

REVIEW OF CHARAKOKTA MAHAKASHAYAS ACTING ON PRANAVAHA SROTAS

Dr. Aby Mathew Jose^{1*}, Dr. Akhila Vinod² and Dr. H.R. Pradeep³

¹P.G Scholar, Department of Dravya Guna, A L N Rao Memorial Ayurvedic Medical College, Koppa, Chikmagalur, Karnataka.

²P.G Scholar, Department of Rasashastra and Bhaishajya Kalpana, A L N Rao Memorial Ayurvedic Medical College, Koppa, Chikmagalur, Karnataka.

³Professor, Department of Dravya Guna, A L N Rao Memorial Ayurvedic Medical College, Koppa, Chikmagalur, Karnataka.

*Corresponding Author: Dr. Aby Mathew Jose

P.G Scholar, Department of Dravya Guna, A L N Rao Memorial Ayurvedic Medical College, Koppa, Chikmagalur, Karnataka.

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ABSTRACT

Srotas are the channels in the human body via which the *Doshas*, *Dhatus*, and *Malas* circulate. According to *Acharya Charaka*, there are fourteen *abhyantra srotas* and eleven according to *Acharya Susruta*, each of which corresponds to a specific organ. These channels are influenced by many factors, resulting in their vitiation. *Pranavaha srotas* is the most important of the *abhyantra srotas*, as it is the conduit through which *prana vata* is circulated. Symptoms such as *swasa*, *kasa*, *hikka*, and others appear when the normality of the *pranavaha srotas* is disrupted. Various *mahakashayas* are listed in the *Charaka samhitha sutrastana* for the management of ailments related to impairment of *pranavaha srotas*. There are ten medications in this each group of *kashayas*. A genuine attempt have been made in this study to enlighten on four *Mahakashaya dravyas*, namely *Kanthya mahaksaya*, *Hikknigrahana mahakasaya*, *Ksahara Mahakasaya*, and *Swsahara mahakasaya*, all of which are explained under *Shadvirechana Shataashriteeya Adhyaya* for their Morphological, Pharmacognostical, Pharmacological study.

KEYWORDS: *Pranavaha srotas*, *Kanthya mahaksaya*, *Hikknigrahana mahakasaya*, *Ksahara Mahakasaya*, *Swsahara mahakasaya*.

INTRODUCTION

The human body is believed to be made up of numerous *srotas* '*sroto aium purusha*', one of the major anatomical concept of *Ayurveda*. *Acharya Susruta* and *Charaka* address the entire concept of *srotas* in their respective treatises. In this regard, *Susruta* has enumerated 11 *srotas*, whereas *Charaka* has 14. Both *Acharyas* consider *pranavaha srotas* as the first and most important *srotas*.

Susruta gives a clear idea regarding *prana*, '*agnisomvayu satvarajatama panchendriya bhutatmethi prana*', i.e., *agni*, *soma*, *vayu*, *satwa*, *raja*, *tama*, and *panchendriya* are *pranas* because due to these vital factors, signs of aliveness is seen. Also, '*pranaha vahantiti prana*', *Chaitanya* or *jivana* is the outcome of *prana*. The *vahana* of this *prana* is through *pranavaha srotas*. Symptoms such as *swasa*, *kasa*, *hikka*, and others appear when the normality of the *pranavaha srotas* is disrupted. Various *mahakashayas* are listed in the *Charaka samhitha sutrastana* for the management of ailments related to the impairment of *pranavaha srotas*. This include *kanthya mahaksaya*, *hikknigrahana mahakasaya*, *ksahara mahakasaya*, and *swsahara mahakasaya*. There are ten medications in each group of *kashaya*. These ten *dravyas* in each group must be

comprehended to be used clinically in a variety of situations.

AIMS AND OBJECTIVES

To enroll the *dravyas* with their botanical sources as specified in *Charakokta Kanthya mahaksaya*, *Hikknigrahana mahaksaya*, *Ksahara Mahakasaya*, and *Swsahara Mahakasaya*, categories them according to *Rasapanchaka*, *Doshagnata*, and precise Pharmaceutical Action, Chemical components, as well as detailed *Karma vivechana*. Along with a brief review on *pranavaha srotas*.

MATERIALS

Charaka samhitha, *Susruta samhitha*, *Ashtanga hrudaya*, *Bhavaprakasha nighantu*, *Dravyaguna vijnana*, *Pharmacology texts*.

