

Determine the Frequency of Depression in Patients with Bronchial Asthma

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ABSTRACT

Objective: To examine the frequency of depression in patients presented with bronchial asthma.

Study Design: Cross-sectional/Observational

Place and Duration: Medical Ward DHQ hospital, Wana Pakistan for Six Month from Jan 2019 to June, 2019

Materials & Methods: One hundred and twenty four patients of both genders with ages 18 to 65 years presented with bronchial asthma were enrolled. Patients detailed demographics including age, sex, socioeconomic status and residence were recorded after taking written consent. Depression was examined by HADS (hospital anxiety and depression scale) and Beck depression inventory. Data was analyzed by SPSS 24.0.

Results: Out of all the patients, 76 (61.29%) were male while 48 (38.71%) were females. Mean age of patients was 39.42±14.65 years. Depression was found in 80 (64.52%) patients. 31 (25%) patients had mild depression, 34 (27.41%) had moderate and 15 (12.10%) patients had severe depression. Association of depression between genders showed that females were more likely to have depression as compared to males and the difference was statistically significant with p-value <0.05.

Conclusion: It is concluded that the frequency of depression among patients with bronchial asthma was very high.

Keywords: Bronchial Asthma, Depression

INTRODUCTION

Bronchial asthma is a widespread chronic condition affecting over 300 million people in the world and is known as the fourth most common condition in US adults¹. In the latest revision of the Global Initiative for Bronchial Asthma (GINA) guidelines², the principle of bronchial asthma regulation has been clearly defined. This definition consists of the seriousness of bronchial asthma, bronchial asthma education and substance use approaches. Bronchial asthma can be well managed in most patients, easily and in time³. The diagnosis of bronchial asthma is based on episodic airflow obstruction symptoms and objective pulmonary function assessment.

The incidence of depression in the general population and even higher in bronchial asthma has been reported to be up to 50%. The leading risk factors for bronchial asthma are age, poverty and race⁴. Anxiety risks and other mood symptoms are increased. Heterogeneous depressive disorders fluctuate in character and have varying degrees of severity and a different impact on the somatic status of the patient, which often influences the moral, mental and emotional conditions. A long-lasting anecdotal awareness has been made that emotional stress can worsen or escalate acute and chronic bronchial asthma⁵. Although the causal correlation between bronchial asthma and depression is not well known, the result of bronchial asthma treatment is influenced by depression. Studies have shown that depression can cause bronchial asthma symptoms in 40% to 80% of the patients². Expiratory volume of forced expiratory tract (FEV₁), expiratory flow peak, and airways are affected by emotions such as

depression, anxiety, frustration, happiness, excitement¹ and neutral feelings⁵. A general medical consultation cannot allow for the diagnosis of depressive disorders⁶⁻⁷.

A correlation between asthma and psychological condition has been identified in several studies. Another research study indicates that anxiety and depression are more prevalent in a moderate to extreme asthma patients than in the general population⁸⁻¹⁰. A recent study of literacy identifies an increased incidence of psychological comorbidity in asthmatics. It is not practical to evaluate all patients by a psychiatrist, and therefore instruments such as the general health questionnaire (GHQ), which measures psychological distress related to general medical illness, are useful for screening patients in the physician's office². The present study was conducted aimed to examine the prevalence of depression among patients with bronchial asthma.

MATERIALS AND METHODS

This cross-sectional/observational study was conducted at Medical Ward DHQ hospital, Wana Pakistan for Six Month during the period from Jan 2019 to June, 2019. A total 124 patients of both gender presented with bronchial asthma were included. Patient's ages were ranging from 18 years to 65 years. Patient's detailed demographics including age, sex; socioeconomic status and residence were recorded after taking written consent. Patients with substance abuse, prior history of psychiatric illness and comorbidities like COPD, stroke, chronic renal failure and heart failure were excluded

Hospital Anxiety and Depression scale HADS was used to examine the frequency of depression. Severity of depression was recorded. Data was analyzed by SPSS 24.0. Mean±SD was done. Frequencies and percentages were recorded in tabulation form. Chi-square test was done to examine the association between gender and depression, P-value <0.05 was taken as significant.

