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Original Research Article.

Assessment of Bronchial Asthma among Smokers: An Observation Study

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ABSTRACT

Background: Airway inflammation with shortness of breath that generally worsens at night and during exertion are typical features of asthma. Asthma is of major health concern in the industrialised and developed countries of the world. The present study was done to assess the signs and symptoms, occupation and awareness about asthma amongst the smokers.

Materials and Methods: The present prospective observational study was conducted in the Department of general medicine, D.B. Hospital, Churu, Rajasthan, India. A detailed history followed by thorough clinical examination was done for all the subjects. An increase in PEFR by 20% was taken as the criteria for diagnosis of asthma. A note was also taken about the type of treatment taken by the subjects for management of asthma. All the data was arranged in a tabulated form and analysed using SPSS software. Unpaired t test was applied for analysis. P value of less than 0.05 was considered significant.

Results: In this study, the chief complaint of breathlessness was seen in 9120(100%) of patients, wheezing was seen in 112(93.3%),.In this study, before admission, for the treatment of acute exacerbation of asthmatic attack, 84 patients used oral, 22 used injectables and 10 patients used inhalers. In this study 60% patients thought their asthma could be cured with treatment; though only 22.5% knew about the various modalities of the available treatments.

Conclusion: From the above study we can conclude that knowledge and awareness about asthma is still poor amongst the smokers. There were still a proportion of subjects who didn't opt for ant treatment.

Keywords: Asthma, Breathlessness, Smokers, Treatment.

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INTRODUCTION

Airway inflammation with shortness of breath that generally worsens at night and during exertion are typical features of asthma.[1] Approximately 300 million people around the world suffer from asthma and around 252000 deaths in the world are due to asthma, as per the world survey.[2] There is a tremendous rise in the incidence and prevalence of asthma in the world. Both the developed and developing countries are affected by it. The hyper responsiveness of the lower breathing tract is peculiar to asthma. It is identified by its characteristic signs and symptoms like wheezing, cough, shortness of breath etc.[3] Asthma is of major health concern in the industrialised[4,5] and developed countries[6-8] of the world. The mortality associated with asthma is increasing at a rapid pace even in the presence of increased knowledge and awareness. Symptoms of asthma start appearing at a younger age in majority of the cases, there are only a few cases (25%) in which symptoms occur after 40 years of age. There is varied prevalence of respiratory disorders like rhinitis, COPD amongst different regions of the same country[9-12] The diseases pose a significant burden for the community and as well as individuals.[13] The present study was done to assess the signs and symptoms, occupation and awareness about asthma amongst the smokers.

MATERIALS AND METHODS

The present prospective observational study was conducted in the Department of general medicine, D.B. Hospital, Churu, Rajasthan, India. The study enrolled 120 subjects reporting to the department with asthma. The patient's admission was based on guidelines procured by British Thoracic Society in the year 1993. Ethical committee clearance was obtained from the institutional ethical board and all the subjects were informed about the study and a written consent was obtained from all in their vernacular language. A detailed history followed by thorough clinical examination was done for all the subjects. A mini peak flow meter was used to record the PEFR before and 20 minutes after injection of Terbutaline. An increase in PEFR by 20% was taken as the criteria for diagnosis of asthma. Every subject's blood and sputum examination were done. Patients were also made to write about their smoking history and frequency in a proforma that also had questions regarding the knowledge and awareness about bronchial asthma. A note was also taken about the type of treatment taken by the subjects for management of asthma. Medical history of the subjects and including the frequently associated signs and symptoms were taken into account.

All the data was arranged in a tabulated form and analysed using SPSS software. Unpaired t test was applied for analysis. P value of less than 0.05 was considered significant.

RESULTS

Table 1 shows the list of symptoms of the patients that they presented with. In this study, the chief complaint of breathlessness was seen in 120 (100%) of patients, wheezing was seen in 112 (93.3%), cough in 84 (70%) and tightness of chest in 79 (65.8%) of patients, URC was reported by 26 (21.7%) patients while 7 (5.8%) patients reported other symptoms. Breathlessness and wheezing were the most predominant symptoms followed by cough and tightness of chest.

