



CRITICAL ANALYSIS OF CARAKOKTA ŚVĀSASAHAHA AND VIṢAGHNA MAHĀKAṢĀYA IN THE MANAGEMENT OF ANŪRJATĀJANYA TAMAK ŚVĀSA (ALLERGIC ASTHMA)

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ABSTRACT

In the 21st century the stressful lifestyle has induced a number of many new and classically untold diseases, one of them is allergic asthma. The World Health Organization (WHO) estimates 300 million individuals have asthma worldwide, a figure that could increase to 400 million by 2025 if trends continue. 50% of them have allergic asthma. In *Āyurveda*, there is not any direct reference regarding *Anūrjatā* (Allergy) in *Samhitās* but few references by *Ācārya Caraka* and *Suśruta* show its incidence in the form of *Abhiśaṅgaja* disease resulting from *Viśausadhi*, *Viśavr̥kṣa*, *Viśa Anila Sparśa* (contact with poisonous drugs, poisonous trees, and poisonous air) and other form of *Viśa* (*Puṣpagam̐dha* etc.). In the etiology of *Śvāsa Roga* there is a clear mention of etiological factors like *Raja*, *Dhūma* (Allergens) and *Āmapradoṣa* and *Viśa* (Underlying factors) for the manifestation of allergy. These are the important causative factors that can be attributed to environment and diet. Because respiratory allergies (i.e. allergic asthma) occur due to hyper responsiveness of these factors in the form of histamine release and activation of mast cells, so treatment is aimed towards anti-histaminic and cell stabilizing agent. The present paper is focused on *Carakokta mahākaṣāya* to determine the role of *Śvāsahara Mahākaṣāya* and *Viśaghna Mahākaṣāya* and their *Dravyās* for management of Allergic Asthma. The paper attributes to the critical analysis of *Śvāsahara* and *Viśaghna Mahākaṣāya* to elicit their pharmacological actions based on various experimental and clinical studies.

KEYWORDS: Śvāsahara, Viśaghna, Mahākaṣāya, Allergic Asthma, Anūrjatājanya tamak śvāsa, Śvāsaroga.

INTRODUCTION

In the 21st century the stressful lifestyle has induced a number of many new and classically untold diseases. These especially include diseases of immune system like Auto immune disorders and Allergic disorders. There are many allergic diseases mounting in incidence everyday; one of them is allergic asthma. Allergic asthma is one of burning challenge for the medical system in the current scenario. Asthma is one of the most common chronic diseases worldwide. The World Health Organization (WHO) estimates 300 million individuals have asthma worldwide, a figure that could increase to 400 million by 2025 if trends continue. More than 50% of them have allergic asthma. India has an estimated 15-20 million asthmatics and rough estimates indicate a prevalence of between 10% and 15% in 5-11 year old children.

Āyurveda is one of the most ancient systems of life, health and care. In *Āyurveda*, there is not any direct reference regarding *Anūrjatā* (Allergy) in *Samhitās* but few references by *Ācārya Caraka* and *Suśruta* show its

incidence in the form of *abhiśaṅgaja* disease resulting from *viśausadhi*, *viśavr̥kṣa*, *viśa anila sparśa* (contact with poisonous drugs, poisonous trees, and poisonous air) and other form of *viśa* (*puṣpagam̐dha* etc.). In the etiology of *śvāsa roga* there is a clear mention of etiological factors like *raja*, *dhūma* (Allergens) and *āmapradoṣa* and *viśa* (Underlying factors) for the manifestation of allergy. Allergic asthma can be clinically defined as recurrent airflow obstruction causing intermittent wheezing, breathlessness, chest tightness and cough, sometimes with sputum production.

