

Reasons for Refusing Inhalers among patients of Bronchial Asthma & Chronic Obstructive Pulmonary Disease (COPD)

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ABSTRACT

Objective: This study was designed to find out the percentage of patients with asthma and COPD, who refuse to use inhalers as the treatment of their disease and to find out the reasons for this refusal. **Methodology:** It was a prospective, cross-sectional descriptive study, with convenient non-probability sampling, statistical analysis was done manually. **Results:** One hundred & ten (110) patients of asthma & COPD, 61 females and 49 males were included in the study. Forty nine (49) patients refused to take inhaler as treatment of their disease, mainly asthmatics, and reasons given by them for refusal were; thinking inhalers as last resort (61%), difficult to operate (57%), want to hide their disease from others (51%), think that inhalers are not needed at moment (51%), inhalers are sign of serious disease (47%), and are lifelong or addictive (43%). **Conclusions:** Despite advancements in treatments, knowledge & awareness, a significant proportion of our patients with asthma & COPD refuse to use inhalers. This demands lot of efforts to create awareness and give education to the masses especially patients. **Keywords:** Asthma, COPD, Inhaler, Refusal.

INTRODUCTION

Bronchial asthma is a common disease and its patients make a significant proportion presenting to hospitals, both in departments of Medicine and pulmonology. It affects approximately more than 300 million people across the globe⁽¹⁾ and its estimated prevalence in adults ranges from 0.2 to 21%⁽²⁾. It is an evidence based fact that bronchial asthma is a heterogeneous syndrome having distinct phenotypes manifesting differently^(3,4,5). This differentiation is mainly on the age at which these patients initially develop asthmatic symptoms. Patients with childhood asthma have a typical tendency of atopy, respond well to treatments and have good prognosis.

While the other phenotype develop asthmatic symptoms in adulthood and are usually females, are atopic, respond less well to treatment and prognosis is relatively bad. Bronchial asthma is commonly associated with comorbid diseases, and sometimes multi-morbidities^(6,7,8). These co-morbidities are usually food allergies, Allergic rhinitis, eczema (atopic), gastroesophageal reflux disease, cardiovascular diseases, type 2 diabetes mellitus and obesity etc. Chronic obstructive pulmonary disease (COPD) is mostly a disease of people more than 40 years in age. Both COPD & asthma share many clinical features as both of these are chronic as well as obstructive airway diseases. Asthma has relatively more reversibility than COPD⁽⁹⁾. The coexistent presence of asthma and COPD is recently established as an overlapping syndrome.

Management of both these conditions is always quite challenging, whether present alone, in co-existence or along with co-morbidities. One of the mainstays of treatment is inhalational medicines, mainly in the form of inhalers or nebulizers. Many short or long acting beta 2 agonists, corticosteroids, ipratropium bromide and many other

medicines are administered through the inhalational route. It is more effective, quick and safe route to administer these medicines. Nebulizers are still not available or feasible for every patient, and are usually used in emergency situations or relatively acute phase. In contrast, inhalers are the common choice for both acute and chronic states.

It is our common day to day observation that a vast majority of asthmatic & COPD patients or their attendants either refuse or are reluctant to use the inhalers. Even after a lot of information, education and motivation, they prefer or request to avoid inhalers. Although acceptance rate seems better than past but still refusal is quite significant. This prospective, cross-sectional descriptive study was designed to find out the percentage of patients refusing for inhalers and the main reasons behind this refusal.

METHODOLOGY

This prospective, cross-sectional descriptive study was conducted at Chaudhry Muhammad Akram Teaching & Research Hospital, Raiwind Road Lahore and Two Private Clinics in Lahore and Kasur. After informed consent, one hundred and ten (110) patients of bronchial asthma and COPD (both known and newly diagnosed) were registered. Patients were above 18 years of age and from both genders. Sampling was done through convenient non-probability technique. After complete evaluation a written questionnaire was completed for every patient, consisting of personal information and questions regarding use of inhalers. They were given treatment by the senior and experienced physicians after the completion of questionnaires. The statistical analysis was done manually.

