

探讨老年胃癌患者胃液中TNF- α , CA19-9和CEA联合检测的临床价值

李明, 刘顺英, 李卫东, 江洁, 潘金泉, 叶正龙, 常尉文, 张文清

■背景资料

目前关于血液中胃肠道肿瘤标志物联合检测报道较多, 但对于胃液中指标研究较少, 且临床价值意义评价不一。

李明, 潘金泉, 叶正龙, 常尉文, 张文清, 江苏油田总医院消化内科 江苏省扬州市 225261

刘顺英, 李卫东, 江洁, 东南大学附属中大医院消化科 江苏省南京市 210009

通讯作者: 李明, 225261, 江苏扬州江都市, 江苏油田总医院消化内科. shao_bo_ren1@163.com

电话: 0514-6762455

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Clinical value of combined detection of tumor necrosis factor- α , carbohydrate antigen 19-9 and carcinoembryonic antigen in gastric fluid of elderly patients with gastric cancer

Ming Li, Shun-Ying Liu, Wei-Dong Li, Jie Jiang, Jin-Quan Pan, Zheng-Long Ye, Wei-Wen Chang, Wen-Qing Zhang

Ming Li, Jin-Quan Pan, Zheng-Long Ye, Wei-Wen Chang, Wen-Qing Zhang, Department of Gastroenterology, Oilfield General Hospital, Yangzhou 225261, Jiangsu Province, China

Shun-Ying Liu, Wei-Dong Li, Jie Jiang, Department of Gastroenterology, the Affiliated Zhongda Hospital of Southeast University, Nanjing 210009, Jiangsu Province, China

Correspondence to: Ming Li, Department of Gastroenterology, Oilfield General Hospital, Yangzhou 225261, Jiangsu Province, China. shao_bo_ren1@163.com

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Abstract

AIM: To explore the clinical valued of combined detection for tumor necrosis factor- α (TNF- α), carbohydrate antigen 19-9 (CA19-9) and carcinoembryonic antigen (CEA) in the gastric fluid of elderly patients diagnosed with gastric cancer.

METHODS: A total of 103 patients underwent upper gastrointestinal endoscopic examination were classified as follows: gastric cancer ($n = 42$), superficial gastritis ($n = 30$), atrophy gastritis with various degrees of intestinal metaplasia or atypical hyperplasia ($n = 31$). The levels of TNF- α , CA19-9 and CEA in gastric fluid were

examined, respectively, using immunoradiometric assay (IRMA).

RESULTS: The levels of TNF- α , CA19-9 and CEA in gastric fluid were significantly elevated in patients with gastric cancer than those in ones with benign gastric diseases (8.96 ± 2.10 mg/L vs 4.92 ± 1.24 , 5.66 ± 1.25 mg/L; 59.47 ± 10.58 IU/L vs 36.89 ± 11.23 , 38.73 ± 9.23 IU/L; 31.68 ± 5.58 mg/L vs 17.55 ± 3.82 , 19.42 ± 5.19 mg/L, all $P < 0.001$). The sensitivity and specificity of combined detection for TNF- α , CA19-9 and CEA were 97.4% and 89.3%, respectively, which were markedly higher than those of any sinle index detection.

CONCLUSION: Combined detection of TNF- α , CA19-9 and CEA can improve the diagnosis of gastric cancer in the elderly patients.

Key Words: Immunoradiometric assay; Gastric cancer; Tumor necrosis factor- α ; Carbohydrate antigen 19-9; Carcinoembryonic antigen antigen; Combined detection

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摘要

目的: 探讨老年患者胃液中TNF- α , CA19-9和CEA联合检测对胃癌的诊断价值。

方法: 采用放射免疫技术测定42例胃癌和61例良性胃病老年患者胃液中TNF- α , CA19-9和CEA浓度。

结果: 胃癌组胃液中TNF- α , CA19-9和CEA的浓度显著高于良性胃病组(8.96 ± 2.10 mg/L vs 4.92 ± 1.24 , 5.66 ± 1.25 mg/L; 59.47 ± 10.58 IU/L vs 36.89 ± 11.23 , 38.73 ± 9.23 IU/L; 31.68 ± 5.58 mg/L vs 17.55 ± 3.82 , $19.42 \pm$

5.19 mg/L, 均 $P<0.001$); 胃癌组联合检测胃液中TNF- α , CA19-9和CEA, 其敏感度和特异度分别97.4%, 89.3%, 均明显高于单项指标的敏感度和特异度。

结论: 联合检测胃液中TNF- α , CA19-9和CEA能有助于提高胃癌的诊断。

关键词: 固相免疫放射分析法; 胃癌; 肿瘤坏死因子 α ; 糖链抗原19-9; 癌胚抗原; 联合检测

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0 引言

现阶段关于胃肠道肿瘤标志物联合检测报道较多, 临床价值意义评价不一. 我们尝试联合检测老年胃癌及良性胃病患者胃液中TNF- α , CA19-9, CEA的水平, 以期获得较高的敏感度、特异度和诊断准确率。