The increase in prevalence may be attributed to environmental factors like *raja*, *dhūma*, dietic incompatibilities like *rūkṣānna*, *viśamāśana* and faulty lifestyles like *ati-vyāyāma*, *ati-grāmya dharmā*.^[4] In the modern science anti-allergic drugs are prescribed for the management of allergic asthma, but they are not safe and long lasting. Although the drugs suppress the symptoms, they do not potentiate respiratory system nor root out the cause. Rather these drugs leaves the patient with

one or other adverse effects such as sedation, drowsiness, ataxia, lack of concentration, headache, dry mouth, constipation etc.^[5] *Āyurveda* can provide better replacement therapeutic measures to modern anti-allergic drugs in the light of eternal fundamental principles of management mentioned in *Āyurveda*.

MATERIALS AND METHODS

References for this article was collected from classical *Āyurvedīya* texts as well from previous research works, research articles from internet and modern science texts to understand the fundamental theories of allergy.

Āyurveda has a wide range of medicinal plants which are very effective in prevention and management of Allergic conditions i.e. Allergic asthma. *Ācārya Caraka* describes fifty *mahākaṣāya* with ten drugs in each respectively, in the 1st *catuṣka* (*bhaiṣaja catuṣka*) of *sūtrasthāna* of

carakasamhitā. Each *mahākaṣāya* has specific pharmacological actions, with the same pharmacotherapeutic actions, to fight against a particular disease or disorder. The utility of *carakokta mahākaṣāya* is disease specific and has been prescribed in such a way that the combination provides effective guidelines for the *cikitsaka*. Out of the fifty *mahākaṣāya*, *śvāsahara* and *viṣaghna mahākaṣāya* can be screened for anti-allergic properties against respiratory disorders.^[3] Out of these two *mahākaṣāyās*, *śvāsahara mahākaṣāya* can be considered directly for the respiratory disorders whereas *viṣaghna mahākaṣāya* plays its role as an anti-allergic agent against respiratory system in an indirect manner. The present paper is focused towards critical analysis of drugs of the above *mahākaṣāyās* to justify their efficacy and safety in the management of respiratory allergic disorders on the basis of clinical and experimental evidence (Table 1, 2, 3, 5).

Table 1: Showing rasa-pañcaka of Śvāsahara Mahākaṣāya.

S. No.	Sanskrit name of drug	Botanical name	Rasa	Guṇa	Vīrya	Vipāka	Prabhāva	Doṣa-śāmakatā
1.	Śaṭī	<i>Hedychium spicatum</i> Buch-Hem.	Katu-tikta-kaṣāya	Laghu, tīkṣṇa	Uṣṇa	Kaṭu	-	KV
2.	Puṣkaramūla	<i>Inula racemosa</i> Hook. f. J.	Tikta-katu	Laghu, tīkṣṇa	Uṣṇa	Kaṭu	-	KV
3.	Amlavetasa	<i>Garcinia pedunculata</i> Roxb.	Amla	Laghu, rūkṣa, tīkṣṇa	Uṣṇa	Amla	-	KV
4.	Elā	<i>Elettaria cardamomum</i> Linn.	Katu-madhura	Laghu, rūkṣa	Śīta	Madhura	-	T
5.	Hīṅgu	<i>Ferula narthex</i> Bioss.	Katu	Laghu, snigdha, tīkṣṇa	Uṣṇa	Kaṭu	-	KV
6.	Aguru	<i>Aquilaria agollocha</i> Roxb.	Katu-tikta	Laghu rūkṣa tīkṣṇa	Uṣṇa	Kaṭu	-	KV
7.	Surasā	<i>Ocimum sanctum</i> Linn.	Katu-tikta	Laghu, rūkṣa	Uṣṇa	Kaṭu	Kṛmighna	KV
8.	Tāmalakī	<i>Phyllanthus urinaria</i> Linn.	Tikta-kaṣāya-madhura	Laghu, rūkṣa	Śīta	Madhura	-	KP
9.	Jīvantī	<i>Leptadenia reticulata</i> Wight & Arn.	Madhura	Laghu, snigdha	Śīta	Madhura	-	T

Table 2: Showing rasa-pañcaka of Viṣaghna Mahākaṣāya.

