

Review Article**Critical Analysis of *Charakokta Mahakashaya* in the Management of Respiratory Allergic Disorders (RAD)**

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ABSTRACT

As the life becoming more and more mechanical, with rapid raise in industrialization, there will be subsequent increase in Respiratory allergic disorders in childhood clinical practice. Grievance of this problem can be understood by statistical view which shows 5-20% of the pediatric populations are sufferers of Respiratory Allergic Disorders (RAD) as per the latest reports. *Acharya charaka* mentions a variety of causative factors or *Hetus* for the same, like house dust, industrial dust, pollens, mites etc (*Rajasa*) or chemical gases, fumes, toxic output of industry (*Dhooma*), dry food, junk food or stored food (*Rukshaanna*) and abnormal and irregular food habits (*Vishamashan*). Further depending on severity and specificity of the Hetu and symptoms, same can be classified as *Vataja* or *Vata-Kaphaja* variety of *Kasa*. *Kasa* which is also a symptoms in many disorders and also a individual disease as per Ayurveda interaction between the environment, diet, immune state of the child, and genetic tendency of certain allergic disorders and familial tendency of atopic disorders will play major role in the manifestation. Moreover respiratory allergies are greatly attributed to hyper responsiveness of respiratory mucosa triggering histamine release and mast cell activation. Same can be understood as aberration of body immune system or *Ojus* due influence of deranged Vata, Kapha and Pitta in Ayurvedic standard. However Ayurveda strongly proposes number of drugs which are beneficial in *Kasa* which acts similar to anti-histaminic or mast cell stabilizing agents. Hence the present paper is focused on *Charakokta Mahakashaya* to determine the role of *Shwashara Mahakashaya*, *Kasahara Mahakashaya*, and *Vishaghna Mahakashaya* for the effective management of Respiratory Allergic Disorders, with special focus to critical analysis of pharmacological actions based on various experimental and clinical studies of *Shwashhar*, *Kasahar*, and *Vishaghna mahakashaya*.

Keywords: *Dhooma*; *Kasahar*; *Rajasa*; *Rukshaanna*, *Shwashhar*; *Vishaghna mahakashaya*; Respiratory allergic disorder

INTRODUCTION:

As we witnessing the increased morbidity and mortality in Respiratory Distress Syndrome in the pediatric practice Respiratory allergy prevalence is increasing worldwide and quite significant and alarming in this regard. Approximately 40% of children are affected by one or the other forms of allergy [1]. WHO identified acute respiratory infections as the leading cause of death in children less than 5 years of age Acute respiratory

infections account for 2 million deaths per year in children below 5 years [2].

Respiratory allergies commonly include allergic Rhinitis and Allergic Asthma, causing wheezing, coughing, shortness of breath, sneezing, runny nose along with sinus problems, associated with and also red, watery and itching eyes [3]. It is quite shocking to know that prevalence of these disorders in the developing as well as developed countries is increasing over recent decades in spite of emergence of latest

methods of treatment. It is quite obvious that environmental factors-(*Rajasa, Dhooma*), dietic incompatibilities-(*Rukshanna, Vishamashan*) and faulty lifestyle- (*Ati-vyayama, Gramyadharm*)[4] plays a very vital role in the same.

Most commonly and popularly used drugs in contemporary science for RAD is certain anti-allergic drugs like Chlorpheniramine Maleate (CPM), Cetirizine, Levocetirizine, Loratidine, Disodium chromoglycate etc. These drugs are effective in suppressing the symptoms, but role in reversing the hyper responsiveness to normality is still questionable along with many evidenced side and adverse effects such as sedation, drowsiness, ataxia, lack of concentration, headache, dry mouth, constipation etc. [5]. A drug which potentiates respiratory system from the route without disturbing the normal homeostasis of the body and mind with complete eradication of disease is need of the hour. Despite the severe impact of disease on patients and on society as a whole, respiratory allergic disorders (RAD) are neglected and under recognized by healthcare professionals thereby accounting for repeated school missing, hampering the quality of life and rendering socio-economic burden on parents or society.

Ayurveda has a rich treasure of medicinal plants which are very effective in prevention and management of Respiratory Allergic Disorders (RAD). Ayurvedic drugs which are considered combination of Pancha Mahabootas where drugs are administered without extracting the active principles separately, not only aims to treat the disease at target area but also to support and modify the body at its route level without disturbing the normal body physiology. Hence

Ayurvedic *Shwasahara*, *Kasahra*, *Vishahara* drugs not only imparts anti-histaminic, anti-toxic, mast cell stabilizer effects but also helps to restore the body immunity modulation of bodily *Doshas*. Ayurveda has a large number of such drugs with above properties and can serve as a mainstay of treatment for respiratory allergies.. Hence there is utmost need to utilize these herbs with evidence based practice guidelines to yield better results.

