

A REVIEW ON: HOLISTIC APPROACH FOR MANAGEMENT OF ASTHMA

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Article Received on
21 Jan 2015,

Revised on 16 Feb 2015,
Accepted on 12 March 2015

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ABSTRACT

Asthma is a chronic lung disease characterized by episodes of acute bronchoconstriction causing shortness of breath, cough, chest tightness, wheezing and rapid respirations, which is influenced by multiple genetic developmental and environmental factor, that affect over 300 million people around the world and one in four urban children. Alternative approaches to asthma management include different systems of medicine like Ayurveda, Homeopathy and Naturopathy. A holistic approach helps the body to come into balance naturally and can be used as a long term therapy with minimal side effects. The holistic approach includes different systems of medicine like Ayurveda, Herbal drugs, Homeopathy, Naturopathy, Siddha, Unani and other therapies. Holistic treatment can be an effective solution for treating asthma Substantial scientific evidence is not available on these therapies and further trials need to be conducted to prove their efficacy and encourage the patients to use this approach in the management of asthma.

KEYWORDS: Asthma, Holistic approach, Ayurveda, Herbal drugs, Homeopathy, Naturopathy.

INTRODUCTION

Bronchial asthma is a well-known hypersensitivity disorder characterized by ventilator insufficiency. It is an exaggerated immune response occurs as a most common chronic disorder of modern society explained mainly as because of increased stress on the immune system by factors such as greater chemical pollution in the air, water and food. Its prevalence is rapidly increased in terms of both severity and incidence particularly at childhood ages in developed countries. It is also considered as an adversary of medical treatment for various specific ailments that can alter immune balance. Approximately 50% of children, but a much smaller percentage of adults, have clearly defined allergen exposure that can be associated with their asthma. Bronchial hyper responsiveness (BHR) is a disappointing adaptation in individuals reasonable for provoking exacerbation by allergen. Multidisciplinary scientific investigations suggest solutions for either prevention by allergen exposure or interrupt sequel after exacerbation in order to provide lesser harm to tissues by immune response. The broad aim of this article is to provide summary about Ayurveda efforts for asthma care. It is written with the intension that its way to use natural medicines should justify for implementation as a whole therapy, or in order to set a systemic integrated approach. This approach can than helpful to those patients burdened by drug induce toxic side effect and have turned to seek help from natural care.^[1]

Public attention in the development world has recently focuses on asthma because of its rapidly increasing prevalence, affecting up to one in four urban children. Over 300 million people around the world suffer from this non-communicable respiratory disease. Recent report shows wide variation (4-19%) in the prevalence of asthma in school- going children from different geographical areas in India. Susceptibility to asthma can be explained in part by genetic factors, developmental, and environmental factors, which interact to produce the overall condition. The word 'asthma' is derived from the Greek meaning ' panting' or 'labored breathing'. Asthma is a condition characterized by a paroxysmal wheezing dyspnoea (difficulty in breathing), mainly expiratory. Asthma is the disease of the respiratory system in which the airways constrict, become inflamed, and are lined with excessive amounts of mucus, often in response to one or more “triggers,” such as exposure to an environmental stimulate (or allergen), cold air, exercise, or emotional stress. . An acute asthma attack is caused by inflammation in the airways of the lungs, resulting in contraction and narrowing of the airways (bronchioles), restricting the airflow and making breathing difficult. Chronic asthma is a lung condition characterized by frequent asthma attacks needing extensive

medical management for prevention of acute attacks. Airway conditions in normal and asthmatic person are represented in Figure1.

In children, the most common triggers are viral illnesses such as those that cause the common cold. Asthma is a chronic condition in which these airways undergo changes when stimulated by allergens or other environmental triggers. Such changes appear to be two specific responses.^[2]