S. No.	Sanskrit name of plant	Botanical Name	Rasa	Guṇa	Vīrya	Vipāka	Prabhāva	Doṣa-śāmakatā
1.	Haridrā	<i>Curcuma longa</i> Linn.	Tikta-kaṭu	Rūkṣa, laghu	Uṣṇa	Kaṭu	-	KV
2.	Mañjiṣṭhā	<i>Rubia cordifolia</i> Linn.	Tikta kaṣāya madhura	Guru, rūkṣa	Uṣṇa	Kaṭu	-	KP
3.	Trivr̥tta	<i>Operculina turpethum</i> Linn.	Tikta-kaṭu	Laghu, rūkṣa, tīkṣṇa	Uṣṇa	Kaṭu	-	KP
4.	Elā	<i>Elettaria cardamomum</i>	Katu-madhura	Laghu, rūkṣa	Śīta	Madhura	-	T

		Linn.						
5.	<i>Candana</i>	<i>Santalum album</i> Linn.	<i>Tikta-madhura</i>	<i>Laghu, rūkṣa</i>	<i>Śīta</i>	<i>Kaṭu</i>	-	<i>KP</i>
6.	<i>Kataka</i>	<i>Strychnos potatorum</i> Linn.	<i>Madhura-tikta-kaṣāya</i>	<i>Laghu, viśada</i>	<i>Śīta</i>	<i>Madhura</i>	<i>Caḡsuṣya</i>	<i>KV</i>
7.	<i>Śīrīṣa</i>	<i>Albizzia lebeck</i> Benth.	<i>Kaṣāya-tikta-madhura</i>	<i>Laghu, rūkṣa, tīkṣṇa</i>	<i>Īṣat uṣṇa</i>	<i>Kaṭu</i>	-	<i>T</i>
8.	<i>Sinduvāra</i>	<i>Vitex nigundo</i> Linn.	<i>Katu-tikta</i>	<i>Laghu, rūkṣa</i>	<i>Uṣṇa</i>	<i>Kaṭu</i>	-	<i>KV</i>
9.	<i>Śleṣmātaka</i>	<i>Cordia dichotoma</i> Forst. F.	<i>madhura</i>	<i>Snigdha, guru, picchīla</i>	<i>Śīta</i>	<i>Madhura</i>	<i>Viṣaghna</i>	<i>PV</i>

Table 3: Pharmacological Properties of Śvāsahara Mahākaṣāya.

S. No.	Drug Sanskrit Name & Botanical Name	Actions on Respiratory System	Other properties
1.	<i>Śaṭī</i> <i>Hedychium spicatum</i> Buch-Hem.	Expectorant, ^[6] Anti-asthmatic, ^[6] Anti-histaminic, Mast cell stabilizer, ^[10]	Anti-inflammatory, ^[6] Anti-microbial, ^[6] Anti-helminthic, ^[6] Spasmolytic, ^[6,7]
2.	<i>Puṣkaramūla</i> <i>Inula racemosa</i> Hook. f. J.	Anti-histaminic, ^[8] Expectorant, ^[6] Anti-catarrhal, ^[6] Anti-asthmatic, ^[9] Mast cell Stabilizer, ^[10]	Anti-spasmodic, ^[6] Stomachic, ^[6] Immuno-stimulant, ^[6]
3.	<i>Amlavetasa</i> <i>Garcinia pedunculata</i> Roxb.	Cough & other respiratory disorders, ^[6]	Astringent, ^[6] Cooling, ^[6] Cardio tonic, ^[6]
4.	<i>Elā</i> <i>Elettaria cardamomum</i> Linn.	Anti-asthmatic, ^[6]	Anti-microbial, ^[6] Anti-septic, ^[6] Anti-spasmodic, ^[6] Carminative, ^[6]
5.	<i>Hīṅgu</i> <i>Ferula narthex</i> Bioss.	Expectorant, ^[11] Anti-asthmatic, ^[6]	Anti-spasmodic, ^[11] Laxative, ^[11] Carminative, ^[11] Sedative, ^[11] Anti-oxidant, ^[11]
6.	<i>Aguru</i> <i>Aquilaria agallocha</i> Roxb.	Anti-asthmatic, ^[6]	Astringent, ^[6] Carminative, ^[6] Anti-diarrheal, ^[6]
7.	<i>Surasā</i> <i>Ocimum sanctum</i> Linn.	Expectorant, ^[6]	Anti-inflammatory, ^[6] Anti-viral, ^[6] Antiseptic, ^[6] Bacteriostatic, ^[6] Carminative, ^[6] Stomachic. ^[6]
8.	<i>Tāmalakī</i> <i>Phyllanthus urinaria</i> Linn.	Anti-asthmatic, ^[12]	Anti-pyretic, ^[6] Anti-spasmodic, ^[6] Anti-viral, ^[6] Diuretic, ^[6] Bactericidal, ^[6]
9.	<i>Jīvanī</i> <i>Leptadenia reticulata</i> Wight & Arn.	Anti-histaminic, ^[13] Mast cell stabilizer, ^[13] Expectorant, ^[13]	Anti-inflammatory, Anti-spasmodic, Anti-diuretic, Anti-bacterial

