

Prevalence of Throat Symptoms in Asthmatic Patients in Nigeria

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ABSTRACT: OBJECTIVE: This study was carried out to determine the prevalence of throat related symptoms in asthma with a view to follow a more holistic approach to the management of asthma patients. **METHODS:** This prospective study was conducted in the Chest Clinic and the Ear, Nose, Throat, Head and Neck Surgery Clinic of the University of Benin Teaching Hospital, Benin City, between 1st March, 2008 to 28th February, 2011. Asthmatic patients were enrolled into the study after taking informed consent. **RESULTS:** 41 asthmatic patients participated in the study. There were 15 males and 26 females. Ages ranged from 17 years to 83 years, with an average age of 48.7 years. The common throat symptoms were cough (26.36%), itching of the throat (17.54%), hoarseness (15.79%). In 46.34% of asthmatics, no abnormality was detected in the throat. **CONCLUSION:** Common throat symptoms in asthmatics were cough, throat itching and hoarseness. A more detailed study of this topic is highly recommended.

Keywords: Prevalence, Throat symptoms, Asthmatic patients, Nigeria.

INTRODUCTION : Asthma is defined as a chronic airway disease characterized by hyper-responsiveness of the airway due to recurrent inflammation following exposure to environmental allergens and manifesting as cough, wheezing, breathlessness and chest tightness which may be reversible with or without the use of bronchodilators¹. Acute asthma has also been defined as acute episodes of progressively worsening shortness of breath, cough, wheezing or chest tightness. Severity is defined according to the global initiative for asthma (GINA) guidelines². Asthma is further confirmed by a change in the Peak Expiratory Flow Ratio (PEFR) of at least 20% (measured with the mini- Wright's peak flow meter after the administration of a bronchodilator)³. Asthma is a common disease in children and adults worldwide⁴⁻⁶. However the prevalence of asthma varies from country to country and even within the same country. There are also differences in prevalence between urban and rural settings⁷⁻⁸. Generally, prevalence of asthma range from 0 to 10% in children and in up to 15% adults in Africa^{5,7}. It is possible that common immunologic reactions to antigenic stimuli as seen in asthma, leading to angio-oedema that causes clinical features of throat resulting from hypersensitivity or exaggerated response of the immune system seen in some asthmatic patients. Angio-oedema is an acute allergic, histamine-mediated reaction, which can occur in many parts of the body and it can be potentially fatal if it occurs in the larynx⁹. Although it is well documented that asthma has a close link to chronic bronchitis¹⁰, the prevalence of clinical features of the throat in asthmatic patients has not been properly documented in our center. This study was therefore carried out to outline the prevalence of throat features in asthma with a view to establishing a link or correlation between

asthma and throat problems. This will form a baseline for a more holistic approach in the management of asthmatic patients.

SUBJECTS AND METHODS : This is a prospective study that was carried out at the Chest Clinic and the Ear, Nose, Throat, Head and Neck (ENT, H & N) Surgery Clinic of the University of Benin Teaching Hospital (UBTH), Benin City, between 1st March, 2008 and 28th February, 2011. Approval for this study was granted by the ethical review committee of UBTH, Benin City. All patients with a diagnosis of asthma that were seen in the Chest Clinic of UBTH, were evaluated to be enrolled for the study. The patients were diagnosed as having asthma with characteristics history, physical examination and reversibility testing³. All the asthmatic patients were stable and were on salbutamol inhaler/tablet and salmeterol/fluticasone propionate accuhaler. All the patients enrolled for the study were requested to attend the ENT, Head & Neck

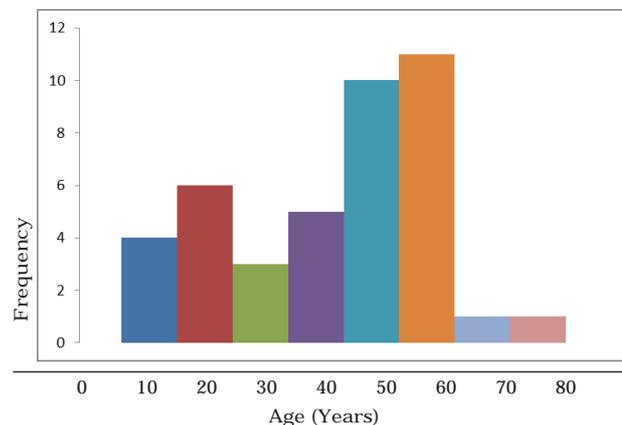


Figure 1: Age distribution.

