

Frequency and Nature of Psychiatric Disorders in Patients with Bronchial Asthma

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ABSTRACT

Background: Asthma is a chronic, reversible, inflammatory disease of the airways, whose incidence is increasing worldwide. Asthma can impose restrictions on the physical, emotional, and social life of a patient, leading to impaired coping capacity and an impact on their careers and quality of life (QOL). Psychiatric morbidity is common among patients with bronchial asthma and the rates of occurrence of certain psychiatric disorders among asthmatics have been reported to be at least double than those observed in the general population.

Aims: 1. To evaluate the frequency of occurrence of psychiatric morbidity in patients with bronchial asthma. 2. To evaluate the nature of psychiatric disorders in patients with bronchial asthma.

Settings and Design: Case Controlled Study done in a Tertiary care centre in Department of Medicine

Materials and Methods: Thirty patients with bronchial asthma with ACT score >21 and thirty relatives of patients with bronchial asthma were assessed in the outpatient department of General Medicine in FMMCH between June-August 2017. Details of Socio-demographic status were enquired into. Diagnosis of psychiatric disorder was made using ICD 10 DCR Criteria.

Statistical analysis used: Independent student t test and Chi square test were used.

Results: 83% of patients with bronchial asthma had a psychiatric illness which was statistically significant. 64% had only one, 32% had two and 4% had three psychiatric disorders. 53.3% of the patients had a mood disorder of which 31% patients had a moderate depressive episode which was statistically significant. 23.3% of the patients had anxiety disorders of which frequency of panic disorder was significant.

Conclusions: The result of this study highlights the high prevalence of psychiatric disorders among adult asthmatics, and the range of increased morbidity that may be associated with it

Key-words: Bronchial asthma, morbidity, psychiatric disorder

INTRODUCTION

Asthma is a chronic, reversible, inflammatory disease of the airways, whose incidence is increasing worldwide. [1] Asthmatics have more than 100 million days of restricted activity and 470,000 hospitalizations annually, with 49% of children and 25% of adults reporting missing school or work. [2] Asthma can impose restrictions on the physical, emotional, and social life of a patient, leading to impaired coping capacity and have an impact on their careers and quality of life (QOL). [3]

Several psychosocial and emotional factors are found to be associated with poor asthma control and worse asthma-related quality of life, including anxiety, depression, and inappropriate (e.g., avoidant) coping skills. However, relatively few studies have evaluated the impact of psychiatric disorders, on levels of asthma control and quality of life. Interestingly, rates of certain psychiatric disorders (e.g., panic disorder, major depression) among asthmatics have been reported to be at least double those than observed in the general population (25% and 20% versus 1-13% and 2-9% respectively), suggesting a need to better understand the impact of such

disorders on levels of asthma control and related outcomes. [4]

Anxiety disorders are consistently reported to be more common than expected in people with asthma, with a reported prevalence of 16-52%. The same study also reports a high prevalence of depressive disorders, occurring in 14-41% of subjects, which is six times more common in people with asthma than in the general population. [4] In one of the hospital based studies in India, they had found that 15% of the bronchial asthma patients had depression and 21% had anxiety disorder. [5]

A World Health Organization survey of over 85,000 adults in 17 countries reported that the age-adjusted and gender-adjusted odds of mental disorders among people with physician-diagnosed asthma relative to those without was 1.6(95% CI 1.4 to 1.8) for depressive disorders and 1.5 (95% CI 1.4 to 1.7) for anxiety disorders. [6]

Psychological factors and psychiatric disorders may affect the clinical course of general medical illnesses. [3] Asthma was historically considered to be a psychosomatic illness and it is observed that “stress” precipitated an “episode.” Many researchers have investigated the role of personality traits and adaptive strategies as a predisposing factor to asthma. There are many possible factors for poor control: patient factors, clinician factors and lack of communication between them. Patient-related factors associated with poor outcomes include co-morbid psychiatric disorders such as anxiety and depression, and behavioural factors such as non-adherence and inadequate self-management skills. [7]

Stress, both acute and chronic, significantly increases the risk of acute asthma attacks. Negative life events are associated with an increased risk of asthma attacks both in the immediate aftermath and in the following 5-7 weeks. Psychiatric morbidity may even be associated with increased asthma mortality risks. [8]

There is good evidence to suggest that outcome of medical illness improves if

comorbid psychiatric illness is effectively treated. A holistic approach of providing care to such patients may improve their overall outcome and quality of life.