METHODOLOGY

The following points will be discussed in detail on *Charakokta mahakashaya acting on pranavaha srotas* from *Charaka samhitha sutrastana*:

1. An overview regarding *Pranavaha srotas*
2. A detailed review of each drug in corresponding *mahakashayas*

3. Critical analysis of these dravyas to enlist the respective chemical compounds and their pharmaceutical actions.

Observations

Embryological appraisal of *pranavaha srotas*

Mula refers to a developmental or generative place. *Mulasthanas* of *pranavaha srotas* is *hrudya* and *mahasrotas* according to *Charaka samhita vimanasthana* 5/8 and as per *Susruta samhita shareerasthana* 9/12, *hrudaya* and *rasavahinidhamani*.

The lungs are crucial organs for breathing. Behind Cuvier's ducts, right and left lung buds emerge. The pleura is a fragile serous membrane that surrounds each lung. Each lung has an apex that reaches above the sternal end of the 1st rib; a costovertebral surface that underlies the chest wall; a base overlying the diaphragm and a mediastinal surface that is molded to adjacent mediastinal structures.

Pranavaha srotodusti hetu

Pranavaha srotodusti is caused by *dhatu kshaya*, *vega sandharana*, *ruksha padartha sevana*, *vyayama*, *kshudhita*, and other factors that vitiate the *srotas*. [Charaka vimanasthana 5/10]

Pranavaha srotodusti lakshana

The respiratory system helps in pulmonary ventilation. The neuronal signals transmitted between the respiratory centers of the brain and the muscles in the chest and diaphragm modulate respiration. Centers that control the rate of breathing are in the medulla oblongata.

Pranavata in *murdha* and *udana vata* in *uras* does the *nishwasa uchvasa* and *vakpravriti* respectively. In the *dushti lakshana* of *Pranavahasrotas*, the manifestation of neurological symptoms can be seen associated with abnormal rate and rhythm of respiration. Hence, treatment of respiratory diseases is also done with the drugs acting on the nervous system.

Pranavaha srotodusti lakshanas are *Atisrushtam* (tachypnea – Neuromuscular disorders), *atibaddham* (dyspnea – Parkinson's disease), *kupitam* (agitated respiration), *alpalpam* (shallow respiration- Anxiety, Stress, neuromuscular dystrophy), *abhikshanam* (frequent respiration), *sashabdham* (stertorous respiration), *sashoola* (painful respiration). [Charaka vimanasthana 5/8].

Diseases of *pranavaha srotas*

Acharya Charaka does not address *pranavaha srotodusti rogas* specifically but does discuss the involvement of *pranavaha srotas* in *vyadhi* such as *kasa*, *swasa*, *hikka*, *vatavyadhi*, *hrudroga*, *kshataksheena*, *rajayakshma*, *chardi*, *sotha*, and so on, while Acharya Susruta mentions ailments like *swasa*, *kasa*, and *pinasa* while explaining *dushta pranavata*.

Pranavaha srotodusti chikitsa

The vitiation of *pranavaha srotas* should be managed on the lines of treatment of *swasa roga* as it is an *amasaya samudbhava vyadhi* and *amasaya* is the *moolasthana* of *pranavaha srotas*. In *swasaroga* as per Acharya Charaka, *ushna*, *kapha vataghna*, *vatanulomaka chikitsa* should be considered as curative. *Dravyas* that is both curative and preventive mentioned in *Bruhatrayis* in the management of ailments of *pranavaha srotas* are listed in table no.1

Table No. 1: List of *Mahakasayas* acting on *pranavaha srotas* according to *Bruhatrayis*.

CHARAKA	SUSRUTA	VAGBHATA
<i>Kanthy Mahakashaaya</i>	<i>Vidari Gandhadi Gana</i>	<i>Vidaryadi Gana</i>
<i>Hikkanigrahana Mahakashaaya</i>	<i>Surasadi Gana</i>	<i>Surasadi Gana</i>
<i>Kasahara Mahakashaaya</i>	<i>Pippalyadi Gana</i>	
<i>Swasahara Mahakashaaya</i>	<i>Mahat Panchamula</i>	

Acharya Charaka enumerated *Mahakashayas* based on *vyadhis* whereas *ganas* by Acharya Susruta and

Vagbhata are based on a large number of herbs having similar pharmacological properties.

Table No. 2: Drugs listed in *kanthya*, *swasahara*, *kasahara*, *hikkanigraha mahakashaya*.