RESULTS

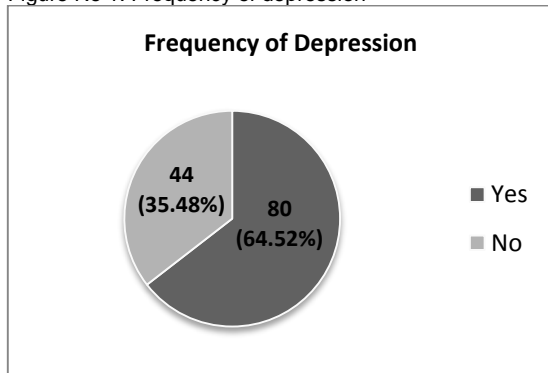
Out of all the patients, 76 (61.29%) were male while 48 (38.71%) were females. Mean age of patients was 39.42±14.65 years. 75 (60.48%) patients had urban residence and 49 (39.52%) had rural residence. 58 (41.94%) patients had low socio-economic status, 60 (48.38%) had middle and 6 (4.84%) patients had high socio-economic status. (Table 1)

Table No 1: Baseline characteristics of all the patients

Characteristics	Frequency No.	%age
Mean age (Years)	39.42±14.65 years	-
Gender		
Male	76	61.29
Female	48	38.71
Residence		
Urban	75	60.48
Rural	49	39.52
Socio-eco status		
Low	58	41.94
Middle	60	48.38
High	6	4.84

Depression was found in 80 (64.52%) patients while 44 (35.48%) patients had no depression. (Figure 1)

Figure No 1: Frequency of depression



According to the severity of depression, 31 (25%) patients had mild depression, 34 (27.41%) had moderate and 15 (12.10%) patients had severe depression. (Table 2)

Table No 2: Severity of depression

Variables	Frequency No.	%age
Severe	15	12.10%
Moderate	34	27.41%
Mild	31	25%

Association of depression between genders showed that females were more likely to have depression as compared to males and the difference was statistically significant with p-value <0.05. (Table 3)

Table No 3: Association between depression and gender

Variables	Male (n=76)	Female (n=48)	P-value
Depression			0.002
Yes	42 (55.26)	38 (79.17)	
No	34 (44.74)	10 (20.83)	

DISCUSSION

Psychological disorders such as depression and anxiety are common in general population and highly associated with severe complications. Bronchial asthma is one of the most commonly found disease and associated with high rate of psychological disorders and can effects the patients quality of life¹¹. We conducted present study to examine the frequency of depression in patients with bronchial asthma. In this regard 124 patients were enrolled. Majority of patients 76 (61.29%) were male while 48 (38.71%) were females. Mean age of patients was 39.42±14.65 years. These results were comparable to some previous studies in which male patients population was high 60% to 75% and majority of patients were ages between 30 years to 50 years¹²⁻¹³.

In present study depression was found in 80 (64.52%) patients while 44 (35.48%) patients had no depression. According to the severity of depression, 31 (25%) patients had mild depression, 34 (27.41%) had moderate and 15 (12.10%) patients had severe depression. A study conducted by Suleman A et al¹⁴ regarding frequency of depression among patients with bronchial asthma and they reported that 40% patients had depression and 60% patients had no depression.

Another study by Taghreed S et al¹⁵ reported that depression was found in 60.1% patients presented with bronchial asthma, COPD and diffuse parenchymatous lung disease.

Shakoor A et al¹⁶ reported in their study that anxiety and depression was found in 74(75.5%) and 62(63.3%) patientswith bronchial asthma. In our study we found that association of depression between genders showed that females were more likely to have depression as compared to males and the difference was statistically significant with p-value <0.05. These results were not similar to the study by Shakoor A et al¹⁶ in which prevalence of anxiety and depression between male and female was not statistically significant. A study conducted by Moussas G et al¹⁷ regarding prevalence of anxiety and depression among patients with bronchial asthma, COPD and tuberculosis, reported that females had higher depression and anxiety scores than males (t test, p < 0.05).

The association of anxiety and depression with asthma has been confirmed innumerous studies¹⁸. Psychiatric disorders were significantly morefrequent inasthmatics than in non-asthmatic population and the ratio of various psychiatric disorders, particularly anxiety and depression, varies ranging from 9% to 65%¹⁹.

CONCLUSION

Psychiatric disorders such as depression and anxiety are commonly found in general population and highly associated with poor quality of life. We concluded from this study that depression is highly associated with bronchial asthma. The frequency of depression in bronchial asthma

was 64.42%. Females had high prevalence of depression as compared to males.

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