

During COVID-19, Physician Education on World Asthma Day Helps Manage Disease

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Abstract

The management of asthma can be significantly impacted by anxiety and depression. The purpose of the study was to examine potential risk factors and treatment options while evaluating the psychosocial effects of asthma patients during COVID-19. The "Questionnaire Star" computerised questionnaire system was used to gather information in June 2022. The questionnaires were given to a total of 98 asthma patients from the Ningbo University Medical School's affiliated hospital. Our study found that the prevalence of anxiety and depression symptoms among asthma patients in the facility was 91.8 and 77.6%, respectively. Those who did not take part in asthma day activities were more likely to develop anxiety symptoms than patients who had an asthma exacerbation in the previous two months. According to this study, regular disease-education lectures held on World Asthma Day can significantly reduce the anxiety and depression experienced by asthma patients.

Keywords: COVID-19; Asthma patients; Locking down

Introduction

When the Omicron strain of COVID-19 made its way to Shanghai in late March 2022, the local government started a two-month silent management period (from 1 April to 31 May 2022), which included locking down public spaces, postponing major events, and preventing crowds from assembling. Ningbo, a city in the Yangtze River Delta with close ties to Shanghai, is required to enact comparable strenuous lockdowns, which is extremely disruptive to people's lives and employment. Asthma patients [1] in Ningbo's ability to see their doctors or general practitioners has been negatively impacted. According to reports, anxiety and sadness have considerably increased during the most recent coronavirus pandemic, and in individuals with asthma, these conditions may be linked to worse asthma control and quality of life. In response to the theme of this year's "World Asthma Day," "Bridging the Gap in Asthma Care," we launched a series of online and offline educational lectures on asthma management in early May, raising public awareness of asthma, popularising knowledge of asthma prevention and treatment, and promoting the standardisation of asthma treatment. We were concerned about the quality of self-management of asthma patients in Ningbo during the Shanghai epidemic.

Research objects and methods

We provided 120 patients with asthma in the outpatient department with online surveys. With an effective recovery rate of 81.6%, we then received 98 answers in response. We warned participants at the start of the survey that if they answered all the questions, they would [2-5] automatically sign the permission. Every patient was given the opportunity to voluntarily take part in the online survey. The Clinical Ethics Committee of the Affiliated Hospital of Ningbo University's medical school granted its clearance.

Survey method

As previously mentioned, we utilised "Questionnaire Star" to collect the data. The questionnaire covers general information, buying asthma medications, and other topics. Every questionnaire is private.

Anxiety symptoms

To evaluate the anxiety symptoms of the patients, we used the

GAD-7 in Chinese. A self-report questionnaire called the GAD-7 is used to diagnose and assess the severity of generalised anxiety disorder. Using a 4-point scale from 0 (not at all) to 3 (nearly every day), participants scored seven items based on how frequently they had those symptoms over the previous two weeks. Higher scores indicated more severe anxiety symptoms, with the total score ranging from 0 to 21. No anxiety disorder if score is 0 to 4, mild anxiety disorder if score is 5 to 9, moderate anxiety disorder if score is 10 to 13, moderate to severe anxiety disorder if score is 14 to 18, and severe anxiety disorder if score is 19 to 21, according to the scale. The widespread use of GAD-7 in China has attested to its high reliability and validity.

Depressive symptoms

The PHQ-9, a 9-item self-report measure of depression severity, was used to evaluate the depressive symptoms of the patients. Participants rated each item on a 4-point scale based on the frequency of symptoms over the previous two weeks, ranging from 0 (not at all) to 3 (almost every day) on a scale from 0 to 27 on a scale of 0-4 with no depression, 5-9 with mild depression, 10-14 with severe depression, 15 China has demonstrated the validity and reliability of PHQ-9 through its extensive use. In this study, the PHQ-9's mild depression symptom cutoff was a total score of 5 or less.

Patient statistics

We created the participant characteristics on the survey, including gender, age, weight, smoking history, employment position, and history of asthma.