Table 2 demonstrates the various treatment modalities opted by the patients previously for asthma. In this study, before admission, for the treatment of acute exacerbation of asthmatic attack, 84 patients used oral, 22 used injectable and 10 patients used inhalers.

There were 4 patients who did not opt for any treatment. There were 73.8% subjects who used oral and 54.5% patients who used injectable regularly while 16 (19.1%) patients used oral and 6 (27.3%) use injectable irregularly. There were 6 (7.1%) patients who took rescue medicine in the form of oral and 4 (18.2%) as injectable whenever they got symptoms.

Table 3 shows the knowledge and awareness about asthma amongst the patients. In this study 60% patients thought their asthma could be cured with treatment; though only 22.5% knew about the various modalities of the available treatments. 35 (29.2%) patients could not judge the severity of the disease or the response of the disease to the treatment; while 18 (15%) patients could tell the bad prognostic signs. However, 84 (70%) patients had knowledge about the triggers of their actions.

Table 1: Frequently associated symptoms

Symptoms in groups	No. of patients	Percentage
Breathlessness	120	100
Cough	84	70
Tightness of chest	79	65.8
Wheezing	112	93.3
URC	26	21.7
Other complaints	7	5.8

Table 2: Type of treatment taken by the patients

Type of treatment	Total patients	Regular		Irregular		Rescue	
		No.	%age	No.	%age	No.	%age
Oral	**84**	62	73.8	16	19.1	6	7.1
Injectable	**22**	12	54.5	6	27.3	4	18.2
Inhaler	**10**	10	100	-	-	-	--
No treatment	**4**						

Table 3: Knowledge and Awareness about asthma in patients

	No	%age
Ability to judge the severity of the disease	35	29.2
Ability to judge poor response to treatment	36	30
Ability to judge bad prognostic signs	18	15
Knowledge about various treatments available	27	22.5
Knowledge about various triggers of asthma	84	70
Knowledge about the curability of the disease	54	45

DISCUSSION

Education results in reduction in incidence of the diseased state and upgrades the outcome of the disease.[14,15] Educating subjects about asthma can be done through different modes and at different locations like hospitals, community based surveys or emergency situations. According to our study 60% patients thought their asthma could be cured with treatment; though only 22.5% knew about the various modalities of the available treatments. 35 (29.2%) patients could not judge the severity of the disease or the response of the disease to the treatment; while 18 (15%) patients could tell the bad prognostic signs. However, 84 (70%) patients had knowledge about the triggers of their actions.

According to study by Ones et al[16] conducted amongst Turkey school teachers there were around 97% of the school teachers who had ample knowledge and awareness about asthma. According to Balzan[17], both the genders were equally affected by asthma. As per their study, the first peak age incidence for admission was 20-24 years and second peak was seen at 55-59 years of age. As per the study A.Mielek et al[18], there was no association between the socioeconomic strata of the subjects and prevalence asthma but they found that demographic status affects the severity of asthma. For diagnosing cases of asthma it is crucial to obtain a complete and detailed history.

According to E.Duran et al[19], wheezing was more frequently seen amongst children of lower socioeconomic strata as compared to higher class. In this study, the chief complaint of breathlessness was seen in 120 (100%) of patients, wheezing was seen in 112 (93.3%), cough in 84 (70%) and tightness of chest in 79 (65.8%) of patients, URC was reported by 26 (21.7%) patients while 7 (5.8%) patients reported other symptoms. Breathlessness and wheezing were the most predominant symptoms followed by cough and tightness of chest. Smaller sample size was few limitations of our study. To increase the knowledge and awareness about asthma, the general subjects should also be made aware and evaluated.

CONCLUSION

From the above study we can conclude that knowledge and awareness about asthma is still poor amongst the smokers. There were still a proportion of subjects who didn't opt for ant treatment. The most commonly seen symptom was breathlessness. Subjects need to be educated against this disease and they should be encouraged to opt for treatment.

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