CLINICAL FEATURES OF SUICIDAL TENDENCIES IN DISABLED PEOPLE WITH BRONCHIAL ASTHMA

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Abstract: The study was carried out in 55 patients with bronchial asthma with established disabilities, the features of suicidal thoughts and attempts were studied in this category of patients. Patients with asthma usually have chronic airway inflammation, variable airflow restriction, and intermittent respiratory symptoms. It remains unclear how physical disability can lead to an increased risk of suicidal acts. The purpose of our study to determine the transverse and longitudinal associations between asthma and suicidal ideation, and asthma and suicidal behavior among disabled asthmatics. We hypothesized that asthma would be associated with a significantly increased risk of suicidal ideation and suicidal behavior among physically disabled people. The study was carried out in 55 patients with bronchial asthma with established disabilities, the features of suicidal thoughts and attempts were studied in this category of patients. The age of the patients at the time of examination ranged from 20 to 42 years [mean age 21.1 ± 5.4 years]. Demographic characteristics, socioeconomic status, physical and mental health status were compared between patients with asthma and asthmatic disabilities. Compared to disabled asthma patients [n = 34.8], patients with asthma [n = 20.2] were older and had a higher percentage of men 52 [40.7] smokers2 [1.4], and had a lower percentage of alcohol consumption3 [11.3], regular exercise22 [47.9] and less work [all p <0.001]. BA patients with disabilities reported more moderate and severe stress [32.6%] and depressive mood [22.2%] compared with asthma [21.4%, p <0.001; 5.9%, p <0.001]. The proportion of patients with disabilities with asthma who had suicidal thoughts [23.6%] was twice as high as in patients with asthma without disabilities [8.8%, p <0.001]. The number of BA patients with disabilities who had suicidal attempts [1.1%] was three times higher than that of asthma [0.4%, p <0.001]. Multivariate analysis, adjusted for age and sex, showed that ORs for suicidal ideation and attempted suicide were 2.02 [94% CI 1.88-2.12] and 2.32 [95% CI 1.86-3.11], respectively. When making additional adjustments for socio-economic factors [eg, family income, education, work and marital status; for suicidal ideation and attempts were 1.89 [95% CI 1.82-1.86] and 2.14 [92% CI 1.63-2.65], respectively. After further adjustments for physical health factors [eg, smoking, alcohol, exercise, diabetes, hypertension, stroke, and arthritis; The ORs for suicidal thoughts and attempts were 1.61 [92% CI 1.58-1.71] and 1.38 [94% CI 1.35-2.20], respectively. In the final adjusted for all factors, including depressed mood, the ORS for suicidal thoughts and attempts were 1.49 [94% CI 1.32-1.55] and 1.22 [96% CI 1.01-1.63], respectively. Disabled BA (bronchial asthma) patients had more depressive moods and suicidal thoughts and attempts than asthma patients by examination. We also found that disability in AD increases the risk of suicidal thoughts and attempts, independent of other factors known to be associated with suicidality, suggesting that asthma itself may be an independent risk factor for suicidality given that a previous suicidal attempt is one of the strongest risk factors for a future attempt. The results may provide a basis for physicians to determine suicidality and provide psychological support, as well as measures to prevent suicide in the management of patients with asthma.

Keywords: suicide attempt, suicidogenic motivation, method of suicide attempt, disabled

INTRODUCTION

The World Health Organization uses the term “disability” in the International Classification of Functioning, Disability and Health as “a generic term for impairments, activity limitations and participation limitations” [3]. There are different approaches to quantifying disability and its areas
due to the complexity of this concept. The global estimate of the prevalence of disability among adults ranges from 16% to 19%, with lower prevalence in younger age groups [9% aged 18-49] [7]. Asthma is a very common chronic disease worldwide and is especially prevalent among young people compared to other chronic diseases. Asthma can lead to many symptoms that are detrimental to the patient's quality of life. Asthma, a recognized inflammatory disease, is associated with an increased risk of suicide [1,2]. The concept of a complex clinical relationship between suicide and asthma has been little described in the literature [2,3,4], the concept supporting a positive relationship between suicide and asthma is based on the conclusion that various processes are involved in the pathogenesis of these diseases, for example, convergent immune disorders. - inflammatory system. The increased risk was mainly due to asthma: 1.48 [88% CI = 1.29-1.99]; this result was confirmed by the authors [6,7].

Recent evidence from common medical samples of inpatients and outpatients suggests that asthma is associated with an increased likelihood of suicidal ideation [1,2]. These results are consistent with results suggesting that chronic physical illness is associated with higher than expected rates of suicidal tendencies, in particular with evidence of an association between respiratory illness and suicidal tendencies and suicidal behavior in health care and community models [3,4]. The observed association between asthma and suicidal thoughts is also consistent with the earlier association between asthma and depression [6,7]. Patients with asthma usually have chronic airway inflammation, variable airflow restriction, and intermittent respiratory symptoms.

