 2020 to June 2021 were selected. According to the results of gastric examination, 48 cases were in chronic atrophic gastritis group and 28 cases in gastric cancer group. Another 30 healthy subjects were selected as the control group. The 13C urea breath diagnostic test was used to identify the infection of H. pylori, and the serum levels of PGⅠ, PGⅡ and gastrin 17 were detected by ELISA. ***Results*** The general data of the three groups of patients were compared,*P*>0.05, which was comparable. The levels of PGI and PGII in the chronic atrophic gastritis group and gastric cancer group were significantly lower than those in the control group (*P*<0.05), and the levels of PGI and PGII in the gastric cancer group were significantly lower than those in the chronic atrophic gastritis group (*P*<0.05). The level of gastrin-17 was significantly higher than that in the chronic atrophic gastritis group and the control group (*P*<0.05). The levels of PGI and PGII in HP positive patients were significantly lower than those in HP negative patients (*P*<0.05), and the gastrin-17 level in HP positive patients was significantly higher than that in HP negative patients(*P*<0.05).***Conclusion*** The method of detecting PGⅠ, PGⅡ and G-17 can be used in the screening of clinical gastric cancer and atrophic gastritis, and it is worthy of popularization and application in clinical practice.

Keywords: Chronic Atrophic Gastritis; Gastric Cancer; PGⅠ; PGⅡ; Gastrin 17

胃癌(GC)为常见恶性肿瘤之一，主要来源于胃黏膜细胞。尽管近年来中国的发病率一直在下降，但仍远高于全球平均水平[1]。慢性萎缩性胃炎(CAG)是一种炎症性疾病，其特征在于胃腺结构的丧失，这些结构被非化生性萎缩或化生性萎缩所取代[2-3]。从幽门螺杆菌(H. pylori)相关的胃粘膜慢性炎症开始的多步骤过程会发展为 CAG、肠化生、发育不良，最后导致胃癌[4]。胃蛋白酶原(PG)对胃癌癌前病变之一的慢性萎缩性胃炎的筛查具有重要意义[5]。PG和胃泌素-17(gastrin-17)与胃黏膜病变的发展密切相关，反映胃黏膜萎缩，可以更好地预测胃癌的风险[6-7]。因此本研究拟探究慢性萎缩性胃炎、胃癌患者血清PGⅠ、PGⅡ及胃泌素17水平变化及意义，为临床治疗提供更多参考依据。

1 资料与方法

1.1 研究对象 选取2020年1月至2021年6月本院收治接受胃镜检查患者76例。均接受胃镜检查检查，符合萎缩性胃炎、胃癌的诊断标准；未合并其他肠道疾病；初诊患者，之前未接受相关抗肿瘤治疗以及1个月内未使用抗生素，PPI，铋剂等药物治疗。根据病理结果进行分组，即慢性萎缩性胃炎组 48 例，胃癌组 28例。另选取同期健康体检者30例为对照组。

1.2 观察指标 抽取5mL空腹静脉血，离心后收集血清。然后通过酶联免疫吸附试验(ELISA)检测血清PGⅠ、PGⅡ、gastrin-17(G-17) 。检测试剂均购自惠安生物科技公司(中国深圳)。采取13C尿素呼气诊断试验鉴定 H.pylori 的感染，检测呼气样本中12C/13 C比值(δ 值)，阳性表示呼气后 δ 值减去呼气前 δ值之差>4，反之阴性。

1.3 统计学处理 使用SPSS 21.0进行分析实验数据，计量资料以($\bar{x}\pm s$)表示，t检验，多组比较用F检验，计数资料以例数或率表示，χ^2检验，多组分级资料比较采用Kruskal Wallis秩和检验，以*P*<0.05表示组间存在差异性。

2 结 果

2.1 各组患者一般资料对比 3组患者一般资料对比，差异无统计学意义(*P*>0.05)，具有可比性。见表 1。

2.2 各组患者PGⅠ、PGⅡ、gastrin-17水平对比 慢性萎缩性胃炎组和胃癌组PGⅠ、PGⅡ水平显著低于对照组(*P*<0.05)，胃癌组PGⅠ、PGⅡ水平显著低于慢性萎缩性胃炎组(*P*<0.05)，胃癌组gastrin-17水平显著高于慢性萎缩性胃炎组和对照组(*P*<0.05)，见表2。

