



Review Article

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BRONCHIAL ASTHMA IN THE PERSPECTIVE OF AGADA TANTRA

A CRITICAL REVIEW

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ABSTRACT

Bronchial asthma is a condition in which a person's airways become inflamed, narrowed, swollen, and producing excess mucus that makes breathing difficult. It is one of the most common chronic diseases that affect people of all ages. It is correlated to the *Tamaka* form of *Swasaroga* (Breathing disorders) in *Ayurveda*. *Agada tantra* is a branch of *Ayurveda* that deals with the various aspects related to poison. On analyzing the etiology and pathogenesis of *Tamaka Swasa* (Bronchial asthma) from the perspective of *Agada tantra*, it is observed that they are comparable to *Dooshivisha* (Cumulative toxicity), *Garavisha* (Concocted poison) and *Virudhahara* (Incompatible diet). Experimental studies have shown the effectiveness of *Agada* treatment principles and formulations in different allergic conditions in addition to poisoning circumstances. Hence if a bronchial asthma case is found to be because of any toxicity conditions like *Dooshivisha* (Cumulative toxicity), *Garavisha* (Concocted poison), or *Virudhahara* (Incompatible diet), an *Ayurveda* practitioner can use *Agada* therapeutic measures and formulations accordingly.

KEYWORDS: *Agada tantra*, Bronchial asthma, *Tamaka Swasa*, *Dooshivisha*, *Garavisha*, *Virudhahara*

INTRODUCTION

Bronchial asthma is characterized by hyper-responsiveness of tracheobronchial smooth muscle to a variety of stimuli, resulting in the narrowing of air tubes, often accompanied by increased secretion, mucosal edema, and mucus plugging. Symptoms include dyspnoea, wheezing, cough and may be a limitation of activity. It is one of the most widespread chronic illnesses that can afflict anyone at any age. There are many different causes of asthma, with genetics having a significant influence on illness susceptibility and environmental factors having a significant contribution to disease development and progression. Although many theories have been put forth, it is still unclear how precisely drug, toxic, chemical, and infectious illness exposures affect the onset and/or worsening of asthma¹.

In *Ayurveda*, it can be correlated to *Tamaka Swasa* (Bronchial asthma), a variety of *Swasaroga* (Breathing disorder). The term '*Tamaka Swasa*' is composed of two words, *Tamaka* and *Swasa*. The word '*Tamaka*' comes from the *dhatu* (root) *tamu-glanow* accompanied by the 'quip' *pratiyaya* (syllable). It denotes darkness, choking, and suffocation. The word "*Swasa*" originated from the Sanskrit word "*Swas*" which means "Aliveness." The act of breathing is a mechanical and biochemical reaction that represents life. The entire respiratory process is covered by the meaning of the word "*Swasa*"². Hence "*Tamaka Swasa*" means difficulty in breathing, which mainly occurs during night-time. It is said that this condition is generally palliative, but it is curable in its primary stage³.

MODERN VIEW OF BRONCHIAL ASTHMA⁴

Asthma is an inflammatory disease of the small airways characterized by episodic, reversible bronchial obstruction due to hyper-responsiveness of the tracheobronchial tree to a multiplicity of intrinsic and extrinsic stimuli. Clinical manifestation includes paroxysms of polyphonic wheeze, dyspnoea, and cough which may be relieved spontaneously or as a result of therapy.

Types- 1. Extrinsic Asthma (Atopic Asthma, Early Onset Asthma)- Onset is in childhood. It occurs in atopic individuals who readily form IgE antibodies in response to allergens.

2. Intrinsic Asthma (Non-atopic Asthma, Late-Onset Asthma)- It can begin at any age, especially in late adulthood. There is no role for allergens in the production of the disease.

Factors Precipitating Asthma

Cold air, Tobacco, Smoke, Dust, Acrid fumes, Emotional stress, Respiratory infections (viral, bacterial, etc.), Drugs (NSAIDS especially aspirin and B-blockers), Chemicals which include Sulfating agents like Sodium or Potassium bisulfite, Sulphur dioxide, etc. Allergens which include ingested (fish, nuts, strawberries), Inhaled (dust, pollen, house dust mite) and Food additives (tartrazine, metabisulfite preservatives, monosodium glutamate or ajinomoto), and occupational allergens like grain-dust, wood-dust, etc. are said to be predisposing factors for Bronchial asthma.