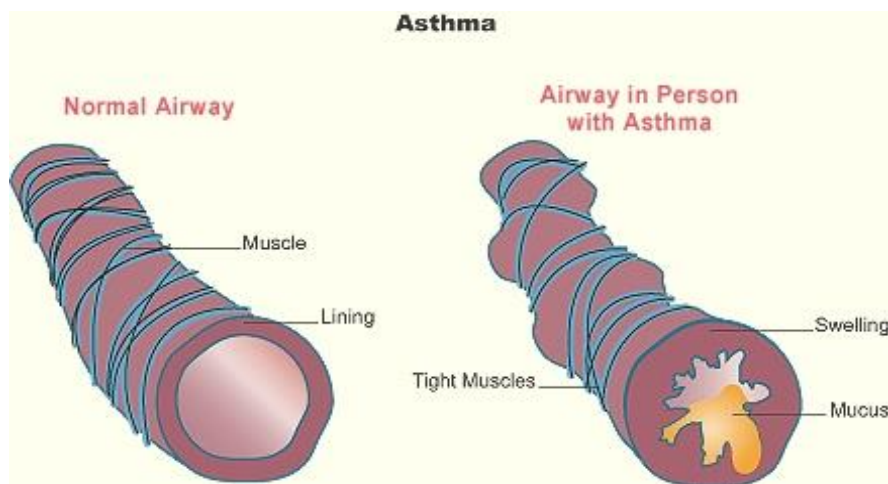


Figure 1: Airways in normal and asthmatic person

Hyper reactive Response

In the hyper reactive response, smooth muscles in the airways constrict and narrow excessive in response to inhaled allergens or other irritants. It should be noted that the airways in everyone's lungs response by constricting when exposed to allergens or irritants. There are major differences, however, in the hyper reactive response occurs in people with asthma. When normal people breathe in and deeply, the airways relax and open in order to rid the lungs of the irritants. When people with asthma take those same deep breaths, their airways do not relax but instead narrow and the patients pant for breath.

Inflammatory Response

The hyper reactive stage is followed by the inflammatory response, which generally contributes to asthma in the following way: The immune system responds to allergens or the other environmental triggers by delivering white blood cells and the other immune factors to the airways and causes the airways to swell, to fill with fluid, and to produce thick sticky mucus. This results in wheezing, breathlessness, inability to exhale properly, and a phlegm-

producing cough. An inflammation of lungs present in all asthmatic patients, evens those with mild cases, and plays a key role in all forms of the disease.^[2, 3]

TYPES OF ASTHMA

An **acute asthma** attack is caused by inflammation in the airways of the lungs, causing contraction and narrowing of the airways (bronchioles), restricting airflow and making breathing very difficult where as **Chronic asthma** is a lung condition characterized by frequent asthma attacks and requiring medical management to prevent and minimized acute attacks. **Exercise-induced asthma (EIA)** is a limited form of asthma in which exercise triggers coughing, wheezing, or shortness of breath. This condition generally occurs in children and young adults, most often during intense exercise in cold dry air. Symptoms are generally most intense for 10 minutes after exercise and then gradually subside. EIA is triggered only by exercise and is distinct from ordinary allergic asthma in that it does not produce a long duration of airways activity, as allergic asthma does.^[2]

CAUSES OF ASTHMA

The most common things in the environment that triggers asthma leads to asthmatic are exercise allergens, irritants, and viral infections. . The underlying cause of asthma is not known however various possible causes are given in Table 1.

Allergens -like Animal dander (from the skin, hair, or feathers of animals), Dust mites (contained in house dust), Cockroaches, Pollen from trees and grass and Mold (indoor and outdoor).

Irritants like Cigarette smoke, Air pollution, Cold air or changes in weather, Strong odors from painting or cooking, Scented products, Strong emotional expression (including crying or laughing hard) and stress.

Others like Medicines such as aspirin and beta-blockers, Sulfites in food (dried fruit) or beverages (wine), A condition called gastro esophageal reflux disease that causes heartburn and can worsen asthma symptoms, especially at night, Irritants or allergens that you may be exposed to at your work, such as special chemicals or dusts and Infections.^[2]

Table 1: Causes of Asthma

Cause	Source
Allergens	Animal dander (from the skin, hair, or feathers of animals), Dust mites (contained in house dust), cockroaches, Pollen from trees and grass, Mold (indoor & outdoor)
Irritants	Cigarette smoke, Air pollution, Cold air or changes in weather, Strong odors from painting or cooking, Scented products, Strong emotional expression (including crying or laughing hard) and Stress.
Diet	Sulfites in food (dried fruit) or beverages (wine), a condition called gastro esophageal reflux disease that causes heartburn and can worsen asthma symptoms, dietary habits (which commonly includes more fast foods and less fruits, vegetables, fiber, minerals, and other nutrients).
Miscellaneous	Medicines such as aspirin and beta blockers, Genetic factors, Early lung development, particularly having smaller lungs, Immunizations that prevent many childhood diseases may actually cause changes in the immune system that make people more susceptible to asthma and allergies, Low-birth-weight babies, who may be more susceptible, Not having been breast-fed, which leads to nutrient deficiencies such as omega-3 fatty acids, which protects against inflammation.

