

WORLD ASTHMA DAY

Introduction :

World Asthma Day has become one of the world's most important asthma awareness and education event. For the 2023 World Asthma Day, GINA has chosen 'Asthma Care for All' as the theme. World Asthma Day is aimed at bridging the gaps in asthma care. While timely intervention can help address “preventable suffering”, as per the World Health Organization (WHO), nearly 15 to 20 million people in India suffer from asthma, which includes patients from every age group (as of 2021).

Definition : Bronchial asthma is a chronic airway disorder which can affect people of all age groups. Asthma is defined as a chronic inflammatory disorder of airways which is associated with airway hyper-responsiveness. It leads to recurrent episodes of wheezing, breathlessness, chest tightness and coughing, particularly at night or early morning. These episodes are usually associated with widespread but variable airflow obstruction within the lungs that is often reversible either spontaneously or with treatment. Appropriate treatment can also reduce the risk of further attacks.

Epidemiology : In 2019 asthma affected approximately 262 million people and caused approximately 461,000 deaths. Prevalence of asthma varies considerably within countries and between countries. In India, the prevalence of asthma has been found to be around 7% in the majority of surveys done. However, it has been reported to vary from 2% to 17% in different study populations, the disease can start at any age, but in a majority, it starts before 10 years of age. It is twice as common among boys as girls, whereas in adults the male to female ratio is usually equal. It is more prevalent in developed countries than developing ones.

PATHOLOGY

Gross Appearance : Patients dying from acute episodes of asthma have bulky and over distended lungs which fail to deflate when the chest is opened. The airways are thickened and plugged with sticky secretions.

Microscopic Appearance : The main features of asthmatic airways include marked thickening of basement membrane, bronchial smooth muscle hypertrophy and damaged epithelium, The bronchial wall contains inflammatory cells and the most important cell is eosinophil. The mucus is often impacted in the small airways in severe asthma.

Environment & Pollution

Asthma is usually worse on a cold and dry day, especially when there is a strong wind. Traffic pollution can aggravate symptoms in asthmatic patients. Air pollutants such as Sulphur dioxide, ozone, diesel particles can also precipitate asthmatic symptoms. Indoor air pollution is also an important trigger factor. Cooking gas fumes and even passive cigarette smoking can trigger symptoms in asthmatic subjects. Paints, sprays and fumes can also precipitate severe symptoms in patients with asthma. The causes of asthma are not fully understood. Asthma is probably usually caused by a mixture of hereditary factors (those you are born with) and environmental factors, but how these factors work together is still largely unknown.

Signs and Symptoms : Asthma is characterized by recurrent episodes of wheezing, shortness of breath, chest tightness, and coughing. Sputum may be produced from the lung by coughing but is often hard to bring up. During recovery from an asthma attack (exacerbation), it may appear pus-like due to high levels of white blood cells called eosinophil. Symptoms are usually worse at night and in the early morning or in response to exercise or cold air. Some people with asthma rarely experience symptoms, usually in response to triggers, whereas others may react frequently and readily and experience persistent symptoms.

Diagnosis is usually based on the pattern of symptoms, response to therapy over time, and spirometry lung function testing. Asthma is classified according to the frequency of symptoms, forced expiratory volume in one second (FEV1), and peak expiratory flow rate. It may also be classified as atopic or non-atopic, where atopy refers to a predisposition toward developing a type 1 hypersensitivity reaction.

Stages of Asthma: Asthma can be a severe disease if not treated and managed correctly. Since there are two phases of asthma, it is essential to try to target and decrease bronchoconstriction, inflammation, and airway remodeling. Asthma is defined in different stages depending on spirometry and/or clinical indications. There are four stages regarding the severity of asthma, intermittent, mild, moderate, and severe. Depending on the specific stage of asthma, treatment, and management change. Intermittent asthma occurs when one has symptoms less than two days a week, and nighttime awakenings less than two times a month. Mild asthma consists of having episodes more than two days a week (but not daily), while there are nighttime awakenings of 3 to 4 times a month. Moderate asthma is where the patient is symptomatic daily and has nighttime awakenings greater than once a week but not nightly. Severe asthma is where a patient is symptomatic throughout the day and often has nighttime awakenings more than seven times within a week.