The above table depicts the pharmacological actions of herbal drugs that make up śvāsahara mahākaṣāya. All the mahākaṣāya herbs show evidence based action on respiratory allergies. Herbs like *Inula racemosa*, *Garcinia pedunculata*, *Elettaria cardamom*, *Ferula foetida*, *Phyllanthus urinaria* can be safely and effectively used in the treatment for cough, bronchitis and asthma.^[6] Gargling with *Balasmodendron myrrha* prove beneficial in tonsillitis, common cold, gingivitis etc.^[6] All Śvāsahara mahākaṣāya 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 4).

Table 4: Analysis of Śvāsahara Mahākaṣāya.

Property	Drugs
Anti-histaminic	Śaṭī, Puṣkaramūla, Jīvantī, Aguru
Anti-asthmatic	Śaṭī, Puṣkaramūla, Elā, Hīṅgu, Aguru, Tāmalakī
Expectorant	Śaṭī, Puṣkaramūla, Hīṅgu, Amlavetasa, Jīvantī
Anti-catarthal	Puṣkaramūla,
Mast cell stabilizer	Śaṭī, Puṣkaramūla, Jīvantī,
Immune-modulator	Surasā, Hīṅgu,

Table 5: Pharmacological Properties of Viṣaghna Mahākaṣāya.

S. No.	Drug Sanskrit Name & Botanical Name	Actions on Respiratory System	Other properties
1.	<i>Haridrā</i> <i>Curcuma longa</i> Linn.	Expectorant, Anti-histaminic, ^[8] Anti-Asthmatic, ^[6] Mast cell stabilizer, ^[16]	Anti-inflammatory, ^[6] Stomachic, ^[6] Anti-oxidant, ^[6] Hepato-protective, ^[9]
2.	<i>Mañjiṣṭhā</i> <i>Rubia cordifolia</i> Linn.	Expectorant, ^[21] Use in cough, cold, ^[21]	Anti-microbial, ^[9] Astringent, ^[6] Anti- inflammatory, ^[9] Blood Purifier, ^[6] Anti-oxidant ^[6]
3.	<i>Trivrṭta</i> <i>Operculina turpethum</i> Linn.	Expectorant, ^[22] Anti-inflammatory, ^[6]	Purgative, ^[22] Carminative, ^[22] Anti-helminthic, ^[22] Anti- arthritic, ^[22]
4.	<i>Elā</i> <i>Elettaria cardamomum</i> Linn.	Anti-asthmatic, ^[6] Anti-spasmodic, ^[6]	Anti-microbial, ^[6] Anti- septic, ^[6] Carminative, ^[6]
5.	<i>Candana</i> <i>Santalum album</i> Linn.	Expectorant, ^[6]	Cooling, ^[6] Diuretic, ^[6] Anti- septic, ^[6] Bacteriostatic, ^[6]
6.	<i>Kataka</i> <i>Strychnos potatorum</i> Linn.	Expectorant, ^[6]	Anti-diabetic, ^[6] Anti- microbial, ^[6] Anti- inflammatory, ^[6] Anti- oxidant, ^[6] Anti-arthritis, ^[6]
7.	<i>Śirīṣa</i> <i>Albizia lebbek</i> Benth.	Bronchodilator, ^[10] Anti-histaminic, ^[9] Mast cell stabilizer, ^[10]	Anti-septic, ^[6] Anti-bacterial, ^[6] Anti-allergic, ^[9] Anti- ulcerogenic, ^[9]
8.	<i>Sinduvāra</i> <i>Vitex negundo</i> Linn.	Mast cell stabilizer, ^[9] Anti- inflammatory, ^[9]	Astringent, ^[6] Febrifuge, ^[6] Anti-diarrheal, ^[6]
9.	<i>Śleṣmātaka</i> <i>Cordia dichotoma</i> Forst. F.	Demulcent, ^[6] Expectorant, ^[6] Use in cough and cold. ^[6]	Diuretic, Anti-helminthic, Anti-inflammatory, Anti- microbial