There are studies in the west reporting anxiety and depression to be associated with Bronchial asthma but there is paucity of literature in Indian scenario. In this background the present study is carried out to find the frequency and nature of psychiatric morbidity in bronchial asthma patients.

MATERIALS AND METHODS

This study was conducted at Father Muller Medical College Hospital, in the Department of Medicine from June to August 2017. The study was approved by the institutional ethical committee and a written informed consent was taken from the participants.

A consecutive sample of 30 patients with a diagnosis of bronchial asthma made by a physician as per the Global Initiative for Asthma guidelines, between the ages of 18 and 65 years with Asthma Control test score >21 with no psychiatric illness prior to the onset of bronchial asthma formed the sample of the study.

A consecutive sample of 30 people of same sex between ages of 18 and 65 years and who are relatives of the patient with Bronchial asthma with no diagnosed psychiatric disorders formed the control for the study.

Procedure:

A Semi- structured proforma was used to record the patient details and clinical variables. Kuppuswamy's scale was used to assess the socio-economic status of the participants. All participants underwent a thorough clinical examination and required investigations were done for medical disorders. Psychiatric disorders were diagnosed using DCR-10 ICD criteria.

Statistical Analysis

Statistical analysis was done using Statistical Package for Social Sciences (SPSS) V 24.0. Independent student t test and Chi square test were used.

RESULTS

This study included 60 participants. Sociodemographic variables are shown in Table 1. Majority of the subjects belonged to age group of 31-40 years (30%); followed by 26.7% in 41-50 years age group which was found to be statistically significant. There were no differences between the two groups in terms of other sociodemographic variables.

Clinical Variables	Cases		Controls		P Value
	N	%	N	%	
Age					
18-30	8	26.6	3	10	0.004*
31-40	5	16.7	13	43.3	
41-50	5	16.7	11	36.7	
51-60	12	40	3	10	
Sex					
Male	12	40	12	40	1.000
Female	18	60	18	60	
Religion					
Hindu	15	50	16	53.3	1.000
Muslim	2	6.7	2	6.7	
Christian	13	43.3	12	40.0	
Residence					
Urban	16	53.3	17	56.7	1.000
Rural	14	46.7	13	43.3	
Family Type					
Nuclear	19	63.3	21	70.0	0.785
Joint	10	33.3	9	30.0	
Extended	1	3.3	0	0.0	
Socioeconomic Status					
Upper class	3	10.0	3	10.0	0.531
Upper middle class	10	33.3	15	50.0	
Lower middle class	10	33.3	8	26.7	
Upper lower class	7	23.3	4	13.3	

* Statistically Significant

Psychiatric Disorders in Bronchial Asthma

In the bronchial asthma group, 83% had a psychiatric disorder which was found to be statistically significant (p value-0.006). Out of these, 64% had one psychiatric disorder, 32% had two and 4% had three psychiatric disorders. Among the controls, 50% had psychiatric disorders

Substance Use was seen in about 30% of the participants. Nicotine dependence syndrome was found to be more both in the bronchial asthma group as well as among the controls. Psychotic disorders were seen only in about 3.3% of the participants. Two bronchial asthma patients had psychotic disorder. Mood disorders were seen in about 53.3% of the bronchial asthma patients with depressive disorders found to be the most common (p-0.02) (Figure-1). Anxiety disorders were seen in 23.3% of bronchial asthma patients. Among these 57% had panic disorder (p-0.038), 15% had generalized anxiety disorder 14% each had Obsessive-compulsive disorder and somatoform disorder. (Table 2) (Figure1).