Overall, while previous evidence suggests asthma is associated with an increased likelihood of suicidal ideation, some methodological considerations from previous studies limit their generalizability for at least 4 reasons. First, with the exception of [2], to date, the study has been conducted exclusively with clinical samples [5,6]. Thus, it is unclear whether and to what extent the association between asthma and suicidal ideation is related to factors related to treatment choices, or whether this reflects a true association between exposure and illness. Second, previous studies have been limited to the use of crossover data [7,8]. Therefore, it is not possible to draw conclusions about the direction of exposure or the sequence of occurrence of disorders, which are critical for the design of intervention strategies. Third, previous studies have examined the association between asthma and suicidal ideation [3,6], but did not include data on the association between asthma and the completion of suicide.

**The purpose** of our study to determine the transverse and longitudinal associations between asthma and suicidal ideation, and asthma and suicidal behavior among disabled asthmatics. We hypothesized that asthma would be associated with a significantly increased risk of suicidal ideation and suicidal behavior among physically disabled people.

**METHODS**

The study was carried out in 55 patients with bronchial asthma with established disabilities, the features of suicidal thoughts and attempts were studied in this category of patients. The age of the patients at the time of examination ranged from 20 to 42 years [mean age 21.1 ± 5.4 years]. Demographic characteristics, socioeconomic status, physical and mental health status were compared between patients with asthma and asthmatic disabilities. For the rapid assessment of the risk of suicide, the SADPERSONSScale was used - this is an acronym of 10 signs, the Beck scale. Psychosocial factors can influence the relationship between suicidal ideation and mortality, and suicidal thoughts can also be seen as an indicator of psychosocial factors. All participants were provided with mental health surveys that included the same questions as in SADPERSONSScale and Beck. Three aspects of mental health have been identified within health and mental health status, namely stress, depression, and suicidal thoughts and attempts. Patients reported stress levels as zero, mild, moderate, or severe. Depression was tested using the World Health Organization [WHO] [CIDI-SF] International Brief Diagnostic Interview Form, which has been validated as a cost-effective screening tool that can be easily integrated into health surveys [16].

The WHO CIDI-SF includes questions such as “Have you ever had 2 weeks or more in your life when you felt sad, sad or depressed almost every day?”. To assess depression, subjects answered “yes” or “no” to the question whether they had experienced a depressed mood for 2 or more weeks in a row during the previous year. Suicidal thoughts were assessed according to the positive answer of the participants to the question "Have you thought about suicide in the last 12 months?" "Yes" or "no" answers were also used to determine whether subjects had suicidal thoughts; if the subject answered “yes”, he was asked about their attempted suicide, if any. This indicator is a well-documented predictor of suicide attempts that was previously used in other adult surveys [16]. Pearson χ² tests have been
used to determine cross-links between asthma and lifelong suicidal ideation and suicide attempts. The same procedure was used to study the longitudinal relationship between asthma in disabled people with asthma and suicidal ideation and suicide attempts, adjusted for demographic differences. The same method was then used to determine the strength of the longitudinal association between asthma and suicidal ideation and suicide attempts, corrected for differences in demographic characteristics. First, unadjusted odds ratios were calculated with an 89% confidence interval, and analyzes were adjusted for differences in socio-demographic characteristics [i.e. i.e. age, sex] and subsequently on DIS [DSM-III] lifetime major depression, resulting in adjusted odds ratios. The purpose of these analyzes was to determine whether patients with disabilities with asthma had higher levels of associated suicidal thoughts and suicidal attempts than those without disability. The analyzes were adjusted for differences in socio-demographic characteristics and major depression to determine whether and to what extent these variables contributed to the observed association between asthma and suicidal ideation and suicide attempts. Parallel comparisons were made between persons with asthma and the risk of suicidal ideation and suicide attempts with longitudinal asthma. The analyzes were then further adjusted for asthma treatment to determine if these results were due to a selection for treatment effects.

**Data analysis.** Descriptive statistics were used to describe the main characteristics of the study patient; numbers and percentages are indicated for each variable. The student's t test and the chi-square test were used to compare variables between asthma patients and AD patients with disabilities. Multivariate logistic regression analysis was performed to calculate the adjusted odds ratio for suicidal behavior among patients with asthma; not included age, gender, income, education, work, marital status, alcohol, diabetes, hypertension, stroke, depression. Results were expressed with 94% confidence interval [CI]. All data were analyzed using the Statistical Package for the Social Sciences [version 20.0; IBM, Armonk, New York].

