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Alimentary Tract

Clinical-psychological characteristics of refractory globus patients in China

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ABSTRACT

Background: Refractory globus is not rare in clinical practice, but little research about it.
Aims: To investigate the clinical-psychological characteristics of patients with refractory globus.
Methods: Six hundred and nineteen globus patients were divided into the refractory globus group ($n = 149$) and the non-refractory globus group ($n = 470$). All subjects completed the following questionnaires: demographic characteristics, medical information, Hamilton Rating Scale of Anxiety/Depression, Pittsburgh Sleep Quality Index, Glasgow Edinburgh Throat Scale, and 36-item Short Form Health Survey.
Results: No significantly differences were found in demographic characteristics between the two groups, but the refractory globus group had longer disease duration and more serious symptoms. Sought healthcare more frequently but still had poorer quality of life than did the non-refractory globus group. Compared with the non-refractory globus group, the refractory globus group also had higher percentages of anxiety, depression, and sleep disorders. Positive correlations were observed between the severity of globus symptoms and HAMA, HAMD, and PSQI scores.
Conclusions: Refractory globus is not rare in clinical practice and should receive more attention from patients and doctors because of its severe symptoms, long disease duration, poor quality of life, and accompanied by psychological disorders and sleep disorders.

1. Introduction

Globus is the fourth functional esophageal disease according to the classification of Rome III criteria [1]. It is a commonly encountered clinical condition characterized by the sense of a lump, foreign body, retained food bolus, or tightness in the throat, in the absence of dysphagia or odynophagia, and cannot be explained by structural lesions, gastroesophageal reflux disease, or histopathology-based esophageal motility disorders [2]. The aetiology of globus is still unknown but appears to be multifactorial, including a combination of physiological and psychological factors. Currently, there are no uniform and standard treatment strategies for globus. Brown et al. [3] indicated that an empirical trial of antidepressants might be appropriate. Similarly, our clinical trial showed that low-dose amitriptyline (a tricyclic antidepressant) was well tolerated and could significantly improve globus patients' symptoms, sleep quality, and quality of life [4].

Refractory globus (RG) refers to continuous symptoms of globus that last for at least six months and is unresponsive to usual treatments, including education, explanation, reassurance, and at least two medical treatments (e.g., proton pump inhibitors, prokinetics, or pharyngitis medicine) for a minimum of 3 months. RG causes patients to seek healthcare more frequently and consume a large amount of medical resources. However, the pathogenesis of RG and the reasons it fails to respond to treatment are not fully understood. Moreover, there has been little research on RG thus far. Therefore, we designed a large sample, multi-centre study to investigate the demographic characteristics, clinical features, quality of sleep, quality of life, and psychological characteristics of patients with RG.

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2. Methods

2.1. Subjects

The subjects were recruited from the ear-nose-throat (ENT) and gastroenterology departments of three hospitals in urban areas of the south of China: Guangzhou First People's Hospital, Guangzhou Nansha Central Hospital, and Guangdong No. 2 Provincial People's Hospital. From May to December 2014, six hundred and nineteen patients (253 male and 366 female) conforming to the Rome III criteria for globus [2,5] completed all study questionnaires. Subjects' average age was 45.47 ± 13.32 years old (range: 18–87 years old). Subject exclusion criteria were as follows: (1) otolaryngological assessment and endoscopic examination revealed structural abnormalities; (2) younger than 18 years old; (3) presence of thyroid disease, connective tissue disease, nervous system disease, or mental illness; and (4) absence of informed consent or refusal to complete the questionnaires. Among the subjects, 149 who fulfilled the following criteria were placed in the RG group [6]: (1) satisfaction of Rome III criteria for globus; (2) symptom duration longer than 6 months; (3) failure to respond to usual treatments including education, explanation, reassurance, and at least 2 medical treatments (e.g., proton pump inhibitors, prokinetics, or pharyngitis medicine) for a minimum of 3 months; and (4) a visual analogue scale score greater than 5 after usual treatment for 3 months (visual analogue scale score was used to measure the level of globus symptoms, and we designated the level of first-visit symptoms as 10). Four hundred and seventy globus patients who did not meet the above criteria were classified as the non-refractory globus (NRG) group.

2.2. Ethics statement

The study was approved by the ethics committees of Guangzhou First People's Hospital, Guangzhou Nansha Central Hospital, and Guangdong No. 2 Provincial People's Hospital. Additionally, it has been registered in the Chinese Clinical Trial Registry center (Registration number: ChiCTR-ECH-14004633). All subjects gave their written informed consent.

