

· 论 著 ·

常规胃镜检查时肉眼观察和胃黏膜组织病理学改变的相关性研究

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[摘要] 目的: 分析胃镜检查时胃黏膜肉眼观察和组织学检查结果之间的相关性, 以评估胃镜检查时胃黏膜活检的必要性。

方法: 收集我院 2005 年 1~12 月因上消化道症状在内镜中心接受胃镜检查的门诊患者。选择连贯的病例入组, 每组患者包括反流性食管炎、非萎缩性胃炎、萎缩性胃炎、胃溃疡和十二指肠溃疡, 同组患者在年龄、性别和病史等方面相互匹配, 共 320 例。胃黏膜肉眼评估由 2 位有经验的内镜检查医师共同进行, 评估的指标包括渗出、充血、糜烂、光滑程度和胃内胆汁反流等; 活检组织学检查由同一位病理医师执行, 报告的指标包括活动性炎症、慢性炎症、萎缩、肠化生和不典型增生等; 幽门螺杆菌 (HP) 的诊断基于活检标本的快速尿素酶试验、组织改良银染色和组织学检查结果, 其中 2 项以上阳性作为判定标准。结果: HP 感染、糜烂、渗出和黏膜粗糙对于活动性炎, HP 感染和黏膜糜烂对于慢性炎症, 黏膜粗糙对于肠化生, HP 感染和黏膜粗糙对于萎缩, 陈旧出血点、HP 感染、黏膜粗糙和胆汁反流对于不典型增生有一定预测价值。肉眼诊断萎缩性胃炎的正确率仅为 71.9%。假阳性率为 28.2%; 肉眼诊断非萎缩性胃炎的正确率仅为 75.62%, 漏诊率为 34.38%。结论: 肉眼观察结果对胃黏膜组织病理学检查结果有一定的提示作用, 但预测价值较低, 缺乏足够的相关性。内镜下肉眼观察不能代替黏膜组织学检查。

[关键词] 内镜; 病理学; 胃炎; 消化道溃疡; 肠化生

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Consistency between histopathological results of routine endoscopy and biopsy in observing gastric mucosa of patients with non-malignant gastroduodenal diseases

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[ABSTRACT] **Objective:** To analyze the consistency between the histopathological results of routine endoscopy and biopsy in observing the gastric mucosa of patients with non-malignant gastroduodenal diseases, and to evaluate the necessity of biopsy following gastric endoscopy. **Methods:** From Jan. 2005 to Dec. 2005, 320 patients who received upper gastrointestinal endoscopy and biopsy because of upper abdominal symptoms were included in this study. The patients were selected consecutively according to their disorders diagnosed by macroscopic endoscopy and were divided into 64 groups. The 5 patients in each group had reflux esophagitis, non-atrophic gastritis, atrophic gastritis, gastric ulcer and duodenal ulcer, respectively. Patients in the same group were matched with each other in gender, age and their history of diseases. The results of endoscopy, including the exudation, congestion, erosion, roughness, bile reflux, etc., were read by 2 experienced endoscopists. The biopsy was performed by an experienced pathologist and pathological variables included active inflammation, chronic inflammation, atrophy, intestinal metaplasia and atypical hyperplasia. The status of *Helicobacter pylori* (*H. pylori*) infection was evaluated by rapid urea test, silver staining and histological methods; the result was deemed positive when the results of either 2 tests were positive. **Results:** Erosion, exudation, roughness, and *H. pylori* infection were related with active inflammation; erosion and *H. pylori* infection were related with chronic inflammation; roughness of mucosa was related with atrophy; roughness and *H. pylori* infection were related with intestinal metaplasia; and obsolete hemorrhage, *H. pylori* infection, roughness mucosa, and bile reflux were related with atypical hyperplasia. Macroscopic diagnosis rate of atrophic gastritis was 71.9% (46/64) with a false positive rate of 28.2% (18/64) and a false negative rate of 34.38% (22/64). **Conclusion:** Macroscopic diagnosis is indicative to pathological changes of gastric mucosa, but the predictive value is relatively poor, making biopsy and pathological examination necessary in the diagnosis of gastric mucosa disorders during routine endoscopic examination.

