

Research Article**An audit of anxiety and depression in cases of bronchial asthma**

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ABSTRACT

Objective: To evaluate the anxiety and depression in cases of bronchial asthma presenting at Civil Hospital Bahawalpur.

Research methodology: This descriptive cross sectional study was done at Department of Medicine, Civil Hospital, Bahawalpur from March 2017 to September 2017. Total 125 cases of bronchial asthma were selected and anxiety and depression was assessed.

Results: This study consisted on 125 patients of bronchial asthma. Mean age of the asthmatic patients was 45.68 ± 7.46 years. Anxiety was noted in 101 (80.8%) patients and 24 (19.2%) patients were found without anxiety. Depression was found in 79 (63.2%) patient and 46 (36.8%) were found without depression. Insignificant association of gender with anxiety and depression was noted with p value 0.432 and 0.524. Statistically significant association of area of residence with anxiety was noted with p value 0.000. Insignificant association between area of residence and depression was noted with p value 0.190.

Conclusion: Results of present study showed a higher rates of anxiety and depression among asthmatics. Statistically insignificant association of gender with anxiety and depression was noted. It is also noted in this study that rural asthmatics has higher rate of anxiety and depression as compared to urban asthmatics.

Keywords: Significant, asthma, anxiety, Psychiatric disorders, depression, chronic

INTRODUCTION

Bronchial asthma is one of the most frequently diagnosed medical conditions causing significant morbidity, mortality and rising health care expenditure.¹ It affects almost 300 million people globally which brings about high socio-economic costs and an increase in rate of morbidity and mortality.² BA is characterized by un-expected and sudden attacks of shortness of breath, thus asthmatic attacks are a real threat for life in these patients.³ It makes sense that BA significantly affects psychological health of the patients because of its serious impact on activities, sleep and social life of patients.⁴ Many observational studies have reported that asthma was associated

with psychological conditions such as anxiety and depression. Pulmonary functionality is impaired during asthmatic attacks, thereby causing significant respiratory distress among patients.⁵⁻⁶ Intense fear, reduced productivity and quality of life due to frequent hospital walk-ins and dependency on the health care personnel pose significant psychological co-morbidities [e.g. anxiety and depression) among asthmatics.⁷⁻⁸ Clinical trials further documented the relationship between asthma and psychogenic factors.⁷⁻⁸ Anxiety is defined as an apprehensive anticipation of danger associated with an excessive feeling of dysphoria due to an illness or tension⁹; while

depression is a condition which renders a person to feel discouraged, sad or uninterested in life.¹⁰Prevalence of anxiety and depression in asthmatics is higher due to dyspnea causing reduced effort intolerance, noncompliance to medications and cholinergic bronchospasm.¹ Almost 24% of adults exhibited anxiety due to asthma in Iran.¹¹ Comparatively, depression was reported in 40-80% of asthmatic patients in the United Kingdom.¹² The increased risk of psychological comorbidities in asthmatics posed significant threat to patient adherence for asthma control.¹¹

A study is planned to screen out the asthmatic patients for anxiety and depression. Results of this study may help us to decrease this co-morbidity of the asthmatics by early management of anxiety and depression.

RESEARCH METHODOLOGY

This descriptive cross sectional study was done at Department of Medicine, Civil Hospital, Bahawalpur from March 2017 to September 2017. Total 125patients of bronchial asthma either male or female having age range from 20-60 years were included in this study. Patients with history of diabetes mellitus and hypertension were excluded from the study.Ethical approval was obtained from the institutional review committee and written informed consent was taken from every patient.Hospital Anxiety and Depression Scale (HADS) was used to assess anxiety and depression. Scores 8-15 were considered as mild anxiety or depression, 16-20 as moderate anxiety or depression and scores higher than 17as severe.Patients with primary education wereconsidered as illiterate and above middle education were considered as literate. All the

collected data was entered into SPSS version 17 and analyzed. Mean and SD was calculated for numerical variables and frequencies and percentages were calculated for categorical variables. Chi-square test was used as test of association. P value ≤ 0.05 was considered as statistically significant.