SYMPTOMS OF ASTHMA

- **Wheezing:** When breathing out is nearly always present during an attack. Usually the attack begins with wheezing and rapid breathing, and as it becomes more severe, all breathing muscles become visibly active.
- **Shortness of breath (dyspnea):** Shortness of breath is a major source of distress in asthma patients, although severe dyspnea does not always reflect a serious attack or reduced lung function.
- **Coughing:** In some people the first symptom of asthma is a nonproductive cough.
- **Chest tightness (pain):** Initial chest tightness without any other symptoms may be an early indicator of a serious attack. The neck muscles may tighten, and talking may become difficult or impossible. Chest pain occurs in about three quarters of patients; it can be very severe, although its intensity is not necessarily related to the severity of the asthma attack itself.
- Rapid heart rate and sweating.
- The end of an attack is often marked by a cough that produces thick, stringy mucus. After an initial acute attack, inflammation persists for days to weeks, often without symptoms.^[2]

DIAGNOSIS

In most cases, a physician can diagnose asthma on the basis of typical findings in a patient's clinical history and examination. Asthma is strongly suspected if a patient suffers from eczema or other allergic condition-suggesting a general atopic constitution-or has a family history of asthma. While measurement of airway function is possible for adults, most new cases are diagnosed in children who are unable to perform such tests. Diagnosis in children is based on a careful compilation and analysis of the patient's medical history and subsequent improvement with an inhaled bronchodilator medication. In adult, diagnosis can be made with a peak flow meter (which tests airway restriction), looking at both the diurnal variation and any reversibility following inhaled bronchodilator medication. If the diagnosis is in doubt, a more formal lung function test may be conducted. Once a diagnosis of asthma is made, a patient can use peak flow meter testing to monitor the severity of the disease.^[2]

DIFFERENT SYSTEMS OF MEDICINE

Ayurvedic treatment

Ayurveda concept: Asthma is known as "*Tamak-Shvasa*" in ancient Ayurvedic science. The main **Doshas** (humors) involved in the pathogenesis of bronchial asthma are *Vata*, *Kapha* and *Pitta*.^[3,4] The *Tamak-Shvasa* develops from an increase in cough (*kasa*), undigested materials (*ama*), diarrhoea, vomiting (*Vamathu*), poison (*visa*), anemia (*pandu*), fever (*jvara*), coming into contact with air containing dust, irritant gases, pollens or smoke; using cold water and residing in cold and damp places.^[5] Ayurveda states that there are three types of asthma based on the *doshas*. They are the air element - dry type asthma, fire element - infection type asthma and water element - congestion type asthma.^[6] According to Ayurveda, the symptoms due to these three *Doshas* are dyspnoea (breathlessness) and wheezing characterized by acute condition and causing great affliction to the vital breath. Due to the force of the paroxysm the sufferer faints, coughs and becomes motionless. The throat is afflicted with sputum and the person is unable to speak. The patient finds comfort in sitting posture and craves for hot things. These paroxysms are intensified by cloudy, humid, allergic and cold environment.^[4]

Diagnosis: The practitioners of Ayurveda confirm the diagnosis by a detailed case history of the patient and the objective examination to determine the imbalances between various constituents. Diagnosis is made based on the symptoms, which are dependent on the location of morbid *dosha* and the nature of pathology.^[7]

Management of patient: The line of treatment in an asthmatic attack is usually

1. Removal of *svasavarodha* (obstruction of respiratory passage) by eliminating the *kapha*.
2. ***Srotosuddhi*** to remove the broncho constriction caused by *vata*. According to Charaka and Vagbhata, the *kapha* should be liquefied first by massaging medicated oils and *saindhava* (rock salt) all over the chest. The patient should be given the drugs and diet, which has the property of *kapha vriddikara dravya* (mucolysis) so that the obstructing *kapha* can be easily expectorated out.^[8]

Medication: One teaspoonful of each, Ginger, turmeric, black pepper and cumin grounded and mixed with honey help in keeping the chest clear. Application of balm containing Gilead, Eucalyptus oil, Cinnamon oil or Clove oil to the chest and back also helps in improving stamina. The ayurvedic drugs used in asthma treatment are given in Table No 2.