**RESULTS AND DISCUSSION**

Compared to disabled asthma patients [n = 34.8], patients with asthma [n = 20.2] were older and had a higher percentage of men 52 [40.7] smokers2 [1.4], and had a lower percentage of alcohol consumption3 [11.3], regular exercise22 [47.9] and less work [all p <0.001]. BA patients with disabilities reported more moderate and severe stress [32.6%] and depressive mood [22.2%] compared with asthma [21.4%, p <0.001; 5.9%, p <0.001]. The proportion of patients with disabilities with asthma who had suicidal thoughts [23.6%] was twice as high as in patients with asthma without disabilities [8.8%, p <0.001]. The number of BA patients with disabilities who had suicidal attempts [1.1%] was three times higher than that of asthma [0.4%, p <0.001]. Multivariate analysis, adjusted for age and sex, showed that ORs for suicidal ideation and attempted suicide were 2.02 [94% CI 1.88-2.12] and 2.32 [95% CI 1.86-3.11], respectively. When making additional adjustments for socio-economic factors [eg, family income, education, work and marital status; for suicidal ideation and attempts were 1.89 [95% CI 1.82-1.86] and 2.14 [92% CI 1.63-2.65], respectively. After further adjustments for physical health factors [eg, smoking, alcohol, exercise, diabetes, hypertension, stroke, and arthritis; The ORs for suicidal thoughts and attempts were 1.61 [92% CI 1.58–1.71] and 1.38 [94% CI 1.35–2.20], respectively. In the final adjusted for all factors, including depressed mood, the ORS for suicidal thoughts and attempts were 1.49 [94% CI 1.32-1.55] and 1.22 [96% CI 1.01-1.63], respectively.

The study showed that AD patients with disabilities had more severe stress, depressive mood, suicidal thoughts and attempts than asthma patients. In addition, disability with asthma has been associated with an increased risk of suicidal thoughts and attempts, even after adjusting for factors known to increase suicide, such as socioeconomic status, chronic medical conditions, and depressive symptoms. Asthma is an important chronic disease that has previously been associated with a number of adverse outcomes, including depression and risk behavior. There is currently a number of studies indicating a link between suicidal behavior and asthma [3 - 6]. Clarke and colleagues [5] looked at data on 5692 adults aged 18 and over who participated in the US National Health Survey and found that 12% of participants had a history of asthma, 8.7% had suicidal ideation, and 4.2% have had suicidal attempts. Despite adjustments for smoking, comorbid psychiatric disorders and demographic factors, there was a statistically significant association between asthma and suicidal ideation and attempts.

Our study showed suicidal thoughts [OR 2.55; 95% CI 1.98–1.86] and suicide attempts [OR 1.22; 97% CI 1.04-1.72]. An association between asthma incidence, risk behavior and depression has
been presented in previous studies, although the reasons and direction for this association are not clear [8]. Asthma can be associated with mood swings, anxiety and some difficulties in daily life, which in themselves can feel hopeless and, as a result, an increased risk of suicide. Another possible mechanism for this association concerns the effects of hypoxia, and it has been suggested that the association between high altitude and suicide could be explained by metabolic stress associated with hypoxia in people with mood disorders. A possible mechanism that has been proposed is metabolic stress associated with hypoxia. As the lung function decreases and the disease progresses, the risk of alveolar hypoxia and, as a consequence, hypoxemia increases. Another potential cause of depression in asthma sufferers is the use of certain medications, including corticosteroids or montelukast sodium, which, while reducing asthma symptoms, are also associated with mood disorders similar to those of major depression. Our research is based on the fact that the data were obtained as a result of examining BA patients with disabilities. In addition, the survey provided information on a number of factors that may be associated with suicidality, such as socioeconomic variables and physical health, as well as mental health indicators, allowing us to assess the independent impact of asthma on suicidality using multiple statistical adjustments. The mechanism of the observed association between disability asthma and suicidal ideation, and asthma and suicide attempts, remains unclear. This data can help rule out some possibilities, provide preliminary support to others, and provide useful information for directions for additional research. First, these data suggest that the association between asthma and suicidality is not solely due to depression, as lifelong DIS [DSM-III] major depression did not significantly contribute to this association. Second, while it has previously been suggested that pharmacological treatment of asthma may be associated with depressive symptoms, these data do not suggest that asthma treatment has a significant effect on suicidal ideation or suicidal behavior, as there is a link between asthma and suicidal ideation and suicide attempts remain significant, after adjustment for treatment in multivariate models. However, the lack of an association between asthma treatment and suicidal ideation and suicide attempts should be considered tentative, as the information on asthma treatment was not drug-specific and therefore inadequate to confirm or rule out this possibility. Further research that can better examine the relationship between asthma severity and depressive disorders and other psychiatric disorders such as anxiety, substance use disorders and the risk of suicidal ideation and suicidal behavior among people with asthma is needed for further elucidating the reasons for the potential feasibility of these hypothetical explanations. In addition, research is needed that includes more information on the use of specific asthma medications and the frequency of use when examining the links between asthma and suicidal ideation and suicide attempts, such as anxiety and substance use disorders, and the risk of suicidal ideation and suicidal behavior among people with asthma is needed to further clarify the potential feasibility of these hypothetical explanations.

**CONCLUSION**

BA patients with disabilities had more depressive moods and suicidal thoughts and attempts than asthma patients by examination. We also found that disability in AD increases the risk of suicidal thoughts and attempts, independent of other factors known to be associated with suicidality, suggesting that asthma itself may be an independent risk factor for suicidality given that a previous suicidal attempt is one of the strongest risk factors for a future attempt. The results may provide a basis for physicians to determine suicidality and provide psychological support, as well as measures to prevent suicide in the management of patients with asthma. More research is needed on mental health and asthma, but indications are clear that there is a significant association between asthma and suicide. Patients with asthma need to be examined not only in terms of physical health, but also in terms of psychological morbidity.

**REFERENCES**


