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· 临床研究 ·

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【摘要】 目的 通过对伴有和不伴有食管外 (extra-esophageal, EE) 症状的反流性食管炎 (reflux esophagitis, RE) 患者的一般人口学资料、生活方式、饮食习惯、合并症、目前用药、焦虑、抑郁等方面的比较, 探讨 EE 症状发生的危险因素。**方法** 选取 2016 年 9 月到 2017 年 8 月于首都医科大学宣武医院消化科门诊就诊, 并于胃镜下明确诊断为 RE 的 361 例患者为研究对象, 以是否存在 EE 症状, 将其分为伴 EE 症状组和不伴 EE 症状组。采用问卷调查的方法对其进行一般人口学资料、生活方式、饮食习惯、合并症、目前用药、患者健康问卷-9 (Patient Health Questionnaire-9, PHQ-9) 抑郁量表、广泛性焦虑障碍-7 (General Anxiety Disorder-7, GAD-7) 焦虑量表、胃食管反流病量表 (Gastroesophageal Reflux Disease Questionnaire, GerdQ)、反流症状指数评分等方面的调查。**结果** 361 例 RE 患者中, 伴 EE 症状者 218 例, 以咽部异物感、反复咽喉痛及慢性咳嗽多见, 分别占 52.75%、46.79% 和 26.15%。单因素分析显示, 两组患者在低教育水平、吸烟、便秘、高体质量指数 (body mass index, BMI)、焦虑及抑郁方面, 差异存在统计学意义 ($P < 0.05$)。多元 Logistic 回归分析显示, 低教育水平 ($OR: 1.646, 95\% CI: 1.049 \sim 2.572, P < 0.05$)、吸烟 ($OR: 2.488, 95\% CI: 2.047 \sim 3.281, P < 0.01$)、高 BMI ($OR: 1.067, 95\% CI: 1.004 \sim 1.135, P < 0.05$)、抑郁 ($OR: 1.062, 95\% CI: 1.002 \sim 1.133, P < 0.05$) 及焦虑 ($OR: 1.061, 95\% CI: 1.001 \sim 1.131, P < 0.05$) 是 RE 患者发生 EE 症状的危险因素。**结论** RE 患者以咽部异物感、反复咽喉痛及慢性咳嗽为主要 EE 症状; 低教育水平、高 BMI、吸烟、抑郁和焦虑是 RE 患者发生 EE 症状的危险因素。

【关键词】 反流性食管炎; 食管外症状; 焦虑; 抑郁; 危险因素

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Analysis of risk factors in patients with reflux esophagitis with extra-esophageal symptoms

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【Abstract】 Objective To determine the risk factors of the reflux esophagitis (RE) with extra-esophageal (EE) symptoms by comparing general demographic information, lifestyle, eating habits, comorbidities, current medications, anxiety, depression of RE patients with and without EE symptoms. **Methods** The subjects of the study were seen in the Department of Gastroenterology, Xuanwu Hospital, Capital Medical University from September 2016 to August 2017 and were clearly diagnosed as RE under gastroscopy. There were 361 cases in total. They were divided into group with EE symptoms and group without EE symptoms. The patients were surveyed on General demographic information, lifestyle, eating habits, comorbidities, current medications, Patient Health Questionnaire-9 (PHQ-9) Depression Scale, General Anxiety Disorder-7 (GAD-7) Anxiety Scale, Gastroesophageal Reflux Disease Questionnaire (GerdQ) and Reflux Symptom Index (RSI). **Results** Among the 361 patients with RE, there were 218 patients with EE symptoms. Sensation of foreign body within the throat, recurrent sore throat and chronic cough were more common, accounting for 52.75%, 46.79% and 26.15% respectively. Univariate analysis showed that there were significant differences in low education level, smoking, constipation, high body mass index (BMI), anxiety, and depression ($P < 0.05$) between two groups. Multivariate Logistic regression analysis identified that low education level ($OR: 1.646, 95\% CI: 1.049 \sim 2.572, P < 0.05$), smoking ($OR: 2.488, 95\% CI: 2.047 \sim 3.281, P < 0.01$), high BMI ($OR: 1.067, 95\% CI: 1.004 \sim 1.135, P < 0.05$), depression ($OR: 1.062, 95\% CI: 1.002 \sim 1.133, P < 0.05$), anxiety ($OR: 1.061, 95\% CI: 1.001 \sim 1.131, P < 0.05$) were the risk factors of onset of EE symptoms in RE patients. **Conclusion** The main extra-esophageal symptoms of RE were sensation of foreign body within the throat and recurrent sore throat, chronic cough. Low education level, high BMI, smoking, depression and anxiety were risk factors of RE with extra-esophageal symptoms.

