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A STUDY ON ALLERGY TRIGGERED BRONCHIAL ASTHMA IN HOMOEOPATHIC PRACTICE

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SUMMARY :

Allergy may be defined as a hyper sensitivity caused by exposure through inhalation, ingestion, injection, infection or skin contact to a particular antigen (allergen) resulting in marked increased reactivity to that antigen upon subsequent exposure which sometimes result in harmful immunological consequences. In this aspect, any foreign substance having the capability of provoking an immune response either local or systemic is a potential allergen. Allergic reaction may localize to the vasculature, gastro-instestinal tract or other visceral organs. The anaphylaxis and serum sickness are systemic form of allergy with a scary increase in mortality. Allergic rhinitis and allergic asthma are the most common manifestations of the clinical disease. This study was carried out to find out the relation between allergy and asthma and to find out an efficacious homoeopathic therapy for the patients suffering from allergic type of bronchial asthma.

Study revealed that Homoeopathic Medicine do act curatively for combating Allergy Triggered Bronchial Asthma and in preventing further complications. Effects of 50 millesimal are superior to centestimal scale in treatment of Allergy Triggered Bronchial Asthma. Repeated doses are better over single dose (of course in majority of cases 50 millesimal was prescribed where principle is to repeat the medicine as long as there is improvement of the cases) Mostly Allergy Triggered Bronchial Asthma is common in children and young age group before the age of 30 yrs and also responds better to Homoeopathic therapy. The drug acts equally for different age groups and sexes.

INTRODUCTION

Asthma is a disease in which inflammation of the airways causes, airflow into and out of the lungs, to be restricted. When an asthma attack occurs, the muscles of the bronchial tree become tight and the lining of the air passages swells, reducing airflow and producing the characteristic wheezing sound. Mucus production is increased.

Most people with asthma have periodic wheezing attacks separated by symptom-free periods. Some asthmatics have chronic shortness of breath with episodes of increased shortness of breath. Other asthmatics may have cough as their predominant symptom. Asthma attacks can last minutes to days, and can become dangerous if the airflow becomes severely restricted.[1]

In sensitive individuals, asthma symptoms can be triggered by inhaled allergens (allergy triggers), such as pet dander, dust mites, cockroach allergens, molds, or pollens. Asthma symptoms can also be triggered by respiratory infections, exercise, cold air, tobacco smoke and other pollutants, stress, food, or drug allergy. Aspirin and other nonsteroidal anti-inflammatory medications (NSAIDS) provoke asthma in some patients.[2]

LITERATURE REVIEW

Asthma is a common disorder that accounts for 1.5-2 million visits each year in the United States. In urban centres, cases of acute asthma may comprise 2.5-10% of all emergency visits.

Asthma is found in 3-5% of adults and 7-10% of children. Half of the people with asthma develop it before the age of 10, and most develop it before the age 30. Asthma symptoms can decrease over time, especially in children.

Many people with asthma have an individual and/or family history of allergens, such as hay fever (allergic rhinitis) or eczema, others have no history of allergies or evidence of allergic problems.

Asthma prevalence varies from 1-30% across nations; the prevalence increases with increased urbanization and affluence. Increase in asthma mortiality in recent years have been noted in Australia, Canada, United Kingdom, Germany, and Switzerland. Overall, the death rate from acute asthma has increased from 13 deaths per million in 1982 to 19 deaths per million in 1991. This is a remarkable 40% increase in just 10 years.

In children younger than 10 years, the male - female ratio is 2:1. Between the ages of 18 and 54 years, the ratio is reversed, with women being affected twice as often as men. Women visit the ED and are hospitalized for acute asthma twice as often as men. Previous data suggested that 40% of these hospitalizations occur during the premenstrual phase of the cycle; more current data from larger studies has not borne out these initial findings. The menstrual cycle may be a trigger for asthma in few women or a cofactor, inciting asthma along with other well described triggers.[5]

Children younger than 10 years constitute 50% of cases.[6]

Acute asthma is a condition characterized by paroxysmal spasmodic narrowing of the bronchial airways due to inflammation of the bronchi and contraction of the bronchial smooth muscle. The inflammatory component is central to the pathogenesis of symptoms; broncho-constriction and airway hyper responsiveness lead to dysponea and wheezing.[7]

Asthma is a disease that affects the breathing passages of the lungs (bronchioles). It is caused by chronic (ongoing, long-term) inflammation of these passages. This makes the breathing passages, or airways, of the person with asthma highly sensitive to various "triggers".