Bronchial asthma in *Ayurveda*

In *Ayurveda*, it can be correlated with the *Tamaka* variety of *Swasaroga* (Breathing disorders). The detailed description of etiology, pathogenesis, clinical features, and treatment is explained in *Ayurveda* classics like *Charaka samhita*⁵.

Etiology of *Tamaka Swasa*⁶

Diet- Habitual intake of un-unctuous food, intake of food deficient or excessive in quantity and before or long after meal time. Use of mutually contradictory ingredients. Habitual intake of flat beans, black gram, oil cake, and sesame oil. Intake of pastry, the rhizome of lotus, *Vata* (Wind) forming ingredients, *vidahi* (ingredients that cause burning sensation in the abdomen and chest), and heavy food. Intake of the meat of aquatic animals, marshy animals, and birds. Intake of curd and unboiled milk. Intake of ingredients that obstruct the channels of circulation and *Kapha* (Phlegm) aggravating ingredients.

Regimens-Exposure to dust, smoke, and wind. Residing in a cold place, use of cold water, sexual intercourse, long walking beyond one's capacity, excessive administration of elimination therapies, and excessive fasting.

Other factors- As a consequence of diarrhea, fever, vomiting, coryza, phthisis, bleeding disorders, upward movement of the abdominal gases, cholera, indigestion, anemia, and poisoning. Injury to throat and chest. Different types of obstruction to the channels of

circulation. Weakness and injury to vital organs. Vitiating by *ama* (product of improper digestion and metabolism). Constipation associated with flatulence and dryness of the body.

Pathogenesis of *Tamaka Swasa*(Bronchial asthma)⁷

Vayu (Wind) moving in the reverse order pervades the channels of vital breath, afflicts the neck, head, and stimulates *Kapha* (Phlegm) to cause rhinitis leading to *Tamaka Swasa*(Bronchial asthma).

Clinical features of *Tamaka Swasa*(Bronchial asthma)⁸

- *Ghurghurata* (Wheezing or murmuring sound).
- Dyspnoea of exceedingly deep velocity which is immensely injurious to life.
- Because of acute spasms, the patient gets tremors with coughs and becomes motionless.
- Fainting again and again while coughing.
- Since the *Kapha*(Phlegm) does not come out, he becomes more restless.
- Relieving from restlessness for some time soon after the *Kapha*(Phlegm) comes out.
- Throat will be choked because of which patient will be unable to speak freely.
- Patient does not get sleep. While lying down for sleep, he gets more dyspnoea because the sides of his chest in that position get afflicted by *Vayu* (Wind), but relieved of this discomfort in a sitting posture.
- He develops a special liking for hot things.
- His eyeballs become prominent and project outside.
- Too much sweating appears on his forehead and he becomes restless.
- Frequent dryness of the mouth.
- Recurring episodes of dyspnoea.
- The attack gets aggravated when clouds appear in the sky when he is exposed to water and cold, when the easterly wind blows, and when he resorts to *Kapha*(Phlegm) aggravating food and regimens.

BRONCHIAL ASTHMA IN THE PERSPECTIVE OF AGADA TANTRA

a) Bronchial asthma and *Dooshivisha*(Cumulative toxicity)

A low-potency poison that remains in the body for a long duration and envelops with *Kapha dosha* (Phlegm) is known as *Dooshivisha* (Cumulative toxicity). *Chakrapani* has commented that *Dooshivisha* (cumulative toxicity) vitiates the *dhatu* (tissue of the body) after the lapse of a long time on obtaining favorable conditions. According to *Susruta*, on exposure to a cloudy or windy day, constant day sleeping, specific place (marshy place), and diet, if the *dhatu* (tissues of the body) get vitiated, it should be considered to be by the *Dooshivisha* (Cumulative toxicity). According to *Vagbhata*, that poison which on exposure to the eastern wind, indigestion, cold breeze, day sleeping, and unsuitable foods, gets vitiated and further vitiates the *dhatu* (tissues of the body) is called as *Dooshivisha* (Cumulative toxicity)⁹. On analyzing the precipitating factors of *Dooshivisha* (Cumulative toxicity), it is seen that they are similar to precipitating factors of *Tamaka Swasa* (Bronchial asthma).