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【Key words】 reflux esophagitis; extra-esophageal symptoms; depression; anxiety; risk factors

(gastroesophageal reflux disease, GERD) [1], (reflux esophagitis, RE) GERD [2], RE 9.0% ~ 24.6%。 Barrett (Barrett's esophagus, BE), BE 0.5%, 85% [3], (extra-esophageal, EE) [1], RE EE, RE EE。

1 对象与方法

1.1 研究对象

2016 9 2017 8 RE (Los Angeles, LA) [4], A、B、C、D [5], <18 ; ; [4]。 RE EE EE。

1.2 资料收集及方法

RE , 361 。

1.2.1 基础资料

(、 、 、 、)、 (、 、 、 、)、 (、 、 、 、)、 (、) [4]。

1.2.2 胃食管反流量表(Gastroesophageal Reflux Disease Questionnaire, GerdQ) [6]

6 , 、 、 、 2。

、 0 ~ 18 。

1.2.3 患者健康问卷-9 (Patient Health Questionnaire-9, PHQ-9) 抑郁量表

2 , 0 ~ 27 , >4 [7]。

1.2.4 广泛性焦虑障碍-7 (General Anxiety Disorder-7, GAD-7) 焦虑量表

2 , 0 ~ 21 , >4 [7]。

1.2.5 反流症状指数 (Reflux Symptom Index, RSI) 评分

、 、 9 RSI , RSI > 13 [8], 、 。

1.3 统计学方法

SPSS 22.0 。 $(\bar{x} \pm s)$, t ; $M(P_{25}, P_{75})$, χ^2 。 Logistic , (OR) 95% (CI) 。 $P < 0.05$ 。

2 结果

2.1 伴 EE 症状组患者主要的食管外症状

361 RE , EE 218 、 EE 143 。 EE 52.75%、 46.79% 26.15% , 1。

2.2 两组 RE 患者胃镜下反流性食管炎分级比较

RE , EE LA-D EE , ($P > 0.05$) , LA-A、LA-B、LA-C ($P > 0.05$) ,

表 1 食管外症状组食管外症状的构成比
Tab. 1 The incidence of extra-esophageal symptoms in the group with extra-esophageal symptoms (n = 218)

Extra-esophageal symptoms	Frequency	Composition ratio/%
Sensation of foreign body within the throat	115	52.75
Recurrent sore throat	102	46.79
Chronic cough	57	26.15
Night cough	15	6.88
Asthma	15	6.88
Clearing throat	14	6.42
Hoarse voice	12	5.50
Secretion flowing down the posterior pharyngeal wall	11	5.05

表 2 两组胃镜下反流性食管炎分级比较
Tab. 2 Comparison of classification of reflux esophagitis under gastroscop between two groups n(%)

LA classification	Group with EE symptoms (n = 218)	Group without EE symptoms (n = 143)	χ^2	P
LA-A	34 (15.60)	24 (16.78)	0.090	0.764
LA-B	170 (77.98)	111 (77.62)	0.006	0.936
LA-C	9 (4.13)	7 (4.90)	0.120	0.730
LA-D	5 (2.29)	1 (0.70)	0.545	0.461

LA: Los Angeles; EE: extra-esophageal.

2.3 伴有食管外症状的反流性食管炎影响因素的单因素分析

本研究采用 Logistic 回归分析，以 EE 为因变量，年龄、性别、BMI、GerdQ 为自变量。结果显示，BMI、GerdQ 均与 EE 密切相关 (P < 0.05)，详见表 3。

2.4 两组焦虑、抑郁的比较

采用 GAD-7、PHQ-9 量表评估焦虑和抑郁。结果显示，EE 组焦虑和抑郁得分均显著高于 RE 组 (P < 0.05)，详见表 4。

2.5 RE 伴 EE 症状的影响因素的多因素分析

采用 Logistic 回归分析，以 RE 伴 EE 为因变量，年龄、性别、BMI、GerdQ 为自变量。结果显示，BMI、GerdQ 均与 RE 伴 EE 密切相关 (P 均 < 0.05)，详见表 5。

3 讨论

GERD 越来越引起人们重视，日益成为临床热点。根据糜烂程度，GERD 可分为非糜烂性反流病 (NERD) 和 RE^[1]。NERD 占 GERD 的 36.1%，从 EE 的构成来看，食管外症状

