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Research Paper

DEPRESSION AND ANXIETY REQUIRING EMERGENCY TREATMENT AMONG PATIENTS WITH ASTHMA AT A TERTIARY HEALTH CARE CENTER IN NIGERIA

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Abstract

Introduction:-There is the background understanding that individuals with asthma may have anxiety and depression[4]. However, to what extent does the anxiety or depression, if found in these individuals, require urgent or emergency treatment? This is the research question answered by this study in this locale.
Materials and Methods:-All consecutive patients both new and old, presenting for the treatment or follow-up of asthma were approached and those who gave consent were recruited into the study. A designed proforma (with sections for the biodata and the patients need for urgent care) as well as the Hospital Anxiety and Depression Score (HADS) were used for data collection.
Results:- A total of 146 patients were included in the study. Males were 67 (45.9%) and females were 79 (54.1%); a male: female ratio of 1: 1.2. Ninety nine (67.8%) of the patients had normal or borderline depression, while 47 (32.2%) were the abnormal cases of depression. One hundred and nine (74.7%) of the respondents do not have anxiety while 37 (25.3%) were well defined abnormal cases of anxiety. The presence of depression in the patients predicted a significant need for urgent treatment (χ^2= 4.58, p= 0.04, and 95% C.I. was 1.11-2.98) (Table I). Similarly, a significant number of those with anxiety reported a need for urgent treatment (χ^2= 6.43, p= 0.03 and 95% C.I. was 1.24-5.79).
Conclusion:- The presence of depression and anxiety individually significantly predicted the need for urgent treatment in the asthmatic patients.
Key words: Depression, Anxiety, Emergency treatment, Asthma.

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INTRODUCTION

Asthma is a common chronic inflammatory disease of the airways of the lungs.[1] It is characterized by variable and recurring symptoms, reversible airflow obstruction, and easily triggered bronchospasms.[2,3] Symptoms include episodes of wheezing, coughing, chest tightness, and shortness of breath.[2] . These may occur a few times a day or a few times per week.[3] Depending on the person, asthma symptoms may become worse at night or with exercise.

Depression, is a mental disorder characterized by at least two weeks of low mood that is present across most situations.[6] It is often accompanied by low self-esteem, loss of interest in normally enjoyable activities, low energy, and pain without a clear cause.[6] Patients with depression have a high rate of having suicidal ideations and may actually commit suicide if not promptly detected and treated. Anxiety disorders are a group of mental disorders characterized by significant feelings of anxiety and fear.[7] Anxiety is a worry about future events, and fear is a reaction to current events.[7] These feelings may cause physical symptoms, such as a fast heart rate and restlessness. Anxiety disorders include generalized anxiety disorder, phobic anxiety disorder, panic anxiety disorder amongst others. The combination of either of these disorders (depression or anxiety) with asthma may worsen the symptoms and signs of the disease and may impact negatively on the overall outcome of the disease.

Patients with chronic illnesses have been shown to exhibit mood disorders. The recurrent nature of their disease and sometimes recurrent hospital visitations and or admissions tends to cause a lot of stress, and depression may set in. Sometimes, depending on the nature of the chronic illness, they may also exhibit neurotic symptoms such as anxiety. The long-term recurrent nature of asthma makes it possible for the affected individuals to develop depressive illness on one hand. On the other hand however, because the episodes come up acutely or suddenly with bronchospasm and air hunger, there is the anxiety component to the condition. Negative emotions such as fear of sudden death and panic attacks are associated with exacerbations of asthma attacks. Thus, it is required to screen patients presenting with asthma for possible presence of depression and anxiety so that these co-morbidities can be promptly attended to, especially, if the features of the depression and anxiety have attained emergency proportions. People with asthma have higher rates of anxiety, psychological stress, and depression.[4,5].

There is the background understanding that individuals with asthma may have anxiety and depression[4]. However, to what extent does the anxiety or depression, if found in these individuals, require urgent or emergency treatment? This is the research question answered by this study in this locale.