With this view in mind, Ayurvedic drugs are screened for their potential against respiratory allergies and can be safely be prescribed for the pediatric population. In this regard Acharya *Charaka* (7) highlighted fifty *Mahakashaya* with ten drugs in each group for separate disorders. The utility of *Charakokta mahakashaya* is disease specific and has been prescribed in such a way that the combination provides effective guidelines for the physician. Out of the fifty *Mahakashaya*, *Shwashara*, *Kasahara* and *Vishaghna mahakashaya* can be screened for anti-allergic properties against respiratory disorders [3]. Out of these three *Mahakashayas*, *Shwashar* drugs are help to maintain he normal rate and rhythm of the respiration while *Kasahara* drugs helps to reduce the cough etc by different mechanisms while *Vishaghna Mahakashaya* is quite helpful in nullifying the toxic effects the causative factors in triggering the entire cascade of Allergy. The present paper is focused towards critical analysis of Ayurvedic drugs of the above mentioned *Mahakashayas* to justify efficacy, effectiveness and safety profile in the management of respiratory allergic disorders on the basis of clinical and experimental evidence (Table 1).

Table 1: Pharmacological Properties of *Shwashar Mahakashaya*

S.N.	Drug	Action on Respiratory System	Other Properties
1	<i>Hedychium spicatum</i> Common name: Shati	Expectorant [6], Anti-asthmatic [6], Anti-histaminic, Mast cell stabilizer [10]	Anti-inflammatory [6], Anti-microbial [6], Anti-helmenthic [6], Spasmolytic [6,7]
2	<i>Inula racemosa</i> Common Name: Pushkaramula	Anti-histaminic [8], Expectorant [6], Anti-catarrhal [6], Anti-asthmatic [9],	Anti-spasmodic [6], Stomachic [6] Immunostimulant [6]

		Mast cell Stabilizer [10]	
3	<i>Garcinia pedunculata</i> Common name: Amlavetasa	Cough & other respiratory disorders [6]	Astringent [6], Cooling [6], Cardiotonic [6]
4	<i>Elletaria cardamomum</i> Common name: Elaichi	Anti-asthmatic [6],	Anti-microbial [6], Anti-septic [6], Anti- spasmodic [6], Carminative [6]
5	<i>Asafoetida</i> Common name: Hing	Expectorant [11], Anti-asthmatic [6]	Anti-spasmodic [11], Laxative [11] Carminative [11], Sedative [11], Anti-oxidant [11]
6	<i>Aquilaria agallocha</i> Common name: Aguru	Anti-asthmatic [6]	Astringent [6], Carminative [6], Anti-diarrhoeal [6]
7	<i>Balasmmodendron myrrha</i> Common name: Myrrh	Expectorant [6],	Anti-inflammatory [6], Anti-viral [6], Antiseptic [6], Bacteriostatic [6], Carminative [6], Stomachic [6]
8	<i>Phyllanthus niruri</i> Common name: Bhumiamalaki	Anti-asthmatic [12]	Anti-pyretic [6], Anti- spasmodic [6], Anti-viral [6], Diuretic [6], Bactericidal [6]
9	<i>Leptadenia reticulata</i> Common name: Jivanti	Anti-histaminic [13], Mast cell stabilizer [13], Expectorant [13]	Anti-inflammatory, Anti- spasmodic, Anti-diuretic, Anti-bacterial
10	<i>Angelica archangelica</i> Common name: Choraka	Expectorant [6], Anti-histaminic [6]	Anti-inflammatory [6], Anti- spasmodic [6], Anti-bacterial [6], Anti-fungal [6]

The above table depicts the pharmacological actions of Ayurvedic drugs that make up *ShwasharMahakashaya*. All the *Mahakashaya* herbs show evidence based action on respiratory allergies. Drugs has been proved for its clinical profile like *Inula racemosa*, *Garcinia pedunculata*, *Ellataria cardamom*, *Ferula foetida*, *Phyllanthus niruri* and can be safely and effectively used in the management common symptoms of respiratory Allergy like cough, bronchitis and

asthma [6]. Gargling with *Balasmmodendron myrrha* prove beneficial in tonsillitis, common cold, gingivitis etc. [6]. All *Shwashara Mahakashaya* show anti-histaminic, anti-asthmatic, bronchodilator, expectorant, and mast cell stabilizer properties that is essential for the management of respiratory allergies. As an adjuvant, herbs such as *Inula racemosa* are efficacious as an equipotent in the respiratory system (Table 2 and 3).