与国外研究^[1,9-10]基本一致。欧洲一项研究^[11]显示，13% 的 GERD 患者伴有食管外症状，由 Irwin^[12]提出的食管外症状系谱 (extra-esophageal symptom spectrum) 甚为相似。西方国家 85% 的 GERD 患者伴有食管外症状，其发病机制尚不清楚，普遍认为食管外症状是由胃酸直接刺激迷走神经丛共同作用结果^[1,13]。^[14]食管黏膜耐受每天 50 次胃酸刺激，每周 1 次胃酸刺激即造成黏膜气损伤，由此看来，食管外症状、胃酸刺激更敏感。食管外症状假设认为食管外症状是由胃酸或支气管理位引起，或食管下括约肌 (lower esophageal sphincter, LES) 上食管括约肌 (upper esophageal sphincter, UES) 止带^[15-16]，UES 压力 - 闭射止与触^[13]。UES 作用，国内研究^[17]显示，食管外症状压力测定：EE 组 RE 组 UES 刺激时极少收缩，甚扩张，致使食管入导致。但国内^[14,18]显示：EE 组 LES 压力降低，蠕动功减弱，UES 压力功与 EE 组无

表 3 伴有食管外症状的反流性食管炎影响因素的单因素分析

Tab. 3 Univariate analysis of risk factors of reflux esophagitis with extra-esophageal symptoms [M(P₂₅, P₇₅), n(%)]

Factors	Group with EE symptoms (n = 218)	Group without EE symptoms (n = 143)	Z/χ ²	P
Age/a	54.00 (45.47, 62.00)	54.00 (40.00, 62.00)	-0.487	0.626
BMI/(kg · m ⁻²)	24.22 (22.04, 26.33)	23.44 (21.19, 25.95)	-2.005	0.043
Male	93 (42.66)	71 (49.65)	1.702	0.193
Low education level (up to junior high school)	130 (59.63)	69 (48.25)	4.522	0.034
Lifestyle and eating habits				
Smoking (Yes)	90 (41.28)	43 (30.07)	4.667	0.031
Alcohol drinking (Yes)	45 (20.64)	30 (20.95)	0.006	0.939
Drinking strong tea (Yes)	53 (24.31)	34 (23.78)	0.014	0.907
Drinking coffee (Yes)	28 (12.84)	20 (13.99)	0.098	0.755
Preference for sweets (Yes)	103 (47.25)	71 (49.65)	0.200	0.655
Overeating (Yes)	118 (54.13)	82 (57.34)	0.361	0.548
Short interval between dinner and sleep (Yes)	113 (51.83)	79 (55.24)	0.403	0.526
Preference for spicy foods (Yes)	75 (34.40)	53 (37.06)	0.267	0.606
Preference for acidic foods (Yes)	45 (20.64)	29 (20.28)	0.007	0.934
Preference for noodles (Yes)	114 (52.29)	79 (55.24)	0.302	0.583
Preference for fried foods (Yes)	49 (22.48)	44 (30.77)	3.105	0.078
Preference for fruits (Yes)	70 (32.11)	37 (25.87)	1.610	0.205
Preference for fatty foods (Yes)	86 (39.45)	56 (39.16)	0.003	0.956
Constipation (Yes)	54 (24.77)	22 (15.38)	4.577	0.033
Sleeping on a low pillow (Yes)	95 (43.58)	64 (44.76)	0.049	0.826
Comorbidities				
Hypertension (Yes)	65 (29.82)	39 (27.27)	0.272	0.602
Ischemic heart disease (Yes)	21 (9.63)	8 (5.59)	1.906	0.168
Diabetes mellitus (Yes)	21 (9.63)	13 (9.09)	0.030	0.863
Cerebrovascular disease	8 (3.67)	5 (3.50)	0.007	0.931
Current medications (oral)				

表 5 与食管外症状相关的多因素分析
Tab. 5 Multivariate analysis of factors associated with EE symptoms

Factors	B	Wald χ^2	P	OR	95% CI	
					Lower limit	Upper limit
Low education level	0.496	4.710	0.030	1.646	1.049	2.572
Smoking	1.024	7.565	0.005	2.488	2.047	3.281
High BMI	0.065	4.349	0.037	1.067	1.004	1.135
Constipation	-0.372	1.578	0.209	0.689	0.385	1.232
Depression	0.063	4.339	0.038	1.062	1.002	1.133
Anxiety	0.062	4.328	0.039	1.061	1.001	1.131
GerdQ score	-0.074	3.441	0.064	0.928	0.858	1.004

EE: extra-esophageal; BMI: body mass index; GerdQ: Gastroesophageal Reflux Disease Questionnaire.

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与国 [18,20] 所。另，国
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各级所 无，处
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影响、卫、理解
知 [1,9]、理压力 从 导
增。 BMI RE
EE 独立，与国
[10,22]，原 与：导
LES 压力 降， BMI 导 腹 压 增，引起
LES 松弛时间延长， 增加
；另 减少唾液
泌，导 腔干燥，从 引起
适、 [10,23]。
来、与 RE 密切相
[4,24]，与无 EE 相，与 EE
更 密切。二 十
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、 脑- 轴增加，诱
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综上所述，：RE
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：①这，推 他；②
，未考 NERD；③所
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步完善。

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