According to contemporary science, it is said that factors like cold air, dust, acrid fumes, etc. triggers asthma attack in patients. Long-term consumption of gluten (wheat and grain products), shellfish, eggs, milk, nuts, peanuts, sesame seeds, and soya are also associated with a high risk of developing asthma¹⁰.

The *Dooshivisha* (cumulative toxicity) management includes measures like *Vamana* (Emesis), *Virechana* (Purgation), *Rakthamokshana* (Bloodletting), administration of *Agada* formulations like *Dooshivishariagada*, *Ajithaghrita*, etc.⁹

b) Bronchial asthma and *Garavisha* (Concocted poison)

Garavisha (Concocted poison) is a unique concept explained in *Ayurveda* classics. According to *Charaka*, *Garavisha* (Concocted poison) is a form of poison that is prepared artificially by the combination of substances either poisonous or non-poisonous. They are slowly metabolized or digested in the body, show their effects after some time, and hence do not kill the person instantly. The different modes of administration of poison like food, drinks, toothbrush, dress, ornaments, etc. are told as *Garavisha adhistanas* (Site of Concocted poison) by *Dalhana*¹¹. Similar factors are also seen in the etiology of *Tamaka Swasa* (Bronchial asthma). It is also clear that while explaining complications of *Garavisha* (Concocted poison), *Acharya Vagbhata* mentions *Swasa* (Breathing disorders) as one among them¹².

According to various research works, it is found that artificial food additives like Tartrazine, Allura red¹³, Monosodium glutamate, Benzoates, Yeast¹⁴, etc. can cause asthma symptoms. The asthma and allergy foundation of America noted that sulfites can also induce asthma in people¹⁵. It is seen that occupational exposure to metals like platinum, chromium, cobalt, nickel, etc. can lead to asthma¹⁶. It is also discovered that around 20% of the asthmatic population is sensitive to aspirin and other NSAIDs¹⁷. In smoking, the irritating substances present in it can settle in the moist lining of the airways and can set off asthma episodes in the long term¹⁸.

The treatment of *Garavisha*(Concocted poison) includes measures like *Nidanaparivarjana*(Removal of cause), *Vamana* (Emesis), *Hridyavarana*(Protection of the heart), *Hemaprashana*(Internal administration of Gold), and administration of *Agada* formulations like *Bilwadi agada*, *Moorvadi agada*, *Nagadantyadi agada*, *Paravatadi agada*, etc.¹⁹

c) Bronchial asthma and *Virudhahara*(Incompatible diet)

Virudhahara(Incompatible diet) are those substances which when consumed, aggravate the *doshas* (humor) but don't expel them out of the body and which bring about abnormalities in the *rasadi dhatus* (tissues of the body) giving rise to diseases. According to *Charaka*, it is of 18 types and 4 types according to *Susruta* and *Vagbhata*²⁰. Different types of *virudhas* (incompatible diet) likes *Desha virudha* (Ex- Residing in a cold place and use of cold water and food), *Matra virudha* (Ex-Deficient or excessive quantity of food), etc. are also told in the etiology of *Tamaka Swasa*(Bronchial asthma)⁶.

In modern lifestyle, very frequently we come across with these kinds of food and regimens like consumption of cold items in winter, milkshakes, fruit salads, taking fish along with milk, having ice creams immediately after a hot meal and so on²¹.

The complications caused due to *Virudhahara* are managed by employing the measures like *Vamana* and *Virechana* (Emesis and purgation therapies), administration of opposite substances useful for relieving complications, and adopting *Samshamana* (prophylactic) measures²².

DISCUSSION

The characteristics of bronchial asthma include chronic airway inflammation, reversible airway obstruction, and airway hyperresponsiveness. It is seen that concepts in *Agada tantra* like *Dooshivisha* (Cumulative toxicity), *Garavisha* (Concocted poison), and *Virudhahara* (Incompatible food) are also responsible for the manifestation of *Tamaka Swasa* (Bronchial asthma).