[KEY WORDS] endoscopy; pathology; gastritis; peptic ulcer; intestinal metaplasia

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胃镜是上消化道疾病的首选检查方法, 结合胃镜检查同时进行的胃黏膜活检标本的组织病理学检查是诊断上消化道疾病, 特别是筛查恶性肿瘤的最可靠、最客观的“金标准”。因此, 胃镜检查同时进行

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胃黏膜活检是公认的规范操作^[1~3]。然而,胃黏膜活组织检查属于一种侵入性、创伤性检查,理论上可以增加并发症的机会,以及血液传播疾病如病毒性肝炎、爱滋病等的交叉感染机会,因此医患双方对此均存在一定程度的顾虑^[4,5]。然而,内镜下肉眼观察结果对胃黏膜病理学改变有否重要的提示作用,两者间的相关程度如何,尚不完全清楚。我们进行了一项前瞻性的研究,旨在分析胃镜检查时,胃黏膜肉眼观察和组织学检查结果之间的相关性,以分析胃镜检查时肉眼观察结果对胃黏膜组织学改变的预测价值,评估内镜检查同时进行活检的必要性。

1 对象和方法

1.1 研究对象 2005年1~12月间,在我院内镜中心接受胃镜检查的门诊有上消化道症状的患者中,按照随机原则,对于每一种上消化道疾病诊断的患者,选择符合研究标准的连贯的病例入组,每组患者包括反流性食管炎、非萎缩性胃炎、萎缩性胃炎、胃溃疡和十二指肠溃疡,同组患者在年龄、性别和病史等相互匹配。

1.2 胃黏膜肉眼观察和评估 参照上消化道内镜检查常用的描述方法^[6~8],肉眼胃黏膜评估由2位有经验的内镜检查医师共同进行,评估的指标包括渗出、充血、糜烂、光滑程度和胃内胆汁反流等;每项指标按严重程度分为4个等级:0,没有明显征象;1,经仔细审视和2位内镜医师讨论认为确有必要观察的指标;2,即刻就能发现的明显的病理改变征象;3,特别明显的改变,给检查者以强烈的印象。

1.3 胃黏膜活检及组织病理学检查 胃黏膜活检以及组织病理学诊断规范参照新悉尼标准^[9]。活检部位选在胃窦部,距幽门2~4 cm处,于大弯侧、小弯侧、前壁和后壁各取胃黏膜1块,即刻投入5%的

甲醛溶液固定,石蜡包埋后切片,H-E染色,由同一位组织病理医师进行光学显微镜检查。病理医师不被告知内镜下胃黏膜的肉眼评估和临床诊断。病理学检查和报告的指标包括活动性炎症、慢性炎症、萎缩、肠化生和不典型增生等。各项指标的严重程度按修订的悉尼标准分为4个等级:0,无;1,轻度;2,中度;3,重度。

1.4 幽门螺杆菌(HP)感染的判定 HP的诊断基于活检标本的快速尿素酶试验、组织改良银染色和组织学检查结果,其中2项以上阳性作为HP感染的判定标准。

1.5 统计学处理 各种肉眼评估指标的严重程度与病理学诊断指标的严重程度之间的相关性以及肉眼观察对病理学改变的预测价值以相关系数来分析。内镜检查时即刻给出的不同诊断之间,病理改变诊断结果之间的差异采用成对样本的 t 检验来评判。

2 结果

2.1 一般资料 共有320病例纳入研究,中位年龄48岁(21~69岁),分别属于年龄、性别、病史相匹配的64组,每组包括胃镜检查时即刻诊断为反流性食管炎、非萎缩性胃炎、萎缩性胃炎、胃溃疡和十二指肠溃疡的患者各1例。

2.2 内镜下肉眼观察指标与组织病理学指标的相关性 对胃黏膜病理改变有预测价值的内镜下肉眼观察指标分别有:HP感染、糜烂和黏膜渗出对于活动性炎;黏膜粗糙对于萎缩;HP感染和黏膜粗糙对于肠化生;陈旧出血点对于不典型增生($P<0.05$,表1)。而通常高频度出现在内镜检查报告中的充血描述对各项胃黏膜病理学改变均没有确定的预测价值。

