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· 临床研究 ·

伴有食管外食管

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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、焦虑、性焦虑-7 (General Anxiety Disorder-7, GAD-7) 焦虑、胃食管反流 (Gastroesophageal Reflux Disease Questionnaire, GerdQ)、反流症状、分等方面的调查。结果 361 例 RE 患者, 伴 EE 症状者 218 例, 以、反、性、分 52.75%、46.79% 和 26.15%。因素分、组患者在、(body mass index, BMI)、焦虑、抑郁方面, 存在学 ($P < 0.05$)。 Logistic 分、 ($OR: 1.646, 95\% CI: 1.049 \sim 2.572, P < 0.05$)、 ($OR: 2.488, 95\% CI: 2.047 \sim 3.281, P < 0.01$)、 BMI ($OR: 1.067, 95\% CI: 1.004 \sim 1.135, P < 0.05$)、抑郁 ($OR: 1.062, 95\% CI: 1.002 \sim 1.133, P < 0.05$) 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、反、性为 EE 症状;、BMI、、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 reflux esophagitis with extra-esophageal symptoms

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【Abstract】 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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表1 食管外症状组食管外症状的构成比
 a. 1 in id n o a- so a al sy o s in o i i
 a- so a al sy o s (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
 a. 2 o a ison o lassj i a ion o l so a i is nd as os o
 l n o o s 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 |

A: Los Angeles; : 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

因素分析, EE、BMI (body mass index, BMI) GerdQ, EE, ($P < 0.05$), 3。

2.4 两组焦虑、抑郁的比较

GAD-7、PHQ-9 0~4, EE, EE, ($P < 0.05$), 4。

2.5 伴症状的影响因素的多因素分析

Logistic 因素分析 RE EE: BMI、($P < 0.05$), 5。

3 讨论

GERD EE 跟 (non-erosive reflux disease, NERD) RE^[1]。 RE 361, EE

[1,9-10], [11], 13%, Irwin [12], 85%, [1,13], [14], 50, (lower esophageal sphincter, LES) (upper esophageal sphincter, UES) 止-止 [15-16], UES 触^[13], UES [17], 力测: EE RE UES 时极少, 缩, 扩 [14,18]: EE LES 力降 蠕 减弱, UES 力 EE

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

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 [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 (62.29) | 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) | | | | |
| Low-dose aspirin | 19 (8.72) | 14 (9.79) | 0.120 | 0.729 |
| Clopidogrel | 13 (5.96) | 5 (3.50) | 1.109 | 0.293 |
| Hypoglycemic agents | 21 (9.63) | 8 (5.59) | 1.906 | 0.168 |
| Calcium channel blockers | 34 (15.60) | 24 (16.78) | 0.090 | 0.764 |
| GerdQ | 8.24 (6.26, 10.33) | 7.18 (5.54, 9.66) | -2.543 | 0.011 |

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

表 4 两组焦虑、抑郁患者所占比例的比较

| Factors | Group with EE symptoms (n = 218) | Group without EE symptoms (n = 143) | χ^2 | P |
|------------|----------------------------------|-------------------------------------|----------|-------|
| PHQ-9 | | | | |
| 0-4 points | 117 (53.67) | 95 (66.43) | 5.804 | 0.016 |
| >4 points | 101 (46.33) | 48 (35.57) | | |
| GAD-7 | | | | |
| 0-4 points | 128 (58.72) | 100 (69.93) | 4.667 | 0.031 |
| >4 points | 90 (41.28) | 43 (30.07) | | |

: extra-esophageal; PHQ-9: Patient Health Questionnaire-9; GAD-7: General Anxiety Disorder-7.

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反 ,食管和 管的胚胎 的反 和 症反 产 性,
源, 配, 食管 反流 时, 管 反的 [1,19]。

表 5 与食管外症状 相关的因素分析
Table 5 Multivariate analysis of associated factors

| 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 |

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

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- [9] , . GERD 定 值 [J]. 医学杂 , 2021, 43(7): 636-638.
- [10] , . 年 [J]. 北医学, 2021, 27(1): 136-141.
- [11] Jaspersen D, Kulig M, Labenz J, et al. Prevalence of extra-oesophageal manifestations in gastro-oesophageal reflux disease: an analysis based on the ProGERD study[J]. *Aliment Pharmacol Ther*, 2003, 17(12): 1515-1520.
- [12] Irwin R S, French C L, Chang A B, et al. Classification of cough as a symptom in adults and management algorithms: CHEST guideline and expert panel report[J]. *Chest*, 2018, 153(1): 196-209.
- [13] Ates F, Vaezi M F. Approach to the patient with presumed extraoesophageal GERD[J]. *Best Pract Res Clin Gastroenterol*, 2013, 27(3): 415-431.
- [14] , , 林 . 动 [J]. 医学 , 2020, 18(25): 125-127.
- [15] , , 史 . 血 CGRP 化与激、标相 [J]. 诊治, 2019, 32(7): 48-52.
- [16] , , . 治效果与 构 化系 [J]. 首都医科大学学报, 2020, 41(2): 243-248.
- [17] Babaei A, Venu M, Naini S R, et al. Impaired upper esophageal sphincter reflexes in patients with supraesophageal reflux disease [J]. *Gastroenterology*, 2015, 149(6): 1381-1391.
- [18] , , , . 180 动学 [J]. 消化杂 , 2021, 41(2): 94-99.
- [19] Stein M R. Possible mechanisms of influence of esophageal acid on airway hyperresponsiveness [J]. *Am J Med*, 2003, 115 (Suppl 3A): 55S-59S.
- [20] Kim S Y, Jung H K, Lim J, et al. Gender specific differences in prevalence and risk factors for gastro-esophageal reflux disease[J]. *J Korean Med Sci*, 2019, 34(21): e158.
- [21] Schlottmann F, Andolfi C, Herbella F A, et al. GERD: presence and size of hiatal hernia influence clinical presentation, esophageal function, reflux profile, and degree of mucosal injury[J]. *Am Surg*, 2018, 84(6): 978-982.
- [22] Spantideas N, Drosou E, Bougea A, et al. Laryngopharyngeal reflux disease in the Greek general population, prevalence and risk factors[J]. *BMC Ear Nose Throat Disord*, 2015, 15: 7.
- [23] Kurin M, Fass R. Management of gastroesophageal reflux disease in the elderly patient [J]. *Drugs Aging*, 2019, 36(12): 1073-1081.
- [24] Wang R X, Wang J, Hu S Q. Study on the relationship of depression, anxiety, lifestyle and eating habits with the severity of reflux esophagitis[J]. *BMC Gastroenterol*, 2021, 21(1): 127.

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