- When the inflammation is "triggered" by any number of external and internal factors, the passages swell and fill with mucus.
- Muscles within the breathing passages contract (bronchospasm), causing even further narrowing of the airways.
- This narrowing makes it difficult for air to be breathed out (exhaled) from the lungs.
- This resistance to exhaling leads to the typical symptoms of an asthma attack.

Bronchial asthma can occur due to many causes. Some very important of them are.....

- Respiratory infections
- Allergens
- Exercise
- Weather, including cold and dry air, weather changes, significant increases in humidity
- Air pollution
- Aspirin ingestion
- Yellow dyes, particularly tartrazine, found in yellow gelatins. This is related to decrease in estrogens and down regulation of progesterone receptors.
- Organic particle exposure, including the following,
- Cotton (byssinosis)
- Detergent manufacture (*Bacillus substilis*)
- Red cedar
- Grains
- Chemical irritants (i.e., tolune di-isocyanate) may be related to nocturnal asthma.
- Low serum epinephrine levels
- High serum histamine levels
- The worst bronchospasm is usually about 4 am, and the best airflow is at approximately 4 pm; therefore, asthma control is labile. ED visits are decreased and mortality increased at night, possibly because of acid reflux, sinusitis, or postnasal dripping during sleep.[9]

CLINICAL FEATURES OF THE DISEASE ARE AS FOLLOWS

The frequency and severity of symptoms vary greatly from person to person and from time to times in the same person. Some asthmatics have occasional episodes that are mild and brief.

Usually, an attack begins acutely with paroxysms of wheezing, coughing, and shortness of breath or insidiously with slowly increasing manifestations of respiratory distress. However, especially in children, an itch over the anterior neck or upper chest may be an early prodromal symptom, and dry cough, particularly at night and during exercise, may be the sole presenting symptom. An asthmatic usually first notices cough, shortness of breath, and tightness or pressure in the chest and may hear wheezes. The cough during an acute attack sounds "tight" and generally does not produce mucus. Except in young children, who rarely expectorate, tenacious mucoid sputum is produced as the attack subsides.[10]

The most reliable signs of a severe attack are dyspnoea at rest, the inability to speak, cyanosis, pulsus paradoxus (> 20 to 30 mm Hg), and use of accessory respiratory muscles. Severity is most precisely assessed by measuring arterial blood gases.[12]

During an acute attack, the patient shows varying degrees of respiratory distress, depending on the severity and

duration of the episode. Tachypnoea and tachycardia are present. The patient prefers to sit upright or even leans forward, uses accessory respiratory muscles, is anxious, and may appear to struggle for air. Chest examination shows a prolonged expiratory phase with relatively high-pitched wheezes throughout inspiration and most of expiration. The chest may appear hyper inflated due to air trapping. Coarse rhonchi may accompany the wheezes, but fine crackles are not heard unless pneumonia, atelectasis, or cardiac decompensation is also present.

During more severe episodes, the patient may be unable to speak more than a few words without stopping for breath. Fatigue and severe distress are evidenced by rapid, shallow, ineffectual respiratory movements. Cyanosis becomes apparent as the attack worsens. Confusion and lethargy may indicate the onset of progressive respiratory failure with CO^2 narcosis. In such patients, less wheezing may be heard on auscultation, because extensive mucous plugging and patient fatigue results in marked reduction of airflow and gas exchange. *A quiet sounding chest in a patient having an asthma attack is an alarm that the patient may have a severe respiratory problem that can quickly become life threatening.*[11]

O/E : Between acute attacks, breath sounds may be normal during quiet respiration. However, fine wheezes may be audible during forced expiration or after exercise. Low to moderate-grade wheezing may be heard at any time in some patients, even when they feel asymptomatic. With long-standing severe asthma, especially if dating from childhood, chronic hyperinflation may affect the chest wall, eg, producing a "squared off" thorax, anterior bowing of the sternum, or a depressed diaphragm.

Investigation to be carried : Determination of arterial blood gases and pH is essential in a patient with asthma of sufficient severity to warrant hospitalization. Arterial blood gas (ABG) measurement provides important information in acute asthma. This test may reveal dangerous levels of hypoxemia or *hypercarbia secondary to hypoventilation; typically,* results are consistent with respiratory alkalosis.

In known asthmatics, pulmonary function tests helps us to assess the degree of airway obstruction and disturbance in gas exchange, measure the airways' response to inhaled allergens and chemicals (bronchial provocation testing), quantify the response to drug, and follow patients over the long term. These tests are also valuable in making a differential diagnosis.

Static lung volumes and capacities reveal various abnormalities; although these may not be detected when mild disease is in remission. Total lung capacity, functional residual capacity, and residual volume are usually increased. Vital capacity may be normal or decreased.