Food to be favoured includes *Sarshapataila* (mustard oil), *Puranaguda* (old jaggery), soup, chapatti, vegetable curries, barley, honey, garlic, goat milk, lukewarm water, tea, coffee and dry fruits like *Khajoor* can be taken.

Food to be avoided includes lassi, rice, sour fruits, ice, beer, cool drinks, egg, meat, fish, and groundnuts. Excess of food intake must be avoided. Care should be taken to avoid exposures to cold, smoke, dust, polluted environment, excessive exercise, excessive walking, daytime sleep and overindulgence in sex.^[8,9] A number of clinical trials have been conducted on different herbs used in the in formulation of Ayurvedic medicines and were found to be effective.^[10]

Table 2: Ayurvedic Medicines Used In the Treatment of Asthma

Preparation	Indications and Examples
Kashayas(decoctions)	Vasadikashaya, Sirishadikashaya, Pushkaramulakashaya and Sathyadikashaya
<i>Gutika</i>	Lavanagativati, Dhanvantar Gutika(1 to 2 pills), Hinguativati (2 pills with hot water)
<i>Avalehas</i>	Vasavaleha, Chavanprasad (12-24g twice daily)
<i>Ghritas</i>	Manahsiladighritam and Vasaghritam
Rasaushadas	Svasakutara ras, Svasakasa chintamani ras, Svasabhairava ras, Chandramrita ras
Churnas	Talisadi churnam, Sitopaladi churnam(1-3gm), Katphaladi churnam, Vasa churnam, Pushkarmula Churna (5 to 15 gm), Shringyadi Churna(5 to 15 gm), Yashtyadi churnam(3gm at bed time) Lavanabhashara churna (4 to 6 gm with hot water once in a day)
<i>Kanakasava and Vasarishta</i>	20ml each with lukewarm water in every 6hours
<i>Karaveeradi vatika and svasakutar rasa</i>	1gm and 25mg each with betel leaves

<i>Kanakasava, Lavanabhaskara</i>	20ml and 3gm mixed with 20ml of water after lunch and dinner
<i>Kupilu Hingvad</i>	2 tablets twice a day
<i>Sirishadi kvatha</i>	20ml twice daily
<i>Sidh Makardhawaj</i>	As directed by physician.
<i>Urovasthi</i>	Warm medicated oil is kept over the chest for 45 minutes
<i>Kanakasava</i>	10 to 30 ml.
<i>Vasarishta</i>	10 to 30 ml.

HERBAL TREATMENT

Various herbal drugs used to treat asthma are listed in Table 3. Most of the herbal drugs are not standardized but are used in the formulation of Ayurvedic medicines. ^[11] Doshi et al studied the efficiency of *P.kurroa* in a randomized, crossover; double-blind method but its efficacy remained unclear. Govindan et al studied the efficacy of *solanum* species and confirmed the usefulness of these herbs in treating asthma. *Ginko biloba* contains several unique terpene molecules, which antagonize platelet-activating factors, hence limit the immune response and subsequent bronchial reactivity. A small double –blind controlled study by Guinot on *Ginko biloba* showed decrease in bronchial airway reactivity to house dust mite. *Tylophora asthmatica* was also studied and all the double blind studies and controlled trials showed positive results. ^[13, 14]

Table 3: Herbal Drugs Used in Asthma Treatment

Name	Therapeutic Use
Elecampane	Bronchitis, asthma treatment and emphysema. A stimulating and anti-inflammatory expectorant, which helps dry up mucus secretions
Garlic, Ginger & Mustard	Removes or prevents the accumulation of mucus in the lungs.
Skullcap & Valerian	Stressful situations when the asthmatic is vulnerable to an attack.
Piper Longum	Cough and bronchitis, asthma.
<i>Solanum indicum</i>	Indian Ayurveda medicine for Asthma, dry & spasmodic cough and chest pains.
<i>Elatteria cardamom</i>	Powerful natural anti inflammatory agent and analgesic, heals the inflammation of respiratory tract.
<i>Cinnamomum cassia</i>	Enhances & eases expectoration of fluids in Lungs.
<i>Adhatoda vasica</i> or Malabar Nut	Powerful respiratory stimulant activity, Used in the management of allergic disorders and bronchial asthma
<i>Cassia occidentalis</i>	Powerful anti microbial and anti spasmodic, natural immunity booster against allergy.
<i>Solanum xanthocarpum</i>	Cough Asthma and pain in the chest.
<i>Saussurea costus</i>	Antispasmodic

HERBAL MEDICINE –HOME REMEDIES

A number of plant products are used as home remedies in the treatment of asthma, some of them are mentioned below.