Dooshivisha (Cumulative toxicity) is a low potency poison that remains in the body for a long duration and envelops with *Kapha dosha* (Phlegm), vitiates the *dhatu* (tissues of the body) after the lapse of a long time on obtaining favorable conditions⁹. Depending on *Khavaigunya* (space susceptible to pathological changes) this *Dooshivisha* (cumulative toxicity) may lead to the appearance of *Tamaka Swasa* (Bronchial asthma) in person. In contemporary texts, it is stated that different factors like cold air, dust, acrid fumes, etc. will trigger an asthma attack in patients. Long-term intake of gluten, shellfish, eggs, milk, etc. is also associated with a high risk of asthma development. Repeated exposure to these proteins and other biomolecules with unique airway-sensitizing properties causes the formation of antigens, induces the production of specific IgE and activates tissue mast cells and basophils, and causes clinical symptoms with continued or subsequent exposure²³.

Garavisha (Concocted poison) is a variety of poison that is prepared artificially by the combination of substances either by poisonous or non-poisonous. They are slowly metabolized in the body, show their effects after some time, and hence do not kill the person instantly. It produces various signs and symptoms and *Swasa* (Breathing disorders) is one among them¹². Modern science has discovered that repeated or continuous exposure to chemicals has respiratory sensitizing effects that result in tissue mast cells and basophil production leading to the manifestation of clinical symptoms. At its core, asthma is a condition marked by an overactive immunological response. The consequences of exposure to inorganic compounds, particularly heavy metals like lead, cadmium, mercury, and nickel, have been investigated and have been found to impair the immune system. There is a large experimental database of immunosuppressive properties of metals, their inorganic salts,

and organometallic compounds²³. Medications such as aspirin and other NSAIDs can also cause asthma by affecting both the lipoxygenase and cyclooxygenase pathways¹⁷.

Virudhahara (Incompatible Incompatible) refers to items that, when consumed, exacerbate the *doshas* (humor) but cannot be eliminated by the body, resulting in anomalies in the *dhatu*s (body tissues) and illness²⁰. Similar to *Dooshivisha* (cumulative toxicity), due to *khavaigunya* (space susceptible to pathological changes), this also can lead to the manifestation of *Swasaroga* (Breathing disorders). It is noted that this *Virudhahara* (Incompatible diet) can lead to inflammation at the cellular level. Certain types of food combinations and unwanted substances released from certain incompatible foods can adversely affect the immune system. For example, milk, which contains lactogens, and certain fruits, such as bananas, which contain common allergens, can make asthma attacks worse. Milk with eggs, reheated cow's milk, consuming too much sugar along with saturated fats, can lead to disturbance in the immune system and form related disorders like Asthma²⁰.

The treatment principle and formulations told in *Agada tantra* are very beneficial in treating different forms of poisoning conditions as well as various systemic disorders²⁴. Experimental studies also discovered the efficacy of *Agada* formulations like *Dooshivishari agada*²⁵ and *Bilwadi agada*²⁶ against different toxic and allergic conditions. Mainly they act faster, because of the *vishaghna* (anti-poisonous) properties of their ingredients and other factors like *Rasa* (Taste), *Guna* (Attribute), *Virya* (Potency), *Vipaka* (Biotransformation), and *Prabhava* (Specific action)²⁴. Hence, they may also be very useful in treating Bronchial asthma as it is found to be one of the manifestations seen because of *Dooshivisha* (Cumulative toxicity), *Garavisha* (Concocted poison), and *Virudhahara* (Incompatible diet).

CONCLUSION

Bronchial asthma is a condition in which a person's airways become inflamed, narrow, swell, and produce extra mucus, which makes it difficult to breathe. There are many treatment options available in the current medical system, but the likelihood of a permanent cure is relatively low. In *Ayurveda*, this condition can be correlated to *Tamaka Swasa* (Bronchial asthma) and in the perspective of *Agada tantra*, the major causative factor

for this is found to be *Dooshivisha* (Cumulative toxicity), *Garavisha* (Concocted poison) and *Virudhahara* (Incompatible diet). Therefore, an *Ayurveda* practitioner should investigate the underlying cause of a case of Bronchial asthma and if it is found to be because of any toxicity conditions like *Dooshivisha* (Cumulative toxicity), *Garavisha*(Concocted poison), or *Virudhahara* (Incompatible diet), he can use *Agada* therapeutic measures and formulations suitably.

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