Disorders	Cases		Controls		P value
	N	%	N	%	
Psychiatric Disorders	25	83	15	50	0.006*
Substance Dependence Syndrome					
Alcohol Dependence Syndrome	3	10	0	0.0	0.076
Nicotine Dependence Syndrome	8	26.7	5	16.7	0.347
Psychotic Disorders	2	6.7	0	0	0.492
Mood Disorders	16	53.3	3	10	0.001*
Mild Depressive Episode	3	10	0	0.0	0.076
Moderate Depressive episode	5	16.7	0	0.0	0.02*
Severe Depressive Episode	1	3.3	0	0.0	0.313
Dysthymia	4	13.3	3	10.0	0.688
Bipolar Affective Disorder	3	10	0	0	0.076
Anxiety Disorders	7	23.3	3	10	0.299
Panic Disorder	4	13.3	0	0	0.038*
Generalised Anxiety Disorder	1	3.3	3	10	0.301
OCD	1	3.3	0	0	0.313
Somatoform Disorder	1	3.3	0	0	0.313

* Statistically Significant

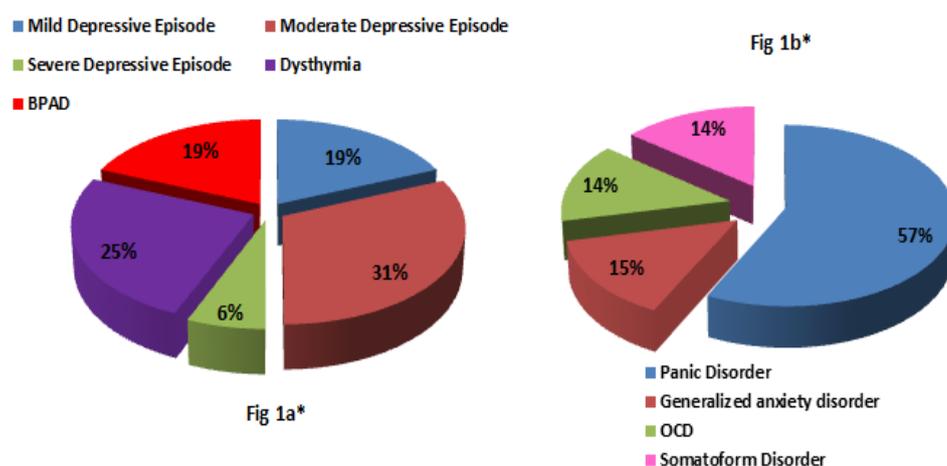


Figure 1: 1a -Mood Disorders in Bronchial Asthma; 1b – Anxiety Disorders in Bronchial Asthma

DISCUSSION

There were no statistically significant differences in socio-demographic variables between the two groups except for age. Psychiatric disorders were more common in patients with bronchial asthma than controls and it was statistically significant. 83% of patients had a psychiatric disorder of which 64% had only one psychiatric disorder, 32% had two psychiatric disorders and 4% had three psychiatric disorders. Even when substance use disorders were excluded 73.3% of cases and 20% of controls had psychiatric disorders (p value <0.001- highly statistically significant).

53.3% of the patients had a mood disorder of which 31% patients had a moderate depressive episode which was found to be significant. These findings were similar to the findings of previous studies. [4]

23.3% of the patients had anxiety disorders of which frequency of panic disorder was found to be significant.

These findings are consistent with previous reports suggesting a high rate of psychiatric disorders, particularly mood (range 14–41%) [9-12] and anxiety (range 9–24%) [11-14] disorders, among adult asthmatics.

When comparing severity of asthma and psychiatric morbidity, it was found that mood disorders especially depressive

disorders and anxiety disorders like panic disorders were more common in patients with moderately severe and severe asthma. This finding is in corroboration with a study Elsaid TE et al. [15]

Merits of our study were that it was a case-control study and one of the very few studies done in a tertiary care center in South India. Psychiatric diagnosis was made using DCR-10 ICD criteria. Limitations of the study were that most of the sample was from the older age group. Other limitations are patients were taken during stable period of the disease and other medical comorbidities were not excluded.

CONCLUSION

The results of this study highlight the high prevalence of psychiatric disorders among adult asthmatics. Early identification and proper management of psychiatric morbidity in patients with chronic respiratory diseases may improve their quality of life and treatment response.

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