SUBJECTS AND METHODS

The study was carried out at the Respiratory Clinic in the Consultant Out-Patient Department (COPD) of the University of Benin Teaching Hospital (UBTH), Benin City.

All consecutive patients both new and old, presenting for the treatment or follow-up of asthma were approached to be included in the study. The rational for the study was explained to each patient. The patients who gave consent were recruited into the study. They were given the instruments to fill for the data collection. A designed proforma and the Hospital Anxiety and Depression Score (HADS) were used for data collection[8]. The proforma had sections for the biodata and the patients need for urgent care. The HADS instrument has fourteen questions; seven questions assessing for depression and the other seven questions assessing for anxiety. Each question has four stems which is graded as 0-3. The patients were to score each question based on how they feel about their disease. Patients were to tick the option that best describes how they have been feeling in the past week. The immediate response to the options is usually the best and patients were encouraged not to think too long on each question to avoid bias. Scores for depression were added together and noted. Similar process was done for questions assessing anxiety. The scores for depression and for anxiety were then compared to the grading independently to know if the individual patient suffers from either condition or both. The final grading is as follows: score of 0-7 is normal, 8-10 is borderline abnormal (borderline case), 11-21 is abnormal (case). A case of depression and or anxiety is defined as any patient whose score for either condition is within the abnormal range 11-21. Individuals with scores for normal (0-7) or borderline case (8-10) are considered normal and not positive for either condition[8].

The data was entered and analyzed with the Statistical Package for Social Sciences (SPSS) version 21.

RESULTS

Sociodemographic characteristics.

A total of 146 patients were included in the study. Males were 67 (45.9%) and females were 79 (54.1%); a male: female ratio of 1: 1.2. Sixty nine (47.3%) were single, 68(46.5%) were married and the remaining 6.2% were either separated or widowed. The minimum age was 16 years while the maximum age was 74 years and mean age was 33.06 (±12.40) years.

Assessment for Depression

Sixty nine (47.3%) of the patients had normal assessment with scores of 0-7. The patients that had borderline depression were 30 (20.5%) while 47 (32.2%) were the abnormal cases of depression (Figure 1).