RESULTS

Mean age of the asthmatic patients was 45.68 ± 7.46 years. Anxiety was noted in 101 (80.8%) patients and 24 (19.2%) patients were found without anxiety. Depression was found in 79 (63.2%) patient and 46 (36.8%) were found without depression. (Table 1) Out of 125 asthmatic patients, male patients were 94 (75.2%) and female patients were 31 (24.8%). Anxiety was seen in 74 (78.72%) male patients and in 27 (87.1%) female patients. Insignificant association of gender with anxiety was noted with p value 0.432. Depressive symptoms was noticed in 61 (64.89%) male patients and 18 (58.06%) female patients. But statistically insignificant association between depression and gender was detected with p value 0.524. (Table 2)

Total 75 (60%) patients belonged to rural area and 50 (40%) patients belonged to urban area. Anxiety was found in 69 (92%) patients of rural area and in 32 (64%) patients of urban area. Statistically significant association of area of residence with anxiety was noted with p value 0.000. Depressive symptoms were noted in 51 (68%) patients of rural area and in 28 (56%) patients of urban area. Insignificant association between area of residence and depression was noted with p value 0.190. (Table 3)

Table 1Frequencies for anxiety and depression in asthmatics

Status	Anxiety N (%)	Depression N (%)
Yes	101 (80.8)	79 (63.2)
No	24 (19.2)	46 (36.8)
Total	125 (100)	125 (100)

Table 2 Association of gender with anxiety and depression

Gender	Yes (%)	No (%)	Total
Association of gender with anxiety P. value = 0.432			
Male	74 (78.72)	20 (21.28)	94 (75.2)
Female	27 (87.1)	4 (12.9)	31 (24.8)
Total	101 (80.8)	24 (19.2)	125
Association of gender with depression P. value = 0.524			
Male	61 (64.89)	33 (35.11)	94 (75.2)
Female	18 (58.06)	13 (41.94)	31 (24.8)
Total	79 (63.2)	46 (36.8)	125

Table 3 Association of anxiety and depression with area of residence

Area of residence	Yes (%)	No (%)	Total
Association of area of residence with anxiety P. value = 0.000			
Rural	69 (92)	6 (8)	75 (60)
Urban	32 (64)	18 (36)	50 (40)
Total	101 (80.8)	24 (19.2)	125
Association of area of residence with depression P. value = 0.190			
Rural	51 (68)	24 (32)	75 (60)
Urban	28 (56)	22 (44)	50 (40)
Total	79 (63.2)	46 (36.8)	125

DISCUSSION

The objective of present study was to assess the anxiety and depression among asthmatic patients. Mean age of the asthmatic patients was 45.68 ± 7.46 years. In one study by Tafti et al mean age of the asthmatic patients was 43.8 ± 16.6 years which is comparable with our study.¹³ Anxiety was noted in 101 (80.8%) patients and 24 (19.2%) patients were found without anxiety. Depression was found in 79 (63.2%) patient and 46 (36.8%) were found without depression. In one study, depression was noted in 65.4% patients which is in agreement with our study.¹³ In another study depression was found in 66.7% patients which is

also comparable with our findings.¹⁴ Labo r et al reported frequency of anxiety and depression as 44.5%, 24.5% which is lower than that of our findings.¹⁵ There are some controversies regarding the prevalence of anxiety and depression in BA. Wang et al¹⁶ reported that 70% of asthmatics have some degrees of anxiety and depression. Some other studies reported anxiety and depression six times more prevalent in asthmatic patients as compare to general population.¹⁷ In a Canadian survey with psychiatric interview, anxiety was more prevalent in asthmatic patients than depression.¹⁸

Out of 125 asthmatic patients, male patients were 94 (75.2%) and female patients were 31 (24.8%). Anxiety was seen in 74 (78.72%) male patients and in 27 (87.1%) female patients. Insignificant association of gender with anxiety was noted with p value 0.432. Depressive symptoms was noticed in 61 (64.89%) male patients and 18 (58.06%) female patients. But statistically insignificant association between depression and gender was detected with p value 0.524. Similarly in study by Wilson et al, asthmatic males and asthmatic females had similar prevalence of anxiety and depression.¹⁹ Conversely, in a study by Tafti et al,¹³ significantly (P = 0.005) more female asthmatics had depressive symptoms as compare to male asthmatic (70.2% versus 54.9%) and Nowobilski et al reported that asthmatic females experience higher degrees of somatic symptoms and anxiety than asthmatic males.²⁰

CONCLUSION

Results of present study showed a higher rates of anxiety and depression among asthmatics. Statistically insignificant association of gender with anxiety and depression was noted. It is also noted in this study that rural asthmatics has higher rate of anxiety and depression as compared to urban asthmatics.

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