KANTHYA MAHAKASHAYA	HIKKANIGRAHANA MAHAKASHAYA	KASAHARA MAHAKASHAYA	SWASAHARA MAHAKASHAYA
<i>Sariva</i>	<i>Shati</i>	<i>Draksha</i>	<i>Shati</i>
<i>Ikshumula</i>	<i>Pushkaramula</i>	<i>Abhaya</i>	<i>Pushkaramula</i>
<i>Madhuka</i>	<i>Badarabeeja</i>	<i>Amalaki</i>	<i>Amlavetas</i>
<i>Pippali</i>	<i>Kantakari</i>	<i>Pippali</i>	<i>Ela</i>
<i>Draksha</i>	<i>Bruhati</i>	<i>Duralabha</i>	<i>Hingu</i>
<i>Vidari</i>	<i>Vruksharuha</i>	<i>Shringi</i>	<i>Aguru</i>
<i>Kaitarya</i>	<i>Abhaya</i>	<i>Kantakari</i>	<i>Surasa</i>
<i>Hamsapadi</i>	<i>Pippali</i>	<i>Vruschira</i>	<i>Tamalaki</i>
<i>Bruhati</i>	<i>Duralabha</i>	<i>Punarnava</i>	<i>Jeevanti</i>
<i>Kantakari</i>	<i>Kulirashringya</i>	<i>Tamalaki</i>	<i>Chanda</i>

Table No. 3: Drugs of *kanthya mahakashaya*.

S. No.	Sanskrit Name	English Name	Latin Name	Family	Part Used
1.	<i>Sariva</i>	Indian sarsaparilla	<i>Hemidismus indicus</i> R.Br.	Asclepiadaceae	Root
2.	<i>Ikshumula</i>	Sugar Cane	<i>Saccharum officinarium</i> Linn.	Gramineae	Root
3.	<i>Madhuka</i>	Liquorice	<i>Glycyrrhiza glabra</i> Linn.	Fabaceae	Root
4.	<i>Pippali</i>	Long Pepper	<i>Piper longum</i> Linn.	Piperaceae	Fruit, Root
5.	<i>Draksha</i>	Grapes	<i>Vitis vinifera</i> Linn.	Vitaceae	Fruit
6.	<i>Vidari</i>	Indian kudju	<i>Pueraria tuberosa</i> DC	Fabaceae	Tuber
7.	<i>Kaitarya</i>	Box Myrtle	<i>Myrica nagi</i> Thumb	Myrtaceae	Stembark
8.	<i>Hamsapadi</i>	Maiden Hair	<i>Adiantum lunulatum</i> Burm.	Polypodiaceae	Whole plant
9.	<i>Bruhati</i>	Indian nightshade	<i>Solanum Indicum</i> Linn.	Solanaceae	Root, Fruit
10.	<i>Kantakari</i>	Yellow Berried Night Shade	<i>Solanum surattenase</i> Burm.f.	Solanaceae	Whole plant

Table No. 4: *Rasapanchaka*, chemical constituents and pharmaceutical action of drugs of *kanthya mahakashaya*.