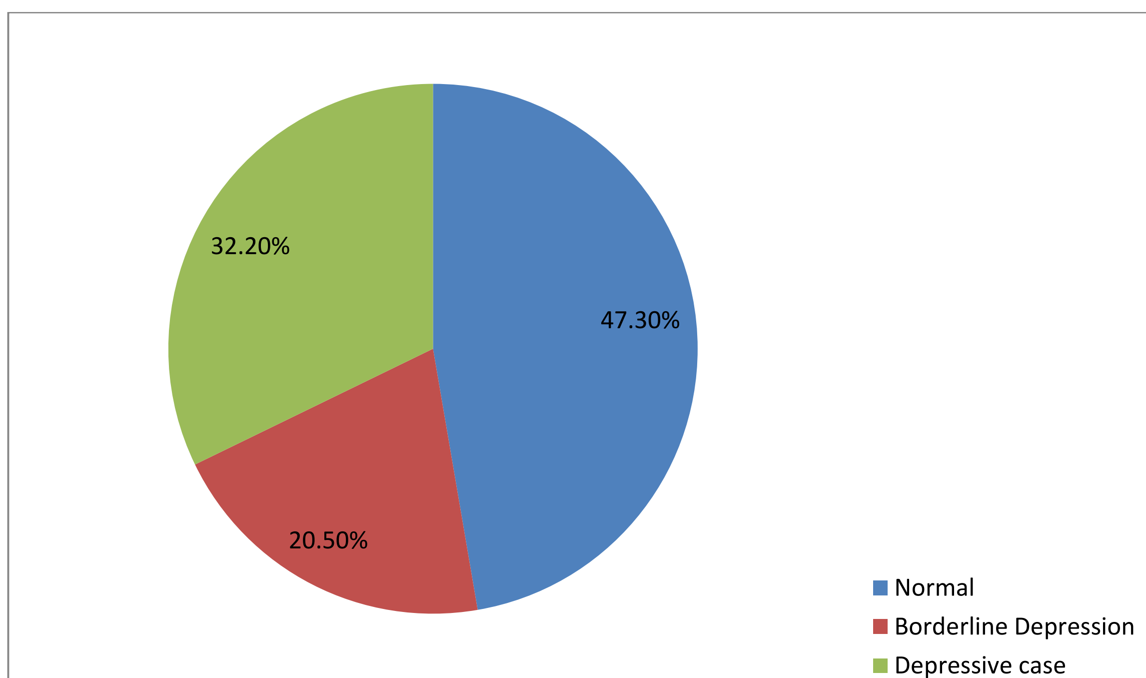

Figure 1: Assessment for Depression

Assessment for Anxiety

Figure 2 showed that 109 (74.7%) of the respondents do not have anxiety while 37 (25.3%) were well defined abnormal cases of anxiety. Of those without anxiety; 69 (63.3%) had normal scores while 40 (36.7%) had borderline anxiety scores.

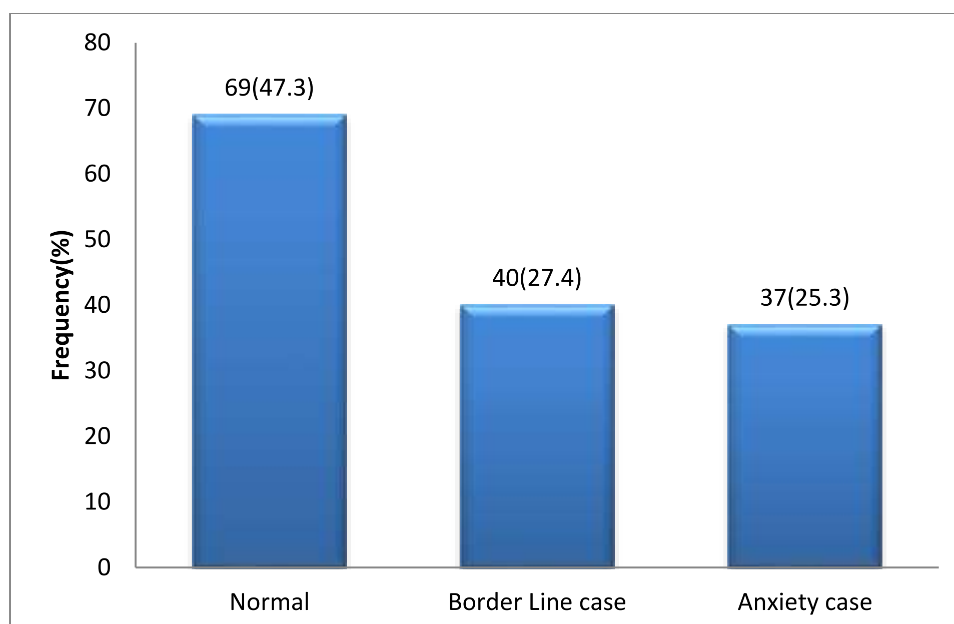

Figure 2: Assessment for Anxiety

Need for Urgent Treatment

The overall need for urgent treatment was found in 21 (14.4%) of the patients while 125 (85.6%) felt that they do not have a need for urgent care. (Table I). The presence of depression in the patients gave a significant need for urgent treatment (χ^2= 4.58, p= 0.04, and 95% C.I. was 1.11-2.98) (Table I). Similarly, a significant number of those with anxiety reported a need for urgent treatment (χ^2= 6.43, p= 0.03 and 95% C.I. was 1.24-5.79).

Table I: - The Need for Urgent Treatment.