The herbs in *viṣaghna mahākaṣāya* have been analyzed to identify their pharmacological action on symptoms of the respiratory system. It is evident from the above table that herbs within *viṣaghna mahākaṣāya* have a potent role in the management of respiratory allergic disorders. These herbs can especially act as anti-allergic agents to counteract the allergens produced in respiratory infections. Among them *Curcuma longa*, *Rubia*

cordifolia, *Albizia lebbek*, and *Vitex negundo* can be used as effective anti-histaminic, anti-asthmatics and mast cell stabilizer agents. As these herbs are included in *viṣaghna mahākaṣāya*, (Table 6) it can be utilized as an anti-toxic, anti-septic, anti-bacterial as well as an anti-inflammatory agent. The herbs have an influential role as immunomodulatory and **anti-oxidant** herbal drugs.

Table 6: Analysis of Viṣaghna Mahākaṣāya.

Property	Drugs
Anti-histaminic	<i>Haridrā</i> , <i>Śirīṣa</i> , <i>Sinduvāra</i>
Anti-asthmatic	<i>Haridrā</i> , <i>Elā</i> , <i>Śirīṣa</i> , <i>Sinduvāra</i> ,
Expectorant	<i>Haridrā</i> , <i>Mañjiṣṭhā</i> , <i>Trivrṭta</i> , <i>Candana</i> , <i>Kataka</i> , <i>Śleṣmātaka</i>
Mast cell stabilizer	<i>Haridrā</i> , <i>Śirīṣa</i> , <i>Sinduvāra</i>
Immune-modulator	<i>Mañjiṣṭhā</i> , <i>Trivrṭta</i> , <i>Śleṣmātaka</i>

DISCUSSION

Viśaghna mahākaṣāya consists of ten drugs namely *haridrā, mañjiṣṭhā, trivṛtta, elā, candana, kataka, śirīṣa, sinduvāra* and *śleṣmātaka*. For a drug to act as anti-allergic it must carry the properties of *dīpana pācana, tridoṣaghna, rasāyana, viśaghna, srotośodhana, śothahara, śvāsahara, and kāсахara*. All the above drugs are well established for the requisite properties and this is justified by its inclusion in the 50 *mahākaṣāyās* of *sūtrasthāna* of *carakasamhitā* as anti-toxic formulation. Their mechanism of action in *Anūrjatā* is as following: Most of the drugs are of *kaṭu-tikta rasa, rūkṣa guṇa, kaṭu vipāka* and *uṣṇa vīrya*. All these properties make them *agnidīpaka* and *āma pācaka*. So on reaching *pittasthāna, agnidīpana* and *āma pācana* takes place. *Tikṣṇa guṇa* makes drug possible to penetrate deep in to the *srotas* and bring about *srotośodhana* by removing the *saṅga*. This is seen as bronchodilation in *prāṇavaha srotas*. The medicated *āhāra rasa* with *āma pācana* properties is carried to the *sāma rasa dhātu*. This alleviates *dhātavagni māndya* of *rasa dhātu* and successively of all *dhātus*. On alleviation of *dhātavagni māndya, sarva dhātu sārātā* is achieved thereby resulting in *ojovṛddhi*. This further enhances *bala* or *vyādhiḥṣamatva* of patient in general. By *āma pācana* in *rasa dhātu, mala rūpa kapha* or *āmaviṣa* is decreased. This results in *saṅga* removal or *srotośodhana*. So normal functioning of *srotas* is retained and normal immune strength is recovered and tolerance to various *anūrjaskara* factors is exhibited by specific *srotas*. The *tridoṣaghna* properties of *elā* and *śirīṣa* make them to act like *rasāyanas*. These enhance the immune status in body. By virtue of *tikta* and *madhura rasa haridrā, mañjiṣṭhā, trivṛtta, elā, candana, kataka, śirīṣa, sinduvāra* and *śleṣmātaka* acts as detoxifying agent (*viśaghna*) and act as *ojovardhaka* remedy. Drugs like *elā* and *śirīṣa* act directly on the *prāṇavaha srotas* and increase the local immunity along with alleviation of localized symptoms. Regular use of this formulation performs the function of *abhisaṃskāra*, the most important property to counter the evil effects of allergens. As well these drugs are supposed to restore the natural state of *srotas* by healing the *kha-vaiguṇya*.