Honey (shahad): It is one of the most effective home remedies. Honey brings relief, as it thins the accumulated mucus and helps in its elimination from the respiratory passage.^[15, 16]

Garlic (Lahsoon): 10 cloves of garlic boiled in 30 ml of milk are recommended daily. Steaming ginger tea with minced garlic pods should be taken in the morning and evening.

Turmeric (Haldi): A teaspoonful of turmeric powder with a glass of milk if taken empty stomach, two or three times a day is very effective in the treatment.^[15]

Bitter Gourd (Karela) Root: A teaspoon of the root paste, mixed with an equal amount of honey or juice of the holy basil, is an excellent expectorant and is a remedy for asthma. Taking the preparation once every night for a month is helpful.^[15]

Figs (Anjeer) dry: Dry figs help clear mucus from bronchial tubes and are therefore a valuable food remedy for asthma. It gives comfort to the patient by draining off the phlegm.

Indian Gooseberry (Amla): Five grams of gooseberry fruit or dry powder mixed with one tablespoonful of honey, forms an effective medicinal expectorant and tonic. Taking it every morning is recommended.^[15]

Linseed (Alsi): A decoction made from linseed is considered useful in curing congestion and preventing recurrence of attacks. Linseed poultice applied externally at the lung bases reduces internal congestion.

Mustard (Rye) Oil: During the attack, mustard oil mixed with a little camphor should be massaged over the chest. This will loosen up the phlegm and ease breathing.^[15,16]

HOMEOPATHIC TREATMENT

Homeopathic concept: The word 'Homoeopathy' is derived from two Greek words, *Homois* meaning similar and *pathos* meaning suffering. Homoeopathy is the system of treatment based on demonstrable laws and principles, which are -

a) **The Law of Similars** - It is also called the Law of Cure. This law demonstrates that the selected remedy is able to produce a range of symptoms in a healthy person similar to that observed in the patient, thus leading to the principle of *Similia Similibus Curentur* i.e. *let likes be treated by likes*.

b) The Law of Single Remedy - This law directs to choose and administer a single remedy, which is most similar to the symptoms of the sick person at a time.

c) The Law of Minimum Dose - The remedy selected for a sick person should be prescribed in a minimum dose, so that when administered, there is no toxic effect on the body. It just acts as a triggering and catalytic agent to stimulate and strengthen the existing defense mechanism of the body.^[17]

d) The Law of Direction of Cure – It states that during curative process the symptoms disappear in the reverse order of its appearance.

e) Theory of Chronic diseases –This law states that most of the diseases are due to three chronic latent affinities known as Psora, Syphilis and Sycosis in human being which normally remain dormant but express their presence when conducive environment overpowers the immune system.

Medication: All Homeopathic formulations are effective orally in a 2.5 ml. (half teaspoonful) dose. The dosage must be held in the mouth for approximately 30 seconds before swallowing. For best results, it is advised to *TAKE BETWEEN MEALS* or at least 10 minutes before or after meal. The frequency of dosage varies with the symptoms and individuals response. A dose per day may be sufficient or in some cases several doses per day may be needed.^[18] Studies suggest that a positive response can be initiated in patients with a chronic illness by using homeopathic treatment.^[19] Taylor-Reilly demonstrated that homeopathy works in asthma triggered by a specific and known allergen such as house dust mite.^[13] According to Skinner (2001), homeopathic specialists anecdotally reported that childhood asthma is generally curable with advanced constitutional treatment.^[20] Glasgow Homeopathic group suggested that significant symptomatic improvement occurred in patients treated isopathically for asthma. Many claims made by homeopaths can however be proved by better controlled studies.

UNANI MEDICINE

Unani concept: Asthma is known as *Zeequnnafas* in Unani system of medicine. Unani medicine is an ancient Greek medicine that has evolved within the Muslim world for the past 13 centuries. The system involves four elements earth, air, water and fire along with four

natures: cold, hot, wet, and dry and four humors: blood (hot or wet), phlegm (cold or wet), yellow bile (hot or dry), and black bile (cold or dry).^[21] The details are mentioned in Figure 2.