S. No.	Dravya	<i>Rasapanchaka</i>		Chemical constituents	Pharmaceutical Action
1.	<i>Sariva</i>	<i>Rasa</i>	<i>Madhura, Tikta</i>	Hyperoside, Rutin, Hemidesmine 1&2.	Anti-inflammatory, Antioxidant, Antiasthmatic, Antiviral, Antibacterial, Spasmodic
		<i>Guna</i>	<i>Guru, Snigdha</i>		
		<i>Virya</i>	<i>Shita</i>		
		<i>Vipaka</i>	<i>Madhura.</i>		
		<i>Karma</i>	<i>Kaphaghna</i>		
2.	<i>Ikshumula</i>	<i>Rasa</i>	<i>Madhura</i>	Mucilage, Albumin	Antioxidant, Anti-inflammatory prevents mucosal irritation
		<i>Guna</i>	<i>Snigdha, Guru</i>		
		<i>Virya</i>	<i>Shita</i>		
		<i>Vipaka</i>	<i>Madhura</i>		
		<i>Karma</i>	<i>Shleshma nissaraka</i>		
3.	<i>Madhuka</i>	<i>Rasa</i>	<i>Madhura</i>	Glycyrrhizin, Liquirtin, Isoliquirtin, Glabrine, Licuraside, Hispaglabridin A & B	Anti-infectious, Spasmodic, Antioxidant, Anti-inflammatory, Antinociceptive, Antitussive Expectorant
		<i>Guna</i>	<i>Guru, Snigdha</i>		
		<i>Virya</i>	<i>Shita</i>		
		<i>Vipaka</i>	<i>Madhura</i>		
		<i>Karma</i>	<i>Kapha nissaraka, kantya</i>		
4.	<i>Pippali</i>	<i>Rasa</i>	<i>Katu, Madhura</i>	Essential oil, Piperine, Piplartine, Piperlongumine, Piperlonguminine, Pipernonaline, Piperundecalidine, Pipericide, Sesamine	Antibacterial, Anti-inflammatory, Antitubercular, Antispasmodic, Antiasthmatic, Immunostimulator, Analgesic
		<i>Guna</i>	<i>Laghu, Snigdha, Teekshna</i>		
		<i>Virya</i>	<i>Anushna</i>		
		<i>Vipaka</i>	<i>Madhura</i>		
		<i>Karma</i>	<i>Kasa-swasahara, Hikkani-grahana Krimighna</i>		
5.	<i>Draksha</i>	<i>Rasa</i>	<i>Madhura</i>	Catechin, Epicatechin, Beta-Sitosterol, Jasmonic Acid, Malic Acid, Tartaric Acid	Anti-infectious, Antiulcer, Antioxidant, prevents dry mouth
		<i>Guna</i>	<i>Snigdha, Guru, Mrudu</i>		
		<i>Virya</i>	<i>Shita</i>		
		<i>Vipaka</i>	<i>Madhura</i>		
		<i>Karma</i>	<i>Phuphusa baladayakam, sandhanakaraka, kapha nisaraka</i>		
6.	<i>Vidari</i>	<i>Rasa</i>	<i>Madhura</i>	B-Sitosterol, Stigma Sterol, Puerarin, Isoflavone, Tuberosin, Gluconic & Malic Acids	Spasmodic, Anti-inflammatory, Antioxidant, Antimicrobial, prevents dry mouth
		<i>Guna</i>	<i>Guru, Snigdha,</i>		
		<i>Virya</i>	<i>Shita</i>		
		<i>Vipaka</i>	<i>Madhura</i>		
		<i>Karma</i>	<i>Kaphanissaraka, Kanthya</i>		
7.	<i>Kaitarya</i>	<i>Rasa</i>	<i>Kashaya, Tikta, Katu</i>	Myricanol, Proanthocyanidin, β -sitosterol, Myricadiol, Myricetin, Myricanone	Antiseptic, Antipyretic, Vasodilator, Analgesic
		<i>Guna</i>	<i>Laghu, Teekshna</i>		
		<i>Virya</i>	<i>Ushna</i>		
		<i>Vipaka</i>	<i>Katu</i>		

		<i>Karma</i>	<i>Kapha nisaraka, swaskara</i>		
8.	<i>Hamsapadi</i>	<i>Rasa</i>	<i>Kashaya</i>	Carotenoids, Hentriacontane, Adiantone, Triterpenes, Fernane	Ulcer healing, Antifungal, Antibacterial
		<i>Guna</i>	<i>Guru</i>		
		<i>Virya</i>	<i>Shita</i>		
		<i>Vipaka</i>	<i>Madhura</i>		
		<i>Karma</i>	<i>Kanthya, swasahara, kasahara</i>		
9.	<i>Bruhati</i>	<i>Rasa</i>	<i>Katu, Tikta</i>	Solanine, Carotene, Carpesterol, Solanocarpone, Diosogenin, Solasonine, β -Solamargine, Solasodine, Vitamin C	Anti-inflammatory, analgesic, Antiasthmatic, Anti-infectious
		<i>Guna</i>	<i>Laghu, Ruksha, Teekshna</i>		
		<i>Virya</i>	<i>Ushna</i>		
		<i>Vipaka</i>	<i>Katu</i>		
		<i>Karma</i>	<i>Kaphaghna, Kasahara, Shwasahara</i>		
10.	<i>Kantakari</i>	<i>Rasa</i>	<i>Tikta, Katu</i>	B-carotene, Solasodine, , B-Solamargine, Solanocarpine, Tomatidieno	Anti-inflammatory, Analgesic, Anti-infectious, Spasmolytic, Immunomodulatory
		<i>Guna</i>	<i>Laghu, Ruksha, Teekshna</i>		
		<i>Virya</i>	<i>Ushna.</i>		
		<i>Vipaka</i>	<i>Katu</i>		
		<i>Karma</i>	<i>Kasaharam, Kanthya, Hikkanihrahana, Swasahara</i>		

Table No. 5: Karma vivechana of Kantya Mahakashaya.