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Symptoms	Freq	%
Cough	15	26.36
Hoarseness	9	15.79
Odynophagia	1	1.75
Itching of Throat Palate	10	17.54
Snoring	3	5.26
Pain in throat	1	1.75
Dysphagia	1	1.75
No Complaint	17	29.82

Table 1: Throat symptoms in asthmatic patient (n=57).

Symptoms	Freq	%
PND	15	34.09
Hyperaemia of ppw	3	6.82
Granular ppw	3	6.82
Hypertrophic papillae post, 1/3rd of tongue	1	2.27
Laryngeal polyp	1	2.27
Oral Candidiasis	1	2.27
Dysphagia	1	2.27
Enlarged tonsils	1	2.27
No abnormality	19	43.18

Table 2: Signs of throat problem in asthmatic Patients (n=44).

Surgery clinic where clinical features of throat problem were taken and elicited respectively. The enquiries were made for the symptoms of dysphagia, odynophagia, regurgitation, breathlessness/dyspnoea, hoarseness, snoring, cough, itching of the roof of the mouth/throat and growth in the mouth /throat. A complete throat examination was also carried out by the first author. The clinical features were then documented in an adopted format/questionnaire for the study. Asthmatic patients found to have symptoms of ENT were treated for the ENT problem. The data were analyzed manually, presenting the results in tabular format and histogram.

RESULTS : A total of 41 consecutive asthmatic patients were enrolled for the study. There were 15 males and 26 females, with male to female ratio of 1: 1.7. Ages ranged from 17 years to 83 years, with an average age of 48.7 years. Figure 1 showed the age distribution of patients in the study. Table 1 showed the throat symptoms in asthmatic patients. Table 2 showed the throat signs in asthmatic patients. It is significant to note that two asthmatic patients were diagnosed as having pharyngitis and laryngeal polyp respectively.

DISCUSSION : Only 41 patients gave consent to participate in this study, despite the fact that 160 asthmatic patients were seen in the Chest Clinic during this period. This is an attestation that people in this locality are reluctant or not so keen to participate in research with no financial or material benefit. The higher number of females in this study, may be due to the higher prevalence of female asthmatics in this age bracket. As seen in the age distribution of patients, there was a preponderance of the working class and the middle age group. The young and active asthmatics may be too busy to attend a second clinic in a week for 'research purpose',

especially when stable. Similarly parents in this locality are less likely to bring their asthmatic children for a 'mere research visit' when there is no financial or material benefits attached. As regards to throat symptoms in asthmatics, cough (26.36%), itching of throat (17.54%) and hoarseness (15.79%) were the main symptoms in asthmatic patients. One may postulate that these symptoms might be a reflection of the allergic tendency of the asthmatic patients as the cough in most cases were non-productive and intermittent. Similarly the hoarseness appears to be related mostly to the period of acute asthmatic attack. Itching of the throat also points to allergic origin. Allergy has been closely associated with chronic laryngitis and asthma¹⁰. Allergy has also been implicated as a cause of vocal cord oedema¹¹. These findings explain the predominance of cough, hoarseness and itching in asthmatic patients.

Although allergic disorder may be different in terms of the stimulating antigens¹², the asthmatic patient has the predisposition to develop exaggerated immunoglobulin E (IgE) antibody responses against common inhaled aeroallergens, in different parts of the body inclusive of the entire respiratory system¹³. Allergic tendency in asthma leading to angio-edema⁹, can also explain the hoarseness in asthmatics in this study. The prevalence of post- nasal drip in some of the patients (34.09%) is due to chronic rhinosinusitis, which is a known common co-morbidity with asthma¹⁴. The muco-purulent discharge dripped from the nasopharynx, down the posterior pharyngeal wall and presented as a throat sign in the asthmatic patients. Laryngeal polyp is more likely to be due to inflammatory changes¹⁵, although allergy can precipitate in the inflammation. It is therefore necessary to look for the presence of these signs in asthmatics and to investigate and treat them when they are present. It is also noteworthy that in 19 out of 41 patients (46.34%) no abnormality was detected in the throat. All the patients in this study had throat examinations only once and they were not followed over a period of time for the symptoms they presented with or for other symptoms. These are limitations of this study. It is advised that a more detailed study in which the asthmatic patients can be monitored over a period of time may be conducted.

CONCLUSION : Asthmatic patients occasionally present with cough (26.36%), itching of throat/palate (17.54%), hoarseness (15.79%), which appear to be due to their allergic tendencies. 46.34% of asthmatic patients had no throat sign on examination. More detailed and follow-up study of throat symptoms in asthma is recommended.

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