Diagnosis: Diseases are mainly diagnosed with the help of **pulse (Nabz)** and physical examination of the **urine** and **stool**. Patients are examined systematically to make the diagnosis easy with the help of simple, modern gadgets.

Treatment: Diseases are treated in the following different ways

- ❖ Ilaj bil Tadbeer (Regimental Therapy)
- ❖ Ilaj bil Ghiza (Dietotherapy)
- ❖ Ilaj bil Dava (Pharmacotherapy)
- ❖ Ilaj bil Yad (Surgery)

Medication: Drugs used are mostly of the Plant origin. Some drugs of Animal and Mineral Origin are also used. Patients are treated either by single drugs (crude drugs) or by compound drugs (formulations of single drugs).^[22] Various drugs used for treating asthma are given in Table No. 4. Studies have to be performed to prove the efficacy of these drugs.

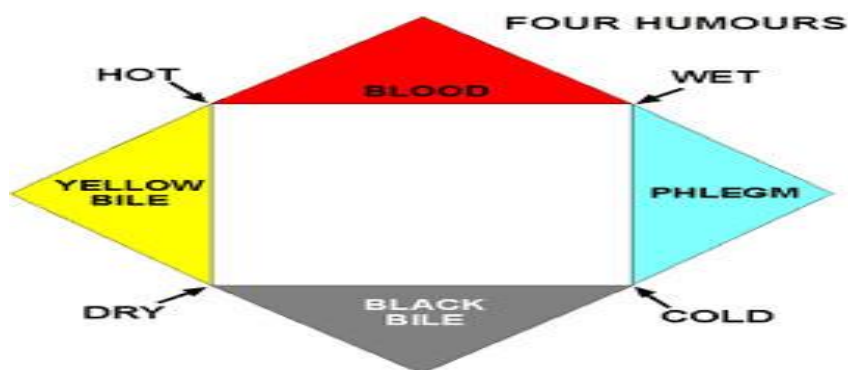


Figure 2: Four humors according to Unani.

Table 4: Unani Medicines Used in Asthma Management

Name	Dose
Habb-e-Hindi Zeeqi	125-250 mg
Kushta -e-Abrak Siyah	60-120 mg
Majoon Rahulmomineen	5-10 g
Habb-e-Zeequn Nafas	125-250 mg
Habb-e-Sammul Far	125-250 mg
Majun Rahul Momneen	5 gm.
Luuq Rabvi	5 gm
Lauq Zeequnnafs	10 gm.
Sharbat Rabvi	5 ml.

Sharbat Zufa Sada	25-50 ml.
Sharbat Zufa Murakkab	25-50 ml.
Habbe Zeequnnafs	These pills stop asthma. Direction - Grind one pill, mix it with Honey and eat.

SIDDHA MEDICINE

Siddha concept: According to the Siddha system of medicine the Universe consists of two essential entities, matter and energy. The Siddha calls them *Siva (male)* and *Shakti (female, creation)*. Matter cannot exist without energy inherent in it and vice versa and both are inseparable. The Primordial elements or Bhutas are the *Munn* (solid), *Neer* (fluid), *Thee* (radiance), *Vayu* (gas) and *Aakasam* (ether). These five elements (*Bhutas*) are present in every substance but in different proportions. Earth, water, fire, air and ether are manifestations of these elements. The human anatomy and physiology, causative factor of diseases, materials for the treatment and cure of the diseases and foods for the sustenance of body all fall within the five elemental categories.

Medications: The common preparations of Siddha medicines are *Bhasma* (calcined metals and minerals), *churna* (powders), *Kashaya* (decoctions), *Lehya* (confections) *Ghrita* (ghee preparations) and *Taila* (oil preparations). Siddha have specialized in *Chunna* (metallic preparations which become alkaline), *mezhu* (waxy preparations) and *Kattu* (preparation that are impervious to water and flames).^[23] Calcined sulphur or red oxide of sulphur is used as remedy against asthma. Purified and consolidated arsenic is also effective against asthma. Drugs available for treatment are - *Civanar Amirtam* and *Cuvacakkutori mathira*. Studies have to be performed to prove the efficacy of these drugs.