Characteristics	Depression		χ^2	p-value
	Present n (%)	Absent n (%)		
Urgent Treatment	11 (23.4)	10 (10.1)	4.58	0.04
No Urgent Treatment	36 (76.6)	89 (89.9)		*
	Anxiety			
Urgent Treatment	10 (27.0)	11 (10.1)	6.43	0.03*
No Urgent Treatment	27 (73.0)	98 (89.9)		
Total	**21(100)**	**125 (100)**		

DISCUSSION

In the current study, about a third of the patients had scores which goes for cases of depression. Only a few had borderline scores for depression. This is not surprising as

studies have found higher prevalence of depressive disorders in patients with asthma compared to general populations[9]. Depression is a common mood disorder that can cause functional impairment and emotional anguish. It has been found as a co-morbidity of some chronic medical conditions[10] such as diabetes, cardiac condition etc. A chronic condition such as asthma characterized with bronchospasm and difficulty with breathing may necessitate frequent hospital visits and sometimes hospital admission. These can cause a lot of emotional and physical stress that may precipitate depression. Similarly, there have been postulations that there may be genetic interplay that enhance the development of both asthma and depression in the same individual. In a vicious cycle, the presence of depression may also exacerbate symptoms of asthma if not recognized and treated promptly. Zielinski et al in 2000 in a meta-analysis documented that the prevalence of depression in patients with asthma was more than 20% of that found in the general population[9]. Other studies have given a prevalence range of 11-18% of depression in patients with asthma[11-13]. The prevalence (32.2%) found in this study was higher than that found by these other studies. The level of control of asthma can affect the prevalence of depression with those with poorer control having higher prevalence of depression. Although the level of asthma control was not determined in this study, it could have contributed to the higher prevalence of depression documented in this study as the study center (UBTH) is a tertiary referral center.

Anxiety was found in 25.3% of individuals with asthma in this study. Sumino et al in 2014 found anxiety to have a prevalence of 16-52% among asthmatic patients[10]. The prevalence of anxiety in asthma patients in this study falls within the documented prevalence range. This is not surprising as patients with asthma have been found to have some level of anxiety. The clinical features of asthma and anxiety are similar and either condition can provoke the symptoms of the other. Stress and anxiety are potent triggers for asthmatic attacks. Episodes of asthma also create panic and fear of inability to breath and sudden death. The confusion of knowing if a patient with asthma is having features of the disease or simply features of anxiety will be minimized if these patients are screened for anxiety. The presence of established anxiety in patients with asthma may worsen outcome of treatment in these patients.

As reported by patients, 14.4% (1 out of 7) perceived that they have an urgent need for treatment. The presence of depression and anxiety individually significantly predicted the need for urgent treatment in the asthmatic patients. The need for urgent or

emergency treatment is often determined by any concerned parties such as patients, relations, health care providers etc[14] In this study, the urgent need for treatment was determined by the patients. A significant number of those with depression and or anxiety require urgent treatment. The feelings of anxiety and depression could be initially subjective. Also, depression and anxiety occur in a spectrum from mild to more severe forms. Individuals with mild features of these disorders can easily be missed; thus, if relations were interviewed or if full clinical assessment was conducted by health care providers, the prevalence of those who require urgent care may be higher. However, as long as the patient recognizes that he needs help and urgent care; immediate attention should be given to such patient. Asthma patients with depression have been found to have higher rates of suicidal ideations and as such, patients with depressive features should be identified early for prompt intervention. Similarly, prompt care should be given to patients who have anxiety features who indicate that they require urgent care. This will help alleviate symptoms of their disease and give faster relief to the patients. Early recognition and prompt intervention of depression and anxiety in patients with asthma will improve the overall treatment outcome of the patients.

CONCLUSION

The presence of depression and anxiety individually significantly predicted the need for urgent treatment in the asthmatic patients. This urgent need for treatment was found in 1 out of 7 patients who had asthma. Adequate evaluation of the asthmatics for depression and anxiety as well as prompt treatment is advisable for a better outcome of treatment in the asthmatic.

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