RESULTS:

One hundred and ten (110) patients of Asthma, COPD (known and newly diagnosed) and those having mixed features of both diseases were registered. Seventy one (71) patients were having bronchial asthma, 17 had COPD while 22 were having features of both asthma and COPD. Sixty one (55.45%) were females and forty nine (44.54%) were

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males.

All patients were above 18 years of age and the maximum age was 72 years. Majority of patients were below 35 years among asthmatics while patients with COPD and mix features of COPD and asthma were between 30-55 years in age. Majority of patients were having the duration of their disease less than 05 years and educational status was below matriculation in more than half of all patients.

All the patients were asked whether they will use the medicines in the form of inhalers if prescribed by the specialist. Sixty one patients (55.45%) agreed to use inhalers, but many of these patients agreed for using inhalers for limited periods only. Forty nine patients (44.54%), refused to take inhaler as the treatment.

Table – 1. Gender & Disease distribution of patients who refused for inhalers (out of all 110 patients).

Sr. No.	Disease	Males - N (%)	Females N (%)	Total N (%)
1	Asthma	13 (26.53%)	23 (37.70%)	36 (32.72%)
2	COPD	2 (04.08%)	4 (06.55%)	6 (05.45%)
3	Mix Features	3 (06.12%)	4 (06.55%)	7 (06.36%)
4	Total	18 (36.73%)	31 (50.81%)	49 (44.54%)

Those who refused for inhalers were asked to tell the reasons from the given choices and also if they have some other reason which is not present in the list. The overall major reasons for refusal were, patients think inhalers are the last resort (61%) in treatment of their disease, are difficult to operate (57%), patients want to hide their disease from others (51%), patients think inhalers are not needed at the moment (51%), inhalers are sign of serious disease (47%), and are lifelong or addictive (43%). In other reason two patients think it looks ugly to use inhalers, and two said it conveys the impression that person using inhalers is suffering from some contagious disease or cancer. (Details are in table -3)

Table – 3. Disease wise number & percentage of patients who refused for inhalers.

Sr. No.	Reasons for refusal	No. & % of asthmatics who refused Total No. 36	No. & % of COPD who refused Total No. 06	No. & % of Mix Features Total No.07	Total No. & % of pts. Who refused Total No.49
1	Not convinced with the diagnosis	15 (47%)	02 (33%)	02 (29%)	19 (39%)
2	Inhalers are not needed at moment	21 (58%)	00 (00%)	04 (57%)	25 (51%)
3	Inhalers are costly	09 (25%)	02 (33%)	04 (57%)	15 (31%)
4	Difficult to carry	05 (14%)	02 (33%)	04 (57%)	11 (22%)
5	Can cause more side effects	05 (14%)	00 (00%)	06 (88%)	11 (22%)
6	Want to hide the disease from others	16 (44%)	03 (50%)	06 (88%)	25 (51%)
7	Inhalers are "Taboo"	04 (11%)	01 (17%)	02 (29%)	07(14%)
8	Are sign of serious disease	16 (44%)	02 (33%)	05 (71%)	23 (47%)

9	Should not be used for longer periods	11 (31%)	00 (00%)	05 (71%)	16 (33%)
10	Lifelong or addictive	10 (28%)	05 (83%)	06 (88%)	21 (43%)
11	Difficult to operate	21 (58%)	01 (17%)	06 (88%)	28 (57%)
12	Can cause complications	08 (22%)	03 (50%)	02 (29%)	13 (27%)
13	Difficult to re-member	09 (25%)	03 (50%)	02 (29%)	14 (29%)
14	Cumbersome	05 (14%)	01 (17%)	00 (00%)	06 (12%)
15	Look bad	03 (8%)	01 (17%)	03 (43%)	07 (14%)
16	It's my choice – so no need for reasons	03 (8%)	00 (00%)	00 (00%)	03 (6%)
17	Lose efficacy after use for longer periods	08 (22%)	02 (33%)	07 (100%)	17 (35%)
18	These are last resort	22 (61%)	02 (33%)	06 (88%)	30 (61%)
19	Other reasons	03 (8%)	00 (00%)	01 (14%)	04 (8%)