1 材料和方法

1.1 材料 选择我院2004-01/12的门诊患者103例, 男49例(47.6%), 女54例(52.4%). 年龄60-87(69.7 \pm 6.4)岁. 其中浅表性胃炎(甲组)30例, 萎缩性胃炎伴不同程度肠化生、不典型增生(乙组)31例, 各期胃癌(丙组)42例. 均经胃镜及病理学检查确诊. GC-911型 γ 放射免疫计数器由科大创新股份有限公司中佳分公司提供; 125 I-肿瘤坏死因子 α (TNF- α)放射免疫分析药盒、 125 I-糖类抗原19-9放射免疫分析药盒、 125 I-癌胚抗原(CEA)放射免疫分析药盒均由北京北免东雅生物技术研究提供. 按说明书操作, 并进行质量控制。

1.2 方法 每例患者均在当天检查前空腹8 h以上. 于胃镜检查时直视下用导管抽取胃液5 mL, 氢氧化钠调整pH为7.0, 以4000 r/min离心10 min后取上清液2 mL -70℃冻存待测. 剔除胃液中有明显血液、胆汁者. TNF- α , CA19-9和CEA测定用IRMA法, 采用GC-911型 γ 放射免疫计数器对本进行检测. 胃液参考值采用胃良性患者组(乙组)总体均数95%可信区间的上限作为阳性值标准, 计算出TNF- α , CA19-9, CEA分别为6.12 mg/L, 42.11 IU/L, 21.32 mg/L。

统计学处理 使用SPSS 11.5统计软件对数据进行分析, 计量资料用mean \pm SD表示, 两组计量资料的比较使用 t 检验, 多组计量资料的比较使

表 1 老年患者胃液中各项指标的检测水平比较(mean \pm SD)

分组	<i>n</i>	TNF- α (mg/L)	CA19-9 (IU/L)	CEA (mg/L)
甲	30	4.92 \pm 1.24	36.89 \pm 11.23	17.55 \pm 3.82
乙	31	5.66 \pm 1.25	38.73 \pm 9.23	19.42 \pm 5.19
丙	42	8.96 \pm 2.10 ^b	59.47 \pm 10.58 ^b	31.68 \pm 5.58 ^b

^b $P<0.001$ vs 甲组、乙组。

表 2 老年患者胃液中各项指标检测结果的评价指标

检测指标	灵敏度(%)	特异度(%)	阳性预期值(%)	阴性预期值(%)	阳性似然比
TNF- α	69.1	75.4	65.9	77.9	2.81
CA19-9	65.7	67.2	58.3	74.6	2.03
CEA	61.9	70.5	59.1	72.9	2.09

表 3 老年患者胃液中各项指标的联合检测

组合方式	灵敏度(%)	特异度(%)	阳性预期值(%)	阴性预期值(%)	阳性似然比
1, 2	69.8	72.5	61.7	72.2	2.23
1, 3	73.7	76.2	77.9	74.3	3.02
2, 3	68.2	71.3	60.2	71.4	2.18
1, 2, 3	97.4	89.3	93.4	85.3	3.96

1: TNF- α ; 2: CA19-9; 3: CEA.

用方差分析, $P<0.05$ 认为有显著性统计学差异。

2 结果

2.1 胃液中各项指标的检测水平比较及检测结果评价指标 胃癌组与胃良性病变组相比, 数值有明显的差异(P 均 <0.001); 胃良性病变组之间无统计学意义($P>0.05$, 表1). 胃液各指标中TNF- α 的灵敏度、特异度、阳性预期值、阴性预期值和阳性似然比均高于CA19-9和CEA(表2).

2.2 胃液中各项指标的联合检测 胃液中各项指标联合检测, 以TNF- α , CA19-9和CEA 3者组合诊断效能最高(表3).

3 讨论

消化道肿瘤早期多无明显症状和体征, 部分患者就诊时已失去治疗机会, 因此早期诊断十分重要. 国内外有用单一肿瘤标志物检测消化道肿瘤的报道, 但诊断阳性率都不高. van Eeden *et al*^[1]指出与血液中CEA相比, 胃液中CEA检测对于胃癌诊断具有更大的价值. 而联合检测胃

■创新盘点

本研究检测老年胃癌患者胃液中TNF- α , CA19-9, CEA的水平, 并探讨了不同组合的敏感度、特异度, 此组合方式在国内外未见相同报道。

■同行评价

本文报道了老年胃癌患者胃液中TNF- α 、CA19-9和CEA联合检测的临床价值,具有一定的可读性。

液中的肿瘤标志物是诊断消化道肿瘤新的尝试^[2-3]。胃液中CA19-9和CEA都是较好的消化道肿瘤标志物^[4],而TNF- α 作为致炎因子在胃癌的发生、发展中起着重要的作用,他是内源性的肿瘤促进剂^[5]。胃液各指标中TNF- α 的灵敏度、特异度、阳性预期值、阴性预期值和阳性似然比均高于CA19-9和CEA。但其单独应用诊断效果仍然偏低,而联合检测可提高其敏感度、特异性,增加胃癌诊断的准确度^[3,6]。研究证明^[2-3,6-7],将数种标志物按一定方式进行联合检测可起到优势互补的作用,可明显提高胃癌诊断的准确度。本研究结果提示,虽然两项指标联合测定能够提高胃癌诊断的灵敏度,但胃液中TNF- α 、CEA、CA19-9三者同时检测的组合方式可获得更高的灵敏度和特异度,能够提高胃癌诊断的准确度,是临床诊断胃癌的一种有效的辅助手段。

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