Eosinophilia (> 250 to 400 cells/μL) is common regardless of whether allergic factors are shown to have an etiologic role. In many asthmatics, the degree of eosinophilia correlates with severity of asthma.

In a patient with uncomplicated asthma, sputum is highly distinctive tenacious, rubbery, and whitish. In the presence of infection, it may be yellowish, especially in adults. Many eosinophils, often arranged in sheets, are seen microscopically, and eosinophilic granules from disrupted cells may be seen throughout the sputum smear. Elongated dipyramidal (CharcoLeyden) crystals originating from eosinophils are common. When bacterial respiratory infection is present particularly when it has a bronchitic element polymorphonuclear leukocytes and bacteria predominate. In uncomplicated asthma, sputum cultures rarely show pathogenic bacteria.

- Chest X-ray of patients with acute asthma rarely reveals clinically significant findings, although it may show streaky infiltrates or hyperinflation of the lung fields.
- Patients with pleuritic chest pain require a chest film to exclude pneumothorax or pneumomediastinum, particularly if subcutaneous emphysema is present.
- Chest X ray is indicated in those with fever to rule out pneumonia. Acute sinusitis may exacerbate asthma, and sinus X-ray results are frequently positive in patients who have acute asthma and a fever.
- With new-onset asthma and eosinophilia, a chest X-ray may be useful in identifying prominent streaky infiltrates persisting less than 1 month, indicating Loeffler pneumonia. The infiltrates of Loeffler pneumonia are peripheral with central sparing of the lung fields. These findings have been described as the radiographic negative of pulmonary edema.[14]

Allergens suggested by the history are best confirmed by an allergy evaluation that includes skin testing.

Specific lgE antibodies to inhalants may be detected by in vitro methods (eg, radioallergosorbent test [RAST].

RELIABLE INDICATIONS

ARS.IOD.	**ARS. ALB.**
CALC. CARB.	**SULPHUR**
SPONGIA	**IPECAC**
NAT. MUR.	**SEPIA**

DISCUSSION

Apart from the signs/symptoms at mental and physical level there was documentation of pathological findings where it was noticed / observed that eosinophilia was brought to normalcy and positive nasal smear of eosinophil was made negative. This clearly indicates that Homoeopathic remedies do remove pathology along with signs and symptoms which counteracts the opinion of Hufeland's journal "Homoeopathy removes the symptoms but disease remains as such".

Results obtained from response of drugs for Allergy triggered Bronchial Asthma were processed for reliability test through Chi-Square test by using (2 X 2) contingency table. On referring to the Chi-square table with one degree freedom the value of Chi Square for probability of 0.05 is 3.841, since the calculated value (279.89) is above, we conclude that the null hypothesis is rejected and the result is significant and it is established scientifically that Homoeopathic Medicines do act curatively when it is applied on the principle of Homoeopathy for Allergy Triggered Bronchial Asthma.

Similarly results obtained for various scales 50 millesimal and centesimal were processed for reliability test. So it is established statistically that 50 millesimal potency is superior to centesimal potency while dealing with the disease Allergy Triggered Bronchial Asthma.

Results obtained from various repetition (Single or Repeated dose) were processed for reliability test. So it is established statistically that repeated dose is superior to single dose while dealing with the disease Allergy Triggered Bronchial Asthma.

On looking at the various age groups it is visualized that mostly children and young age group are vulnerable and responds better to Homoeopathic Medicament.

Results obtained for effects of Homoeopathic drugs on Male and Female were processed for Chi Square test. Calculated value (0.004) is much less than the table value, we conclude that the Null hypothesis is accepted and the result in non-significant. Hence there is no difference between the effect of medicines among male and female.

Looking to the table of the study of allergic factors in Aetiology it is envisaged that the sequential order of the occurrence is as follows.

- Individual history / family history of allergy
- Allergic rhinitis
- Eczema
- Urticaria

CONCLUSION

From above study it is envisaged that

1) Homoeopathic Medicine do act curatively for combating Allergy Triggered Bronchial Asthma and in preventing further complications.
2) Effects of 50 millesimal are superior to centesimal scale in treatment of Allergy Triggered Bronchial Asthma.
3) Repeated doses are better over single dose (of course in majority of cases 50 millesimal was prescribed where principle is to repeat the medicine as long as there is improvement of the cases.)
4) Mostly Allergy Triggered Bronchial Asthma is common in children and young age group before the age of 30 yrs. and show better response to Homoeopathic therapy.
5) The drug acts equally for different age groups and sexes.

From above results we should not be complacent. We must try hard to augment / foster the cure rate by increasing the citadel of Homoeopathic drug pathogenesis by proving new drugs. Of course it is a very challenging task.

However we have to do it if at all we need 100% results with Homoeopathy.

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