2.3 HP感染与PGⅠ、PGⅡ、gastrin-17水平的关系 HP阳性患者PGⅠ、PGⅡ水平显著低于HP-IgG阴性(*P*<0.05)， HP阳性患者gastrin-17水平显著高于HP阴性(*P*<0.05)。见表3。

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表1 各组患者一般资料对比

指标		对照组(n =30)	慢性萎缩性胃炎组(n =48)	胃癌组(n=28)	F	P
年龄		48.76±7.09	46.63±7.12	48.87±8.54	1.844	0.163
性别	男	17	26	15	0.067	0.967
	女	13	22	13		
体质量指数(kg/m^2)		22.54±4.12	23.16±4.09	21.76±4.04	1.045	0.355

表2 各组患者PGⅠ、PGⅡ、gastrin-17水平对比

指标	对照组(n =30)	慢性萎缩性胃炎组(n =48)	胃癌组(n=28)	F	P
PGI(μg/L)	114.54±16.23	67.34±10.98	36.54±5.32	331.288	<0.001
PGII(μg/L)	21.26±8.15	15.32±6.12	7.43±3.54	35.626	<0.001
gastrin-17(pmol/L)	11.54±6.31	10.43±3.76	18.54±6.90	20.553	<0.001

表3 HP感染与PGⅠ、PGⅡ、gastrin-17水平的关系

指标	HP阳性(n =64)	HP阴性(n =42)	t	P
PGI(μg/L)	58.34±9.46	103.43±14.65	19.271	<0.001
PGII(μg/L)	10.32±1.76	17.54±4.76	11.059	<0.001
gastrin-17(pmol/L)	18.53±4.32	13.47±2.96	6.633	<0.001

3 讨 论

目前已有研究提出了人类肠型胃癌的分期模型，正常胃黏膜发展为慢性浅表性胃炎，然后发展为慢性萎缩性胃炎、肠化生、异型增生、早期胃癌，最后发展为晚期胃癌[8]。CAG是一种常见的消化系统疾病。如果不积极治疗，可能会诱发胃癌[9]。CAG胃黏膜上皮损伤程度与黏膜腺体水平存在关系，损伤越重，黏膜腺体水平越少，或伴有肠化生和/或假幽门化生[10]。2014年多中心流行病学调查显示，目前中国CAG患病率较高，约为25.8%[11]。CAG与H pylori感染、环境因素、遗传因素有关，其中H pylori感染是该病的主要致病原因[12]。CAG患者无明显临床症状，可能出现上腹痛、恶心、食欲不振等症状[13]。随着病情的发展，CAG患者可能出现黏膜肌层增厚、肠化生等病理变化，增加患癌风险[14]。

胃蛋白酶是一种由胃腺细胞分泌的肽酶[15]，通过肽键水解的方式分解蛋白质。当它与其他胃内容物一起从胃中泄漏出来时，胃蛋白酶破坏粘膜组织[16]，通过间隙连接，胃蛋白酶会损害上皮屏障[17]。胃泌素是一种肽激素，主要负责增强胃粘膜生长、胃动力和盐酸分泌到胃中[18]。它存在于胃窦和十二指肠的 G 细胞中。胃泌素主要响应迷走神经和胃泌素释放肽 (GRP) 的刺激而释放，该刺激继发于肽、氨基酸、胃扩张和胃pH值升高[19-20]。相反，由于生长抑素的旁分泌抑制和胃pH值降低，胃泌素释放减少[21]。胃泌素被分泌到血液中并被运送到胃底和心脏，在那里发现了大部分分泌盐酸的壁细胞[22]。盐酸是胃蛋白酶必需物质，它有助于胃中的蛋白质消化和唾液R蛋白载体中钴胺素(维生素 B12)的释放[23-24]。测定胃泌素的主要临床适应症是诊断产生胃泌素的肿瘤胃泌素瘤[25]。此外，已有研究表明胃泌素可能在某些癌症(如胃癌)中起作用[26]。本研究中慢性萎缩性胃炎组和胃癌组PGⅠ、PGⅡ水平显著低于对照组，胃癌组PGⅠ、PGⅡ水平显著低于慢性萎缩性胃炎组，胃癌组gastrin-17 水平显著高于慢性萎缩性胃炎组和对照组。提示gastrin-17 水平越高，胃黏膜上皮细胞病变程度越重。本研究HP阳性患者PGⅠ、PGⅡ水平显著低于HP阴性， HP阳性患者gastrin-17水平显著高于HP阴性。提示HP感染可使患者的PGⅠ、PGⅡ水平降低，gastrin-17值升高。

综上所述，检测PGⅠ、PGⅡ和 G-17 的方式可用于临床胃癌及萎缩性胃炎的筛选中，值得在临床中推广应用。

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