DRAVYA	KARMA VIVECHANA
<i>Sariva</i>	<i>Madhura rasa and singdha guna reduces vata, tikta rasa reduces kapha</i>
<i>Ikshumula</i>	<i>Madhura rasa, snigdha-guru guna reduces vata</i>
<i>Madhuka</i>	<i>Madhura rasa, snigdha-guru guna reduces vata</i>
<i>Pippali</i>	<i>Katu rasa reduces kapha, snigdha guna and madhura vipaka reduces vata</i>
<i>Draksha</i>	<i>Snigdha, guru, mrudu guna and Madhura rasa pacifies vata</i>
<i>Vidari</i>	<i>Madhura rasa, snigdha-Guru guna reduces vata</i>
<i>Kaitarya</i>	<i>Kashaya, katu, tikta rasa and Laghu tikshna guna reduces kapha, ushna virya reduces vata</i>
<i>Hamsapadi</i>	<i>Kashaya rasa pacifies kapha</i>
<i>Bruhati</i>	<i>Laghu, ruksha, tikshna guna and katu tikta reduces kapha, ushna virya reduces vata</i>
<i>Kantakari</i>	<i>Vatahara due to usna virya and kapahara due to usna virya, Katu vipaka, Tikta katu rasa</i>

Table No. 6: Drugs of Hikkanihrahana Mahakashaya.

S. No.	Sanskrit Name	English Name	Latin Name	Family	Part Used
1.	<i>Shati</i>	Spiked ginger lily	<i>Hedychium spicatum</i> Buch-Ham	Zingiberaceae	Rhizome
2.	<i>Pushkaramula</i>	Elicampane	<i>Inula racemose</i> Hook. f.	Asteraceae	Root
3.	<i>Badara</i>	Indian Jujube	<i>Zizyphus jujube</i> Lamk.	Rhamnaceae	Fruits, Root, Leaf
4.	<i>Kantakari</i>	Yellow berried night shade	<i>Solanum surattense</i> Burm. f.	Solanaceae	Whole plant
5.	<i>Bruhati</i>	Indian nightshade	<i>Solanum indicum</i> Linn.	Solanaceae	Root, Fruit
6.	<i>Vruksharuha</i>	Honeysuckle mistletoe	<i>Dendrophthoe falcate</i> Linn. f.	Loranthaceae	Whole plant
7.	<i>Abhaya</i>	Chebulic myrobalan	<i>Terminalia chebula</i> Retz.	Combretaceae	Fruit
8.	<i>Pippali</i>	Long pepper	<i>Piper longum</i> Linn	Piperaceae	Fruit, root
9.	<i>Duralabha</i>	Khorasan thorn	<i>Fagonia cretica</i> Linn.	Zygophyllaceae	Whole plant
10.	<i>Kulirashruni</i>	Crabs claw	<i>Pistacia integerrima</i> Stewart ex Brandis	Anacardiaceae	Gall

Table No. 7: Rasapanchaka, chemical constituents and pharmaceutical action of drugs of hikkanihrahana mahakashaya.

S. No.	Dravya	Rasapanchaka		Chemical constituents	Pharmaceutical Action
1.	<i>Shati</i>	<i>Rasa</i>	<i>Katu, Tikta, Kashaya</i>	Sitosterol, Diterpenehedychenone and 7 hydroxy hedychenone	Anti-tussive, Expectorant, Bronchodilator
		<i>Guna</i>	<i>Laghu, Tikshna</i>		
		<i>Virya</i>	<i>Ushna</i>		