Śvāsahara mahākaṣāya consists of ten drugs namely *śaṭī, puṣkaramūla, amlavetasa, elā, hiṅgu, aguru, surasā, tāmalakī* and *jīvantī*. Their mechanism of action in *Anūrjatā* is as following: Most of the drugs are of *kaṭu-tikta rasa, rūkṣa guṇa, kaṭu vipāka* and *uṣṇa vīrya*. All these properties make them *agnidīpaka* and *āma pācaka*. So on reaching *pitta sthāna, agnidīpana* and *āma pācana* takes place. *Tikṣṇa guṇa* makes drug possible to penetrate deep in to the *srotas* and bring about *srotośodhana* by removing the *saṅga*. This is seen as bronchodilation in *prāṇavaha srotas*. The medicated *āhāra rasa* with *āma pācana* properties is carried to the *sāma rasa dhātu*. This alleviates *dhātavagnimāndya* of *rasa dhātu* and successively of all *dhātus*. On alleviation of *dhātavagnimāndya, sarva dhātu sārātā* is achieved thereby resulting in *ojovṛddhi*. This further enhances *bala* or *vyādhiḥṣamatva* of patient in general. By *āma*

pācana in *rasa dhātu, mala rūpa kapha* or *āmaviṣa* is decreased. This results in *saṅga* removal or *srotośodhana*. So normal functioning of *srotas* is retained and normal immune strength is recovered and tolerance to various *anūrjaskara* factors is exhibited by specific *srotas*. The *tridoṣaghna* properties of *elā* and *jīvantī* make them to act like *rasāyanas*. These enhance the immune status in body. By virtue of *tikta* and *madhura rasa śaṭī, puṣkaramūla, elā, aguru, surasā, tāmalakī* and *jīvantī* acts as detoxifying agent and act as *ojovardhaka* remedy. Being *śvāsahara* drug, these drugs act directly on the *prāṇavaha srotas* and increase the local immunity along with alleviation of localized symptoms. As well these drugs are supposed to restore the natural state of *srotas* by healing the *kha-vaiguṇya*.

CONCLUSION

As per the above analysis, it is evident that *Ācārya Caraka* has correctly described the drugs in a qualitative manner to combat the particular disorder. The herbal agents of *śvāsahara and viśaghna mahākaṣāya* has shown anti-histaminic, anti-asthmatic, expectorant, mast cell stabilizing and immune-modulator properties. These *Āyurvedic* drugs can be used as effective anti-allergic agents against the respiratory allergic disorders i.e. allergic asthma. Moreover these drugs provide better options to prepare formulations on the basis of their pharmacological actions. Their role as immunomodulatory agents is equally important in limiting repeated respiratory allergies and potentiating the respiratory system.

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