Bronchial Asthma

Bronchial Asthma is a clinical syndrome characterised by sudden shortness of breath and wheezing which occurs due to increased resistance to the flow of air through the narrowed bronchi. The narrowing of the bronchi is sometimes caused due to a spasm in the bronchial smooth muscles. The precise etiology of bronchial asthma is obscure. However it is known that inflammation and infiltration by inflammatory cells of the bronchial mucosa are important pathologic features of asthma and these can be seen in asymptomatic cases.

Asthma is classified as **‘Extrinsic’** when it is associated with a history of atopic in patient’s childhood, a family history of allergies, symptoms like hay fever or in rare cases of positive skin tests. Occasionally a raised serum IgE level also causes asthma in children and factors which affect the IgE production may be genetic or environmental. An early exposure to house-dust mite or passive exposure to parental smoking during childhood may be some leading causes for asthma due to environment. The **‘Intrinsic’** variety occurs in middle aged subjects with no family history of allergies and clinically it assumes ‘chronic form’.

Clinically asthma is divided into three main forms:

* **Episodic form**: Here the patient gets discrete infrequent attacks which can be relieved by bronchodilator drugs which do not cause a disability in between the attacks.
* **Status Asthmaticus**: Here the acute attack is severe, persistent and does not respond to routine treatment and occasionally may lead to respiratory failure.
* **Chronic Form**: this is also known as chronic obstructive pulmonary disease (COPD) and in this case there is persistent dyspnoea and wheeze of variable severity, with acute attacks occurring from time to time. Such chronic form can be divided into moderate and severe grades, depending on the interference with daily activities and with sleep, and the degree of obstruction caused in a patient’s life.

**Treatment of Asthma:** Asthma is much more than broncho-constriction and treatment should be directed towards reducing the inflammation as well as promoting broncho-dilation. Nowadays the focus of treatment is shifted from bronchodilator therapy to anti-inflammatory therapy.

Various therapeutic measures available in the treatment of asthma are:

1. Elimination of the trigger factors like allergens, dust etc
2. Avoiding respiratory irritants such as tobacco, smoke and chemicals.
3. Psychological treatment also helps in functional cases to a certain extent.
4. Drug therapy is the most important part of the management of asthma and this includes bronchodilators, antibiotics and anti-inflammatory medicines. If dehydration occurs, which is a side effect of asthma, and then measures should be taken to correct it.
5. Last but not the least a programme of graded exercise training in order to improve the general sense of well being and tolerance for exercise is essential.

Studies suggest that a majority (80%) of asthmatics are atopic and form IgE antibody on exposure to common allergens like house dust, mite or pollen. Hence a healthy and clean lifestyle may lead to a reduction in asthmatic attacks and may relieve the patient from distress to a large extent.