Table 2: Analysis of *Shwashar Mahakashaya*.

Property	Drugs
Anti-histaminic	<i>Hedychium spicatum</i> , <i>Inula racemosa</i> , <i>Leptadenia reticulata</i> , <i>Angelica archangelica</i>
Anti-asthmatic	<i>Hedychium spicatum</i> , <i>Inular acemosa</i> , <i>Elletaria cardamomum</i> , <i>Asafoetida</i> , <i>Aquilaria agallocha</i> , <i>Phyllanthus niruri</i>
Expectorant	<i>Hedychium spicatum</i> , <i>Inularacemosa</i> , <i>Asafoetida</i> , <i>Balasmmodendron myrrha</i> , <i>Leptadenia reticulata</i> , <i>Angelica archangelica</i>

Anti-catarrhal	<i>Inula racemosa</i>
Mast cell stabilizer	<i>Hedychium spicatum, Inula racemosa, Leptidenia reticulata</i>

Table 3: Pharmacological Properties of *KasaharMahakashaya*

S.N.	Drug	Action on Respiratory System	Other Properties
1	<i>Vitis vinifera</i> Common name: <i>Draksha</i>	Anti-histaminic, Use in cough & respiratory tract catarrh [6]	Anti-microbial [14], Anti-malignant [9], Laxative [6], Anti-oxidant [15]
2	<i>Terminalia chebula</i> Common name: <i>Haritaki</i>	Anti-asthmatic [16], Mast cell stabilizer [16]	Gentle purgative [6], Astringent [6], Stomachic [6], Anti-bilious [6]
3	<i>Emblica officinalis</i> Common name: <i>Amalaki</i>	Anti-asthmatic [6], Anti-tussive [17]	Anti-oxidant [9], Anti-microbial [9], Anti-ulcerogenic [9], Immunomodulatory
4	<i>Piper longum</i> Common name: <i>Pippali</i>	Anti-Asthmatic [6], Mast cell stabilizer property [18], Bronchodilator [18], Anti-histaminic [19], Bio availability enhancer [9]	Anti-bacterial [9], Anti-tubercular [9], Appetizer [6], Anti-inflammatory [9]
5	<i>Fagonia cretica</i> Common name: <i>Dhanvyaas</i>	-	Anti-septic [6], Anti-microbial [6], Anti-viral [6], Blood purifier [6]
6	<i>Pistacia integerrima</i> Common name: <i>Karkatshringi</i>	Anti-histaminic [6], Expectorant [6],	Astringent [6], Anti-dysenteric [6]
7	<i>Solanum xanthocarpum</i> Common name: <i>Kantakari</i>	Anti-histaminic [8], Expectorant [6], Mast cell stabilizer [8]	Diuretic [6], Laxative [6], Febrifuge [6]
8	<i>Boerhavia diffusa</i> Common name: <i>Punarnava</i>	Expectorant [6],	Diuretic [6], Laxative [6], Anti-inflammatory [6], Spasmolytic [6],
9	<i>Phyllanthus niruri</i> Common name: <i>Bhumiamalaki</i>	Anti-asthmatic [12]	Anti-pyretic [6], Anti-spasmodic [6], Anti-viral [6], Diuretic [6], Bactericidal [6]

Among the Ayurvedic drugs in *Kasahar Mahakashaya* mentioned above, eight herbs have action on the respiratory system that is evident from clinical and experimental studies. Although *Acharya charaka* has indicated this group of herbs in *Kasa* disorders, evidence from studies has suggested their multi-dimensional use in respiratory allergies. *Terminalia chebula*, *Piper longum*, *Pistacia integerrima*, *Solanum xanthocarpum* are few herbs that are beneficial for cough, bronchitis, dyspnea and asthma. Apart

from this, *Terminalia chebula*, *Emblica officinalis*, *Piper longum*, *Boerhavia diffusa* are reported to have immunomodulatory property [20] that is helpful in managing RAD, especially in the pediatric age group. Most of the herbs including *Vitis vinifera*, *Terminalia chebula*, *Embelica officinalis*, *Piper longum* and *Phyllanthus niruri* have shown anti-microbial or anti-bacterial property, which can be drug of choice in allergy with infectious base. (Table 4 and 5).