表1 内镜下肉眼观察指标与组织病理学指标的相关系数

Tab 1 Coefficients between endoscopic descriptions and pathologic descriptions

($n=3, \bar{x} \pm s, \rho_B/\text{ng} \cdot \text{ml}^{-1}$)

Endoscopic descriptions	Pathologic descriptions				
	Active inflammation	Chronic inflammation	Atrophy	Intestinal metaplasia	Dysplasia
Effusion	0.151 962 *	0.047 356	-0.054 98	-0.012 85	-0.012 9
Hyperaemia	0.12	0.06	0.01	0	0.03
Erosion	0.277 7 *	0.114 1	0.018 9	0.028 9	-0.021
Roughness	0.102 2	0.032 6	0.185 6 *	0.163	0.052
Stale bleeding sites	0.007 648 87	-0.033 543 7	-0.035 291 7	-0.068 309 6	0.252 425 7 *
Bile reflux	0.040 202 96	0.004 887 62	0.038 303 72	0.036 386 09	0.041 312 3
<i>H. pylori</i>	0.513 049 79 *	0.378 545 31	0.032 644 5	0.128 056 6	0.072 943 9

* $P<0.05$

2.3 HP感染与组织病理改变的关系 所有患者中HP感染率为58.44%(187/320)。按有无HP感染将所有病例分为2组。胃黏膜病理改变中活动性炎症和慢性炎症项的病理评分均值在HP阳性组和阴性组之间差异有统计学意义(表2)。

2.4 胆汁反流与组织病理学的关系 所有患者中存在胃内胆汁反流者为17.5%(56/320)。按有无胆汁反流将所有病例分为2组。两组之间胃黏膜病理改变的评分均值之间的差异无统计学意义(表2)。

表2 不同HP感染状态以及有无胆汁反流病例胃黏膜病理改变评分均值比较

Tab 2 Pathologic grades between different *H. pylori* infections and bile reflux statuses

($n=3, \bar{x} \pm s, \rho_B/\text{ng} \cdot \text{ml}^{-1}$)

Index	Active inflammation	Chronic inflammation	Atrophy	Intestinal metaplasia	Dysplasia
<i>H. pylori</i> positive	1.27±0.03*	2.29±0.03*	0.89±0.03	0.42±0.02	0
<i>H. pylori</i> negative	0.37±0.02*	1.64±0.02*	0.95±0.03	0.52±0.03	0.01±0.01
Bile reflux positive	0.75±0.2	1.875±0.2	1.025±0.9	0.58±0.82	0±0
Bile reflux negative	0.68±0.2	1.889±0.2	0.916±0.2	0.625±0.04	0.01±0.01

* $P < 0.001$

2.5 内镜检查的准确性 64例被内镜检查诊断为萎缩性胃炎患者经胃黏膜组织病理学检查证实只有46例为组织学有证据的萎缩性胃炎,诊断正确率为71.9%,假阳性率为28.1%;64例在内镜检查即可被诊断为非萎缩性胃炎的患者中有22例经组织学检查证实存在胃黏膜萎缩改变,假阴性率为34.4%。

素还包括内镜本身的质量、内镜检查时的注气量、内镜医师的操作方法与经验等多种因素,提示内镜下肉眼观察描述对胃黏膜病理改变的预测作用很难满足临床治疗决策参考的需要。提示现阶段内镜检查时的活组织检查对于了解胃黏膜病理改变情况仍然是必要的。研究结果显示,在内镜检查报告文字描述中出现频率最高的“充血”描述与任何一项病理改变描述之间均无统计学意义的相关性,提示这一描述对于理解胃黏膜病理改变的特点没有特异性的帮助和提示。

3 讨论

胃镜是上消化道疾病诊断的首选检查方法,内镜检查同时进行活组织取材和组织病理学检查对于恶性肿瘤的早期诊断、恶性肿瘤筛查以及高危人群的监控均非常重要^[1,2]。流行病学资料显示,常规内镜检查及其消化道黏膜活检的病理学检查对于消化不良人群也具有重要价值^[3]。然而,胃黏膜活组织检查毕竟是一种侵入性的检查手段,理论上可能会增加出血、溃疡、交叉感染,甚至穿孔等并发症的危险,因而带来某些医患人员的顾虑,由此产生一些医学或伦理的问题。内镜下的大体观察对于胃黏膜炎症或更加严重的病理改变有一定的提示作用^[3]。对于胃黏膜炎症较轻的患者能否通过提高肉眼诊断的准确性和对病理改变的相关性,来减少这部分患者胃镜检查时的活检操作,目前尚缺乏足够的研究数据。