Differential Diagnosis.

Chronic obstructive pulmonary disease (COPD): Wheezing and dyspnea are prominent symptoms of asthma, and conditions presenting with these symptoms may pose diagnostic problem. The differentiation of chronic obstructive pulmonary disease (COPD) from asthma can pose clinical difficulty. History of smoking, exertional dyspnea, and lack of symptoms-free periods favour a diagnosis of COPD, whereas nocturnal worsening, chest tightness, episodic pattern and good response to bronchodilators and steroids favour diagnosis of asthma. Bronchodilator reversibility shown in spirometry is diagnostic of bronchial asthma.

Acute left ventricular failure: may cause wheezing and dyspnoea especially during nights. Dyspnoea starting 1 to 2 hours after sleep, history of heart disease, inspiratory crepitations and gallop rhythm supports the diagnosis of left ventricular failure, whereas early morning dyspnea and response to bronchodilators are characteristic of asthma.

Upper airway obstruction with a tumor or lymphadenopathy's occasionally mistaken for asthma. It usually presents with rapidly progressive airway obstruction and inspiratory stridor. Spirometry shows reduced inspiratory flow and tracings of flow volume curve becomes flat instead of being curved normally. Hyperventilation syndrome, foreign body aspiration, bronchiectasis pulmonary tuberculosis and acute pulmonary thromboembolism are also sometimes confused with asthma. Careful history and documentation of variable and reversible airway obstruction can differentiate asthma from these conditions.

Treatment: Based on these criteria, correct treatment can be administered to decrease the symptoms of the patient. The most common medications used are short-acting beta-agonists, long-acting beta-agonists, muscarinic antagonists, and inhaled and systemic glucocorticoids.

Yes, that risk cannot be disregarded. Poorly treated asthma gets worse with age, and the lungs of people with untreated asthma function less well than those of non-asthmatic individuals. Modern asthma treatments have not been available for long enough for us to be certain whether or not lung function will still deteriorate more rapidly in people with treated asthma as they grow older. However, most asthma experts think, that regular, preventive asthma treatment can prevent your asthma from getting worse and help to preserve your lung function.

Prognosis: The prognosis of adult asthma is not as well-described as that of chronic obstructive pulmonary disease. Although complete remission is possible, remission rates are low and limited to milder cases. Permanent lung function impairment develops in some asthmatic patients, and this risk

is increased in smokers.

Prevention : For people with asthma, having an asthma management plan is the best way to prevent symptoms. An asthma management plan is something developed by you and your treating doctor to help you control your asthma, instead of your asthma controlling you. An effective plan should allow you to:

1. Be active without having asthma symptoms.
2. Fully take part in exercise and sports.
3. Sleep all night, without asthma symptoms.
4. Attend school or work regularly.
5. Have the clearest lungs possible.
6. Have few or no side effects from asthma medicines.
7. Have no emergency visits or stays in the hospital.

Key Message : Asthma cannot be cured but it can be well controlled. Inhaled therapy is the ideal treatment of asthma. Both preventer and reliever drugs should be used properly. Patient education is central to asthma management. Physicians must explain proper technique of inhalation and cross check it. Awareness among society and physicians should be created to bust the myths around asthma and inhalation therapy.

Dr. Rajendra Nanavare
Chest Physician

Report of Family Welfare and Vasectomy Centre Sub committee for the month of April 2023.

It gives me great pleasure to submit the report of our above Centre for the period 01/04/2023 to 30/04/2023.

With the help of all dedicated IMA staff, the Centre is running smoothly and to our satisfaction.

We have performed 33 (Thirty three only) vasectomies in the month of April 2023.

Total no. of cases done by us till end of April 2023 are 464.

Regular updates are given to our philanthropic sponsor, President, Secretary and Managing committee of our IMA, Mumbai branch.

I, as a Chairman and my sub-committee members thank all for their co-operation.

Dr. Aspi Raimalwala
Chairman
Family Welfare and Vasectomy Centre