CHINESE MEDICINE

Traditional Chinese medicine is the most interesting, systematized alternative medical system available in the west. The typical Chinese medicine prescription may contain a mixture of ten to sixteen herbs. There are different methods of classifying Chinese medicine based on the order of combination. When combined, two biologically active substances can be observed to have the following effects: mutual accentuation, mutual enhancement, mutual counteraction, mutual suppression, mutual antagonism and mutual incompatibility. The principle ingredient is the substance that provides thrust and the secondary ingredient enhances the therapeutic actions of the first. The other ingredients aim at, treating the accompanying symptoms, reducing the toxicity or hardness of the primary ones, guiding the medicine to proper organs, or exerting a harmonizing action.^[24] Herbs, Minerals, Animals and Mixtures of these are used

for the treatment of asthma. The herbs used are Bupleurum, Cordyceps, Ephedra, Ginkgo, Licorice etc. minerals used are - Gypsum, Mercury salts, animals included are worms, lizard tail, crocodile bile and commercial mixtures of these are - Ge Jie Anti-asthma Pill, Crocodile bile pill, Minor bile dragon.^[25] Most of the herbs used by Chinese practitioners in asthma have been carefully reviewed in a comprehensive analysis by Bielory and Lupoli but their clinical value remains uncertain.

NATUROPATHY

The word "Naturopathy" has been coined by Dr. John Scheel in the year 1895. Nature Cure movement started in Germany & other western countries with "**Water cure**". It gained momentum in India when Mahatma Gandhi, "Father of the Nation" became much interested in this system and included it in his programmes.^[26] Naturopathy is a call to "**Return to Nature**" and to resort to simple way of living in harmony with the self, society and environment. Naturopathy is a system of medicine that uses natural substances to treat the patient. It identifies and treats the patient's mental, emotional, and physical states for a long-term effect.^[27]

Concept: Nature Cure believes that all diseases arise due to the accumulation of morbid matter in the body and if removed, it provides cure or relief. It also believes that human body possesses inherent self constructing and self healing powers. The whole practice of Nature cure is based on the following three principles: accumulation of morbid matter, abnormal composition of blood and lymph and lowered vitality.^[26] It is based on the principle of natural laws that work within and outside the body and makes use of natural agents like water, air, light, heat, exercise and food for curing the diseases.

Diagnosis and treatment: According to naturopathy, asthma is a direct result of increased histamine production. Dehydration initiates exaggerated histamine production as a water regulating control. Asthmatics have excessive levels of histamine in their lung tissue causing constriction of the bronchial passages and increased mucus build up. Water is used in the lungs to keep the tissue moist, but each time exhaling expels the moisture from lungs. The moisture is rapidly replaced in normal hydrated conditions but in dehydrated state the tissues inside the lungs begin to coat with mucus to prevent drying. It has been demonstrated in many animal studies that an increase in water intake will reduce histamine levels, restore normal hydration of lung tissue in two to three weeks period and reduce the mucus build up. The bronchial passages begin to open and normal breathing is restored.^[28] Naturopaths say

that asthma is caused by excess of phlegm and inability of the body to expel it. Patient can get relief by giving up food which tends to increase the phlegm such as rice, maida, sugar lentils, milk and curd. Patients should eat food that discourages phlegm such as green vegetables, carrots, tomato and fruits like orange, papaya, guava, mango and rose apple. A salt free diet would be beneficial. The patient should take bath in the morning and evening to perk up his digestive powers. Soaking feet in warm water can relieve the agony during the attack to a great extent.^[29]

DIETARY SUPPLEMENTS

Fish Oil: Omega-3 fatty acids found in cold water oily fish have anti-inflammatory effects and may be helpful in asthma. Intake of high doses of Omega-3 fatty acids reduces inflammation of airways and asthmatic attacks.^[30]

Enzymes: A decreased level of coenzyme Q10 is found in asthmatic patients. Studies revealed that the modulation of anti oxidative defense by supplementation with antioxidants represents additive therapy in management of asthma.^[31]

Vitamins: Animal studies suggest that Vitamin B supplementation may be beneficial. Schwartz and Weiss suggested that increased vitamin C intake may be associated with a 30% lower incidence of active bronchitis and wheezing.^[32]

YOGA

Yoga is an ancient Hindu discipline which increases mental and physical control of the body and aims to effect union of the soul with a universal spirit.^[33] Yoga improves strength, flexibility and lung capacity, the three necessary components of overall fitness. It is ideal for people with exercise induced asthma, in which more rigorous exercises cause asthma to flare. It emphasizes on conscious breathing and includes relaxation.^[34] Yoga is taught in eight steps, out of which pranayama deals with control of breathing. Pranayama has four objectives: a stepwise reduction in breathing frequency, attainment of a **1:2 ratio** for duration of inspiration and expiration, a breath holding period at the end of inspiration that lasts twice the length of expiration, and mental concentration on breathing.^[33]