研究结果中,尽管HP感染仅与活动性炎症之间的相关性有统计学上的显著意义,但与慢性炎症、肠化生以及不典型增生等有相对较大的相关系数。推测原因,可能因为这些病理改变特征受多因素,如胃酸作用、胆汁反流及患者自身反应性的影响^[9~12]。另外,有无HP感染组之间,胃窦黏膜活动性炎症和慢性炎症2项病理学改变的差异有统计学显著性。这些结果提示HP感染是胃黏膜相关病理改变的重要病因。与国外同类研究的结果相似^[10,13,14]。

我们的研究结果提示,内镜检查时肉眼观察的描述对于胃黏膜病理改变有一定的提示作用。其中,黏膜表面有渗出、糜烂和粗糙(不光滑)对活动性炎症有较好的预测价值;黏膜粗糙对于萎缩有较好的预测价值。然而,由于本结果中相关系数均较小,而且,影响胃镜观察与胃黏膜活检病理相关性的因

文献报道,胆汁反流可以引起胃黏膜显著的病理改变^[11,15]。然而,我们现在的研究结果中,胃腔内存在胆汁反流与胃窦黏膜病理改变特征之间的相关性也没有达到统计学有意义的水平,有无胆汁反流组胃窦黏膜病理改变之间的差异也没有达到统计学显著性,这与我们以往的研究相似,可能胆汁反流对于近端胃(胃体)黏膜病理改变的影响更加容易体现出来^[12]。

研究结果显示,胃镜检查时,被肉眼诊断的萎缩

性胃炎,只有71.9%的正确率,假阳性率为28.1%,而诊断为非萎缩性胃炎者中,只有65.6%的正确率,黏膜萎缩的假阴性率高达34.4%。提示肉眼观察在判断胃黏膜是否萎缩方面存在较大的误差。

总之,我们的研究数据表明,尽管胃镜检查时肉眼描述对于胃黏膜病理改变特征有一定的提示作用,然而,其预测价值较低,尚不能满足临床工作的需要,因此,内镜检查医生的大体判断和描述的准确性有待进一步提高。现阶段,为了准确理解胃黏膜病理改变特征,内镜诊断同时常规进行胃黏膜取材和病理学检查仍然是必需的。

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Reduction of atherosclerosis in cholesterol-fed rabbits and decrease of expressions of intracellular adhesion molecule-1 and vascular endothelial growth factor in foam cells by a water-soluble fraction of *Polygonum multiflorum*

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[ABSTRACT] *Polygonum multiflorum* stilbeneglycoside (PMS) is a water-soluble fraction of *Polygonum multiflorum* Thunb., one of the most famous tonic traditional Chinese medicines, that has protective effects on the cardiovascular system. The purpose of the present study is to elucidate the effects of PMS on macrophage-derived foam cell functions and the reduction of severity of atherosclerosis in hypercholesterolemic New Zealand White (NZW) rabbits. NZW rabbits were fed for 12 weeks with a normal diet, a high cholesterol diet, or a high cholesterol diet associated with irrigation with different doses of PMS (25, 50, or 100 mg/kg). Treatment of NZW rabbits fed with high cholesterol diet with 100 mg/kg PMS attenuated the increase in plasma cholesterol, low-density lipoprotein cholesterol, very low-density lipoprotein cholesterol, and plasma triglyceride. Treatment with 50 and 100 mg/kg PMS caused 43% and 60% decrease in atherosclerotic lesioned area ratio to total surface area, respectively. In U937 foam cells, PMS could decrease the high expression of intercellular adhesion molecule (ICAM)-1 protein and the vascular endothelial growth factor (VEGF) protein levels in the medium induced by oxidized lipoprotein when analyzed by flow cytometry. The results proved that PMS is a powerful agent against atherosclerosis and that PMS action could possibly be through the inhibition of the expression of ICAM-1 and VEGF in foam cells.

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