2.3. Data collection

Data were collected during face-to-face interviews conducted in a quiet environment (20–30 min per subject). During each interview, the measures described in the following section were completed, and all demographic characteristics (e.g., gender, age, cigarette smoking, and alcohol consumption) and medical information (e.g., disease duration, efficacy, and physician visit times) were recorded. All subjects were interviewed by trained psychologists and digestive physicians.

2.4. Questionnaires

The Hamilton Rating Scale of Anxiety (HAMA) [7] is one of the first rating scales developed to measure anxiety severity, and is still widely used in both clinical and research settings. The scale consists of 14 items, and each item is scored on a scale from 0 (not present) to 4 (severe). Total scores range from 0 to 56, with higher scores indicating more severe anxiety. Subjects were classified into groups by anxiety severity according to the following HAMA score ranges: no anxiety ≤ 7; mild anxiety = 8–14; moderate anxiety = 15–23; and severe anxiety ≥ 24.

The Hamilton Rating Scale of Depression (HAMD) [8] is the most widely used clinician-administered depression scale. The scale consists of 17 items, total scores range from 0 to 52, and higher scores indicate more severe depression. Subjects were classified into groups by depression severity according to the following HAMD score ranges: no depression ≤ 7; mild depression = 8–17; moderate depression = 18–24; and severe depression ≥ 25.

The Pittsburgh Sleep Quality Index (PSQI) [9] is an effective instrument used to measure the quality and patterns of sleep over the previous month. It assesses seven areas, including sleep quality, time to fall asleep, sleep duration, sleep efficiency, sleep disturbance, use of sleep medication, and daytime dysfunction. In total, 18 items were used for the calculation of the PSQI score. A higher score represents worse sleep quality, with scores >7 indicating the presence of a sleep disorder.

The 36-item Short Form Health Survey (SF-36) [10] is the most commonly used scale for assessing patients' quality of life. It consists of eight dimensions of quality of life: physical functioning, role-physical, bodily pain, general health, vitality, social functioning, role-emotional, and mental health. The maximum total score of every dimension is 100, with higher scores representing better quality of life.

The Glasgow Edinburgh Throat Scale (GETS) [11] is a validated questionnaire used to assess throat symptom severity. The questionnaire comprises globus symptom scores and scores that represent the psychological impact of the patient's symptoms. The globus symptom score component is based on 10 questions assessing various throat symptoms. Patients subjectively grade their symptoms for each question on a 7-point Likert scale, with 0 being "none" and 7 being "unbearable," with a maximum possible score of 70. In this study, we only used the globus symptom score section, for which higher scores represent more severe symptoms.

2.5. Statistical analysis

Statistical analyses were conducted using SPSS Version 13.0 for Windows (SPSS Inc., Chicago, Illinois, USA). Continuous data were expressed as means ± standard deviations (SDs). Comparisons between the two groups were performed using the χ^2 test for categorical data and Student's *t*-test for continuous data. Spearman's rank correlation was used to examine the relations between globus symptom severity and HAMA, HAMD, and PSQI scores. All tests were two-sided and a *P* value of less than 0.05 was considered statistically significant.

3. Results

3.1. Demographic characteristics and clinical features

As shown in Table 1, there were no marked differences in gender, age, cigarette smoking, or alcohol consumption between the two groups (all $P > 0.05$). Compared with the NRG group, the RG group had more severe symptoms (higher GETS scores) and longer disease duration. The RG group also sought healthcare significantly more frequently than did the NRG group.

Table 1
Demographic and Clinical Features of Study Subjects.

	RG (*n* = 149) *n* (%)	NRG (*n* = 470) *n* (%)	*P*
Female	90 (60.40)	276 (58.72)	0.716
Male	59 (39.60)	194 (41.28)	0.716
Age	46.25 ± 12.52	45.23 ± 13.56	0.415
Cigarette smoking	22 (14.76)	69 (14.68)	0.980
Alcohol consumption	21 (14.09)	68 (14.47)	0.910
GETS scores	13.41 ± 4.94	10.96 ± 4.63	0.001
Disease duration (months)	40.23 ± 22.87	27.79 ± 11.19	0.003
Physician visits (times)	12.77 ± 5.52	4.27 ± 2.89	0.001

GETS, Glasgow Edinburgh Throat Scale; RG, refractory globus; NRG, non-refractory globus.