		<i>Vipaka</i>	<i>Katu</i>		
		<i>Karma</i>	<i>Kasahara, Shwasahara, Hikkani-grahana</i>		
2.	<i>Pushkaramula</i>	<i>Rasa</i>	<i>Tikta, Katu</i>	Alantolactone, Dihydroisoalantotolactone, β -Sitosterol, Dihydroinunolide, Neo-Alantolactone, Sesquiterpene lactone, Inunol, Alantodiene	Expectorant, Anti-inflammatory, Analgesic, Anti-spasmodic
		<i>Guna</i>	<i>Laghu, Tikshna</i>		
		<i>Viryā</i>	<i>Ushna</i>		
		<i>Vipaka</i>	<i>Katu</i>		
		<i>Karma</i>	<i>Kasahara, Hikkani-grahana, Swasahara</i>		
3.	<i>Badara</i>	<i>Rasa</i>	<i>Madura, Amla</i>	Ceanothic acid, Frangulofline, Spinosin, β -sitosterol, Daucosterol, Octadecenoate, sucrose, Docosanoic acid, Steraic acid, Palmitoleic acid	Antioxidant, Antimicrobial, Anti-inflammatory, Immunomodulator
		<i>Guna</i>	<i>Guru, Snigdha</i>		
		<i>Viryā</i>	<i>Shita</i>		
		<i>Vipaka</i>	<i>Madhura/Amla</i>		
		<i>Karma</i>	<i>Hikkani-grahana</i>		
4.	<i>Kantakari</i>	<i>Rasa</i>	<i>Tikta Katu</i>	β - carotene, Solasodine, β -Solamargine, Solanocarpine, Tomatidieno	Anti-inflammatory, Analgesic, Anti-infectious, Spasmodic, Immunomodulatory
		<i>Guna</i>	<i>Laghu, Ruksha, Teekshna</i>		
		<i>Viryā</i>	<i>Ushna</i>		
		<i>Vipaka</i>	<i>Katu</i>		
		<i>Karma</i>	<i>Kanthya, Kasahara, Swasahara, Hikkani-grahana</i>		
5.	<i>Bruhāti</i>	<i>Rasa</i>	<i>Katu Tikta</i>	Solasonine, Salosodine, Solanine, Diosgenin, Carpesterol, Carotene, Solanocarpone, β -Solamargine, Vitamin C	Anti-Inflammatory, Analgesic, Anti-Asthmatic, Anti-Infectious
		<i>Guna</i>	<i>Laghu, Ruksha, Tiksna</i>		
		<i>Viryā</i>	<i>Ushna</i>		
		<i>Vipaka</i>	<i>Katu</i>		
		<i>Karma</i>	<i>Kaphaghna, Kasahara swasahara</i>		
6.	<i>Vruksharuha</i>	<i>Rasa</i>	<i>Kashaya, Tikta, Madhura</i>	Flavonoids, Gallic acid, Chebulinic acids, Kempferol, Rutin, β -sitosterol, Stigmasterol, β -amyrin and Oleanolic acid.	Anti-inflammatory, Antimicrobial, Antioxidant, Anti-secretory
		<i>Guna</i>	<i>Laghu, Ruksha</i>		
		<i>Viryā</i>	<i>Shita</i>		
		<i>Vipaka</i>	<i>Katu</i>		
		<i>Karma</i>	<i>Kasahara, swashara</i>		
7.	<i>Abhaya</i>	<i>Rasa</i>	<i>Lavana varjitha pancharasa</i>	Tannin, Chebulagic acid, chebulinic acid, gallic acid, Sorbitol, ethyl gallate, Punicalagin Terflavin A, Terchebin	Anti- spasmodic, Antioxidant
		<i>Guna</i>	<i>Laghu, ruksha</i>		
		<i>Viryā</i>	<i>Ushna</i>		
		<i>Vipaka</i>	<i>Madhura</i>		
		<i>Karma</i>	<i>Swasahara, Kasahara, Lekhana</i>		
8.	<i>Pippali</i>	<i>Rasa</i>	<i>Katu, Madhura</i>	Essential oil, Piperine, Piplartine, Piperlongumine, Piperlonguminine, Pipernonaline, Piperundecalidine, Pipericide, Sesamine	Antibacterial, Anti-inflammatory, Anti-tubercular, Antispasmodic, Anti-asthmatic, Immunostimulatory, Analgesic
		<i>Guna</i>	<i>Tiksna, Laghu, Snigdha</i>		
		<i>Viryā</i>	<i>Anushna</i>		
		<i>Vipaka</i>	<i>Madhura</i>		
		<i>Karma</i>	<i>Kasa-Swasahara, Hikkani-grahana, Krimighna</i>		
9.	<i>Duralabha</i>	<i>Rasa</i>	<i>Kashaya, tikta, Madhura, katu</i>	Harmine, Alanine, Glycine, Leucine, Arginine Isoleucine, Lysine, Phenylalanine, Proline,	Expectorant, Anti-inflammatory, Antioxidant,
		<i>Guna</i>	<i>Laghu, snigdha</i>		

