



Late Onset Asthma in an Elderly Health Personnel

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Abstract

Asthma is generally considered as a disease of childhood, but it may be first diagnosed in the adults and even senior citizens, then it is called as Late-onset asthma, that may begin even in the eighth and ninth decades of life. When late onset occurs, symptoms are more likely to be moderate to severe. Some studies of older persons who have asthma have shown that as a group, as many as 40% have their first attack after the age of 40 years. We present one such case of A -60year-old woman, nurse by profession. She was diagnosed with asthma at the age of 57 years and was given an inhaler for her mild shortness of breath and a non-productive cough that used to be worse at night. In the last one year her symptoms worsened slightly and persisted over several months. She has wheezing sound while breathing and her family members have noticed that her sleep gets disturbed due to breathlessness. The current asthma episode was considered as moderate persistence asthma and treated with Aerocart (Beclomethasone Dipropionate and Levalbuterol) inhaler and Salbutamol syrup 10ml and steam inhalation (by adding Eucalyptus oil). For co-morbidity of diabetes was given Glykind M 500mg (a combination of Gliclazide 80 mg and Metformin Hydrochloride 500 mg -1/2 tablet morning and evening) taking for 2 years. Has been advised to continue the regimen regularly and periodic reviews.

Keywords: Asthma; Wheezing; Salbutamol; Late Onset Asthma

Introduction

Asthma is a chronic disease characterized by recurrent attacks of breathlessness and wheezing. During an asthma attack, the lining of the bronchial tubes swell, causing the airways to narrow. They also turn more sensitive to irritants in the environment, and thus reducing the flow of air into and out of the lungs [1]. The severity of these symptoms varies from person-to-person. Asthma is believed to be a disease of childhood as half of all people with Asthma tend to have their first attack by the age of 10 years and majority among them by 6 years. If first diagnosed in the adults or

elderly it is known as Adult onset or Late-onset asthma, that begins at any age, even at the age of 80 - 90 years [2]. Asthma can be controlled well in most people most of the time, although some people may have more persistent problems. The main risk factors or Asthma triggers are airborne allergens, such as pollen, animal dander, mold, cockroaches, and dust mites. Exposure to various irritants and substances that trigger allergies (allergens) can trigger signs and symptoms of asthma. Asthma triggers such as Respiratory infections (the common cold, Cold air) Air pollutants, and irritants (such as smoke). Certain medications [including beta-blockers, as-

pirin, ibuprofen (Advil, Motrin IB, others) and naproxen (Aleve)] Strong emotions and stress, Sulfites, and preservatives added to some types of foods and beverages like processed potatoes, beer, and wine [3].

Asthma is not uncommon among adults as it is estimated to affect 235 million people worldwide and causes more than 3,50,000 deaths per year. When late onset occurs, symptoms are similar to that of children but more likely to be moderate to severe. Some studies of older persons with asthma have shown that as many as 40% have had their first attack after the age of 40 years. Half of the middle age patients with asthma had onset in adulthood rather than childhood according to some studies. This proportion of onset of asthma in adulthood increases with age [4].

Occupational asthma remains relatively under-recognized in India with little or no information regarding preventable causes. A large population-based, nationally representative cross-sectional study has confirmed findings from high income countries showing high prevalence of asthma in men in several occupational categories and subcategories; however, with no evidence of increased risks for women in the same occupations [5]. There is a particular lack of information on occupational risk factors for women workers [5]. Women's work has traditionally been considered safe and less hazardous to health in comparison with men's work [5]. This has resulted in a lack of information on occupational hazards for women workers [5], and our knowledge of occupational health has mainly been based on studies of men. However, 12% of work-related asthma cases were related to the use of cleaning products. Nurses the largest healthcare worker group formed work-related asthma and reported frequent exposures to clean products and disinfectants, including quaternary ammonium compounds, bleach, ammonia, floor strippers, glutaraldehyde, and formaldehyde, all of which, at sufficient concentrations, are established respiratory irritants or sensitizers [6].

In terms of DALY (Disability Adjusted Life Years) Asthma is one of the leading causes of disease burden. Use of tobacco like smoking and in any other form in women were significantly more likely to suffer from Asthma. The households without a separate room for kitchen, or smokeless Chullahs, as well as using unclean fuel (wood, Charcoal) for cooking further aggravate the prevalence of Asthma among women [7].

Although various asthma guidelines have been propagated widely over the past decade there remains a substantial gap between recommended and actual practices regarding inhaled steroid therapy, particularly among primary care physicians. We present one such case of an elderly female nurse being managed by both allopathic and homeopathic system.

Case History

A 60-year-old female nursing professional reported at the hospital in October 2020, complaining of chest tightening, wheezing, and shortness of breathing early in the morning. Cooking and exposure to some specks of dust resulted in sneezing and persistent blockage of her nose and exacerbation of Asthma. This lady was diagnosed as Type 2 Diabetic and under treatment for over 2 years.

On examination

BP- 120/80 mmHg, RSB-160 mg/dl, Pulse Rate- 80/min, Respiratory Rate- 22/min and on Auscultation- wheezing sound could be heard.

No specific investigations were done. Clinical diagnosis was made and treated.