Meditation: Meditation affects mainly the mental side of the personality and the emotional and psychic sides. Yogic treatment is not complete without Yoga Nidra, a deep relaxation practice which systematically relaxes all the four levels - physical, mental, emotional and

psychic. Yogic practices serve to expand awareness, giving insight into the cause and effect. It helps in reducing the stress and checks the recurrence of diseases.^[35] Clinical trials in asthmatic patients, with yoga therapy have shown an improvement in lung function and reduced frequency of exacerbations. A systematic review has highlighted the need for studying the beneficial aspects of various breathing exercises.^[36, 37]

FISH TREATMENT

The Bathini Goud family started the fish therapy which is a secret for the past 156 years. According to this therapy the two-inch murrel fish having herbal paste in the mouth moves down the windpipe, opens pores blocked by phlegm, making way for the paste. It is given every year on the auspicious *Mrigashira* Karthik *day* of the Hindus. Once the patient has swallowed the live fish, three doses of extra medicine is provided and should be taken on three successive auspicious days - Arudra Karthi, Punarvasu Karthi and Pushyami Karthi, which fall after every fifteen days in a regulated span of forty five days. Patient should be under strict diet control for forty five days. This medicine has been certified by pharmaceutical authorities in India as purely herbal and is an ayurvedic cure.^[38]

ACUPUNCTURE

This therapy has been used for thousands of years in the east to treat many conditions. It forms a part of the whole system of **Traditional Chinese Medicine**. Chinese believe that if there is balance in the body we are healthy. This balance depends of the flow of energy called as 'Qi', through channels or meridians in the body. If the energy flow is blocked or weakened in any way, illness occurs. The acupuncturist carefully assesses each person individually to determine where these blockages are. Very fine needles are then inserted at specific points on the body called acupoints, to stimulate the flow of energy and correct any imbalances⁹⁵⁻⁹⁶. Clinical experience of many acupuncturists suggests that acupuncture may be helpful in the long term, but the treatment has to be continued for long periods.^[13]

HYPNOTHERAPY

This aims to prevent asthmatic attacks. It works by interfering with the progression to an attack. The hypnotherapist, by inducing a state of calm relaxation lowers the individual's tension levels thereby defusing the panic stage of the reaction and preventing the attack. This therapy can be done everyday for about 15-20 min as a preventive measure. Erwer and Stewart conducted a single blind, prospective, randomized controlled trial on hypnotherapy and it proved to be beneficial.^[13]

OTHER APPROACHES

A number of other treatments like Acupressure, T'ai chai, Reflexology are available but there is a lack of scientific data available to prove the efficacy of these treatments.

Acupressure: This technique is essentially acupuncture without using needles. It involves using precise degrees of pressure on the acupoints where the needles would usually be placed in acupuncture. Each case is assessed individually. The principle of this technique is to stimulate the flow of energy and correct any imbalances which are causing illness.

T'aiChi: It is another aspect of **Traditional Chinese Medicine**, which is becoming very popular in the western world. It seeks to unite the individual with universal energy through postures, movements and breathing exercises. The way in which the movements are combined with breathing is essential to the art, and helps in guiding the circulation of blood so that the tissues throughout the body can be repaired and cleansed more efficiently.

Reflexology: Reflexologists believe that the body can be divided into ten zones, with energy lines passing through these zones ending in feet and hands. A blockage in any part of the body will affect the flow of energy through that zone causing illness. This technique involves stimulating these zones, called reflex zones, from their corresponding points on the feet or hands by massage. This in turn promotes the flow of energy thereby restoring the body's natural balance. Clinical trials conducted with reflexology proved that it does not have any specific effect on asthma.

CONCLUSION

Asthma is a chronic lung disease with no permanent cure. Allopathic medicines give quick relief, but produce a lot of side effects. Alternative systems of medicines are meant for the preventive and long term therapy with minimal side effects. Holistic treatment could be the solution for treating asthma with minimal side effects. Substantial scientific evidence is not available on these therapies and further trials need to be conducted to prove their efficacy and encourage the patients to use the holistic approach in the management of asthma.

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