Table 4: Analysis of *KasaharMahakashaya*

Property	Drugs
Anti-histaminic	<i>Vitis vinifera</i> , <i>Pistacia integerrima</i> , <i>Solanum xanthocarpum</i>
Anti-asthmatic	<i>Termania chebula</i> , <i>Emblica officinalis</i> , <i>Piper longum</i> , <i>Phyllanthus niruri</i>
Expectorant	<i>Pistacia integerrima</i> , <i>Solanum xanthocarpum</i> , <i>Boerhavia diffusa</i>
Mast cell stabilizer	<i>Terminalia chebula</i> , <i>Piper longum</i> , <i>Solanum xanthocarpum</i>

Table 5: Pharmacological Properties of *Vishaghna Mahakashaya*

S.N.	Drug	Action on Respiratory System	Other Properties
1	<i>Curcuma longa</i> Common name: <i>Haridra</i>	Expectorant, Anti-histaminic [8], Anti-Asthmatic [6] Mast cell stabilizer [16]	Anti-inflammatory [6], Stomachic [6] Anti-oxidant [6], Hepato-protective [9],
2	<i>Rubia cordifolia</i> Common name: <i>Manjishta</i>	Expectorant [21], Use in cough, cold [21]	Anti-microbial [9], Astringent [6], Anti-inflammatory [9], Blood Purifier [6], Anti-oxidant [6]
3	<i>Operculina turpethum</i> Common name: <i>Trivrit</i>	Expectorant [22]	Purgative [22], Carminative [22], Anti-inflammatory [6], Anti-helminthic [22], Anti-arthritis [22]
4	<i>Elletaria cardamomum</i> Common name: <i>Elaichi</i>	Anti-asthmatic [6],	Anti-microbial [6], Anti-septic [6], Anti-spasmodic [6], Carminative [6]
5	<i>Santalum album</i> Common name: <i>Chandan</i>	Expectorant [6]	Cooling [6], Diuretic [6], Anti-septic [6], Bacteriostatic [6]
6	<i>Strychnous potatorum</i> Common name: <i>Kataka</i>	Expectorant [6]	Anti-diabetic [6], Anti-microbial [6], Anti-inflammatory [6], Anti-oxidant [6], Anti-arthritis [6]

7	<i>Albizia lebbek</i> Common name: <i>Shirisha</i>	Bronchodilator [10], Anti-histaminic [9], Mast cell stabilizer [10],	Anti-septic [6], Anti-bacterial [6], Anti-allergic [9], Anti-ulcerogenic [9]
8	<i>Vitex negundo</i> Common name: <i>Nirgundi</i>	Mast cell stabilizer [9]	Anti-inflammatory [9], Astringent [6], Febrifuge [6], Anti-diarrheal [6]
9	<i>Cordia dichotoma</i> Common name: <i>Shleshmataka</i>	Demulcent [6], Expectorant [6], Use in cough and cold [6]	Diuretic, Anti-helminthic, Anti-inflammatory, Anti- microbial

The herbs in *Vishghna mahakashaya* have been analyzed to identify their pharmacological action on symptoms of the respiratory system. It is evident from the above table that herbs within *Vishghna mahakashaya* have a potent role in the management of respiratory allergic disorders. Allergic substance is also considered as a *Visha* and these herbs helps to counteract this toxic material and nullify its adverse effects. Certain drugs like *Curcuma longa*, *Rubia cordifolia*,

Albizia lebbek, and *Vitex negundo* can be used as effective anti-histaminic, anti-asthmatics and mast cell stabilizer agents, due to its capacity to remove the toxic products from the circulation. (Table6). Further anti-toxic, anti-septic, anti-bacterial as well as anti-inflammatory effects of above drugs are proved by the previous clinical studies. Besides these drugs are also helpful as immunomodulatory and anti-oxidant effects.

Table 6: Analysis of *Vishaghna Mahakashaya*

Property	Drugs
Anti-histaminic	<i>Curcuma longa</i> , <i>Albizia lebbek</i>
Anti-asthmatic	<i>Curcuma longa</i> , <i>Elletaria cardamomum</i>
Expectorant	<i>Curcuma longa</i> , <i>Rubia cordifolia</i> , <i>Operculina turpethum</i> , <i>Santalum album</i> , <i>Strychnous potatorum</i> , <i>Cordia dichotoma</i>
Mast cell stabilizer	<i>Curcuma longa</i> , <i>Albizia lebbek</i> , <i>Vitex nigundo</i>

CONCLUSIONS

Hence by considering all above clinical and experimental facts from above analysis, upholds the *Acharya charakas* view in imparting permanent and symptomatic cure by using the *Kasahara*, *Shawasahara*, *Vishagna Mahakashayas* and imparting the qualitative cure and immunomodulatory effects for the same, along with Anti-histaminic, Anti-asthmatic, Expectorant, and mast cell stabilizing properties, which comprehensively helps in curing Respiratory Allergic Disorders, by reducing the incidences of repeated attacks. and preventing form chronicity. Moreover these herbal drugs provide better options to prepare formulations on the basis of their pharmacological actions.

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