Treatment

- Advised using Aero cart (Beclomethasone Dipropionate and Levo-salbutamol) inhaler whenever there is an exacerbation.
- Salbutamol syrup 10 ml and steam inhalation (by adding Eucalyptus oil) if cough persists continuously suggested to use.
- Asked to continue her homeopathic medicines (Dr. Reckeweg R 48 and 49 both, twice a day).
- For diabetes continue Tab. Glykind M 500 mg (a combination of Gliclazide 80 mg and Metformin Hydrochloride 500 mg -1/2 tablet morning and evening) and monitor blood sugar and Hb1Ac periodically.

Prognosis

- She is better after 2 days of the new regimen.
- Continues to feel breathless while cooking and when exposed to dust.
- Her Diabetes is in control.
- Her respiratory rate is 20/ minute, and the wheezing sound is reduced drastically.

Follow-up

After a week wheezing sound had disappeared and respiratory rate was 20/min. She is advised to continue homeopathic medicines (Dr. Reckeweg R 48 and 49 both twice a day), Aerocart inhaler (Beclomethasone Bipropionate and Levosalbutamol) when there is difficulty in breathing and manage the co-morbidity of diabetes with Tab. glykind M 500mg (1/2 tablet morning and evening).

Past history

As the staff nurse, this lady used to guide the workers in the labor room for the purpose of cleaning and fumigation in Operation Theater and labor rooms where the smoke and dust are inhaled and exhaled which are dangerous to health. 2 years ago, she felt breathlessness and tightness in the chest after fumigation work and she consulted doctor within 2 days and took treatment for a week. But symptoms were not relieved thus consulted Homeopathic doctor. A Homeopathic medicine (Dr. Reckeweg R 48 and 49 both twice a day) advised.

Discussion

The burden of asthma is immense, with about 30 million living in India [8]. Achievement and maintenance of control through the assessment of clinical manifestations and future risk has become the aim of treatment over the years. Indian asthmatics have a high frequency of reported exacerbations (67%), leading to substantial functional and emotional limitations. This depicts poor control of asthma and reflects the inadequate treatment of such patients. The uptakes of bronchodilators, inhaled corticosteroids, and influenza vaccinations have been found to be low in India [8]. Lack of familiarity with evidence-based management of asthma and lack of periodical updating among general physicians, reliance on alternate system of medication, and quacks, explains this disparity. Although various asthma guidelines have been propagated widely over the past decade there remains a substantial gap between recommended and actual practices regarding inhaled steroid therapy, particularly among primary care physicians.

Asthma in the elderly population has a major impact on patient's quality of life because of significant impairment in health status, symptoms of depression, professional demand, and significant limitation of daily activity. The factors of physiological processes of aging, psychosocial and associated co-morbidities, and drug interactions between prescribed medications. Once diagnosed,

should be under prolonged treatment because of poor inhalational technique, adverse effects of drugs, and drug interactions. There may also be problem in compliance in taking treatment because of a multiplicity of drugs. While young asthmatics are confident and correctly use inhalational therapy, the same is not seen among the elderly, because of the presence of co-morbidities and their management with asthma [9,10].

Walk-through surveys of hospital studies have identified several chemical products, in Operation theatre, Labor room, and other departments and areas, predominantly run by nurses and nursing aides, are exposed to potentially strong respiratory irritants or sensitizers [6,11,12].

Asthma among older women is undertreated, even among health care professionals. As per the study greatest mortality of asthma has increased among older women. In multivariate analysis, non-adherence factors are associated with severe asthma, lower socioeconomic status, current smoking, earlier onset of asthma, increasing age, and co-morbid conditions. Most physicians recognize that treating medical conditions appropriately becomes harder as the number of conditions increases along with Asthma. Severe asthma is at higher risk in women of advanced age, and it is undertreated among older women, even among health care professionals [8,11,12].

Exercise improves a patient's breathing capacity Pranayama and yoga in Indian practices have become scapegoats of busy modern days life [12]. Though our patient had started the daily practice after the first diagnosis (Surya-namaskar and pranayama -deep breathing exercises) that had influenced a change of activeness in her routine and her breathing airways relaxed but soon it was discontinued due to odd working hours.

Conclusion

Asthma is a public health problem, especially the late-onset and severe asthma that can be a challenge to manage both to the patient and the Physicians. Doctors can diagnose adult-onset asthma through a physical examination, medical history, and lung-function tests. There are several treatments options currently to help manage these patients, and new treatments are continuing to emerge. Once diagnosed it is difficult to cure and people must intake daily medication to control the underlying inflammation and prevent symptoms and exacerbations for long-term. Managing

severe asthma thus requires consideration of a patient's personal situation-both in terms of disease phenotype and individual preference. A major goal in asthma therapy should be to develop methods for the assessment of lung function that can be easily and quickly used. It is also important to avoid asthma triggers, for working women in kitchens avoiding smoke, sweeping, and dusting tasks and workplace exposure to fumes vapors etc. If there are occupational trigger asking for the change of such environment is advised. Most cases can be treated at home by taking precautionary measures like keeping warm, minimizing exposure to the smoke, practicing regular breathing exercises.

Take-Home Message

- Approximately 10% to 15% of asthma patients have severe persistent asthma refractory to commonly available medications.
- Treating symptoms as soon as possible help get asthma exacerbations under control, preventing life-threatening situations.
- Once underlying conditions are ruled out, there are several treatment options to consider.
- Strengthening respiratory muscles (chest, abdomen, and diaphragm) through regular breathing exercises should be practiced and
- Cultivating the habit of doing Pranayama, Kapalbhathi which effectively improve the airways will add value.

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