DISCUSSION

Bronchial asthma and COPD are two very common diseases we see in our daily medical practice. These patients require medical treatment along with a lot of changes in their daily life style. They have to adopt certain things while avoiding a lot of other common things they are very used to.

One of these life style modification is that in most of the cases either they have to take their treatment for very long periods or even continuous. Those who have episodic attacks, especially atopic asthmatics, may need to take medications for prevention, during their symptom free periods. Being one of the effective modes of medicine delivery, inhalational medicines especially in the form of inhalers are the mainstay of modern treatment regimens⁽¹⁰⁾. Despite the change over last decade or two, there are still a large proportion of patients who do not like or accept inhalers as the part of their treatment and at least try to avoid inhalers as long as possible. Patients need to adhere to the treatment for these diseases as long as their physicians want them to. If not convinced with the modes or routes of the treatment it is less likely that patients will adhere to the treatment regimen, and patients will have its justification^(11,12). In this study 45 percent patients refused for the inhalers, which is very much significant. It is quite surprising that in this era of medical advancements, awareness and education, approximately half of the patients are not ready to take the better, safe, convenient and effective mode of treatment. Unfortunately despite reasonable search from the literature, not very sufficient research was found from the past on the same topic. In one study from India, about knowledge and management of asthma, authors found that even after motivation only 18 % of the patients were prepared to take inhalers⁽¹³⁾. As compared to the study in India the percentage of patients in our study who agreed is much higher, approximately three times more. The reason for this may be the general trend and increased awareness regarding inhalers over last two decades.

The main objective of the study was to find out the reasons for refusing to use inhalers. In our study the main reasons for refusal were; that 61% patients think that use of inhalers is actually the last resort of asthma or COPD treatment. Fifty

seven percent (57%) feel they are difficult to operate, about half of the patients think that it is too early to start inhalers in their management. There was another very important aspect found that a little more than half of the patients want to hide their disease from others, they don't want people around them (other than living in the same house) to know that they have asthma or COPD. A significant percentage thinks that inhalers are sign of serious disease (47%), and are lifelong or addictive (43%). In the study conducted by Bedi RS, the main reasons were difficulty to use (50%), difficulty to carry (49%), "Habit - forming" (42%) "Last - resort" (38%) and Social stigma 48 (37%)⁽¹³⁾.

In a study from Karachi Pakistan, about many myths regarding use of inhalers for asthma & COPD, author found that 41% of the patients either refused to use inhalers or they did not adhere to them. He found that more males accepted inhalers as treatment in comparison to females. And this is similar as we found in our study. This may be because of the social reasons, brought up and practical approach. Acceptability also increases with duration of disease and increasing age of the patients. Patients in his study associated use of inhalers with severity of disease and with serious side effects. They also considered inhalers as costly and habit forming⁽¹⁴⁾. In a study by Marsden EJ & colleagues in Zambia, they found that many of their patients with asthma believe that inhalers are addictive and inferior to tablets in efficacy.⁽¹⁵⁾ In many other studies in different countries, the percentages of patients considering inhalers as addictive ranged from 37-43%^(16,17,18). So it seems that patients who refuse for inhalers have many reasons in their minds. They must be educated and convinced regarding the safety and efficacy of inhalers. They should be asked to experience the use of inhalers at least a limited time initially before finally deciding about their use.

CONCLUSION

Despite advancements in treatments, knowledge & awareness, a significant proportion of our patients with asthma & COPD refuse to use inhalers. This demands lot of efforts to create awareness and give education to the masses especially patients.

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