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Statistical Methods

This statistical analysis made use of categorical variable statistics. The chi-square test was performed to assess statistical significance, and the categorical variables were presented as percentages. The binary logistic regression analysis was carried out in order to assess the outcomes of the chi-square test $p < 0.05$ in categorical variables. Model calibration and discrimination were evaluated using the Hosmer-Lemeshow goodness-of-fit statistic. On all sides, $P = 0.05$ was determined to be statistically significant. These statistical tools, which included "questionnaire star" and SPSS v25.0 (IBM), were used to collect statistical data.

Discussion

Asthma has been connected to psychiatric symptoms and mental health issues as a chronic heterogeneous condition. There is strong evidence to suggest that people with asthma have a lower quality of life and more frequent mental health issues. Asthma symptoms can have negative impacts, including emotional diseases like anxiety and melancholy. Anxiety and depression in asthma are caused by a wide variety of pathophysiological causes. Patients with asthma always worry about their condition [8-10] getting worse and having an attack at any moment. Chronic psychological distress may induce a pro-inflammatory state and be associated with elevated levels of leukocyte, superoxide, and cytokines. In addition, anxiety states are directly caused by neurokinins and P substance, which are consequences of asthma pulmonary neurogenic inflammation. Inhaled corticosteroids have been associated to depressive symptoms in asthma patients. The disruption of the hypothalamic-pituitary-adrenal axis has been associated with long-term corticosteroid use. Patients with asthma are particularly concerned about catching the SARS-CoV-2 virus, especially during the COVID-19 pandemic. People who have asthma are also more likely to experience anxiety and despair. Numerous studies have found a connection between psychological disorders and poorer asthma results. A mental illness that is linked to poor asthma control and a decreased quality of life due to asthma may be the cause of persistent asthma. Patient education, symptom monitoring, trigger control, and pharmacologic therapy are the four key facets of managing asthma. An important and crucial part of managing asthma is educating the patient, which reduces exacerbations and enhances control. Asthma is a chronic condition that needs ongoing care. Education at its most fundamental level includes knowledge of asthma, its causes, and its remedies. Despite their own stress during this epidemic's crisis, doctors should share information online or through other media for the benefit of their patients since prompt scientific popularisation could lower the number and frequency of asthma patients' acute attacks. The following topics are covered in the doctors' instructions: the distinction between asthma relievers and controls; using an inhaler; self-monitoring of symptoms; self-management plans (how to notice and react to asthma that is getting worse); avoiding environmental allergens; and so on. The patient's awareness of asthma was raised by the doctor's advice, which also significantly decreased the number of attacks. Despite their own stress during this epidemic's crisis, doctors should share information online or through other media for the benefit of their patients since prompt scientific popularisation could lower the number and frequency of asthma patients' acute attacks. The following topics are covered in the doctors' instructions: the distinction between asthma relievers and controls; using an inhaler; self-monitoring of symptoms; self-management plans (how to notice and react to asthma that is getting worse); avoiding environmental allergens; and so on. The patient's awareness of asthma was raised by

the doctor's advice, which also significantly decreased the number of attacks. In our study, anxiety levels in asthma patients—many of whom also have allergies—show comparable outcomes. Although there were some private confounders that were not included in the study, such as income losses or another major event (loss of a job, postponement of a wedding, etc.), we discovered that doctors can help patients feel less anxious and depressed by improving communication and providing disease education. In the midst of this epidemic's crisis, doctors may experience stress themselves, but sharing information online or through other media is important for patients' welfare because prompt scientific popularisation may lessen the number and frequency of asthma patients' severe attacks.

Conclusion

The shanghai pandemic caused severe worry and depression in the Ningbo asthma sufferers, but doctors' dissemination and application of information about managing chronic conditions helped patients' levels of stress and melancholy. Doctors have primarily used the Internet or other media during the pandemic to educate the general population about asthma. Additionally, they offer offline patients individualised care as well as spiritual support for those suffering from psychiatric issues. In order to aid patients during the COVID-19 outbreak, doctors are urged to offer professional education through a variety of channels.

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Conflict of Interest

For the research, writing, and/or publication of this work, the authors disclosed no potential conflicts of interest.

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