		<i>Virya</i>	<i>Ushna</i>	Tyrosine, Valline	Immunomodulator
		<i>Vipaka</i>	<i>madhura</i>		
		<i>Karma</i>	<i>Kaphanissaraka</i>		
10.	<i>Kulirashrungi</i>	<i>Rasa</i>	<i>Kashaya, Tikta</i>	Campene, α -terpineol, Caprylic acid, Tannin, Resin, Pistacienoic acid, Tirucallid, β -sitosterol, Misticadienoic acid	Antiasthmatic, Expectorant, Stimulant
		<i>Guna</i>	<i>Laghu, Ruksa</i>		
		<i>Virya</i>	<i>Ushna</i>		
		<i>Vipaka</i>	<i>Katu</i>		
		<i>Karma</i>	<i>Kaphanissaraka, Kaphaghna, Hikkanigrahana</i>		

Table No. 8: Karma vivechana of hikkanigrahana mahakashaya.

Dravya	Karma Vivechana
Shati	Kapha-Vata shamaka due to ushna virya
Pushkaramula	vatahara due to ushna virya, kaphahara due to ushan virya, katu vipaka, katu tiktha rasa
Badara	Vatahara due to madhura rasa, guru, snigdha guna
Kantakari	Vatahara due to usna virya and kaphahara due to usna virya, katu vipaka, tikta katu rasa
Bruhati	Kaphahara due to lagu, ruksha, tikshna guna, ushna virya, katu vipaka and katu tikta rasa, Vatahara due to ushna virya
Vruksharuha	Tridoshagna, (Kaphapitta shamaka), kapha hara due to katu vipaka, laghu ruksha guna.
Abhaya	Vatahara due to usna virya, madhura vipaka, kapha samaka due to usna virya and kasaya rasa
Pippali	kaphahara due to katurasa and vatashamaka because of snigdha guna and madhura vipaka
Duralabha	Vatahara due to its snigdha guna, Madhura rasa
Kulirashrungi	Vatahara due to usna virya, Kaphasamaka due to usna virya, katu vipaka, and tikta Kashaya rasa

Table No. 9: Drugs of kasahara mahakashaya.

Sr. No.	Sanskrit Name	English Name	Latin Name	Family	Part Used
1.	<i>Draksha</i>	Grapes	<i>Vitis vinifera</i> Linn.	Vitaceae	Fruit
2.	<i>Abhaya</i>	Chebolic Myrobalan	<i>Terminalia chebula</i> Retz	Combretaceae	Fruit
3.	<i>Amalaki</i>	Indian goose-berry	<i>Emblica officinalis</i> Gaertn	Euphorbiaceae	Fruit
4.	<i>Pippali</i>	Long Pepper	<i>Piper Longum</i> Linn	Piperaceae	Fruit, Root
5.	<i>Duralabha</i>	Camel thron	<i>Alhagi camelorum</i> Fisch	Fabaceae	Whole plant
6.	<i>Shringi</i>	Wax Tree	<i>Rhus succedanea</i> Linn.	Anacardaceae	Gall
7.	<i>Kantakari</i>	Yellow berried Nightshade	<i>Solanum surattense</i> Burm.	Solanaceae	Whole plant, Root, Fruit
8.	<i>Vruschira</i>	Horse purslane	<i>Trianthema portulacastrum</i> Linn.	Nyctaginaceae	Whole Plant, Root, Leaf
9.	<i>Punarnava</i>	Spreading Hogweed	<i>Boerhavia diffusa</i> Linn.	Nyctaginaceae	Whole Plant, Root, Leaf
10.	<i>Tamalaki</i>	Gale of wind	<i>Phyllanthus niruri</i> Linn.	Euphorbiaceae	Whole Plant, Root

Table No. 10: Rasapanchaka, chemical constituents and pharmaceutical action of drugs of kasahara mahakashaya.

S. No.	Dravya	Rasapanchaka	Chemical constituents	Pharmaceutical Action	
1.	<i>Draksha</i>	<i>Rasa</i>	Resveatron, Melatonin, Malondialdehyde Resveratrol, Vitisin A	Anti-oxidant Antiviral Anti-inflammatory	
		<i>Madhura</i>			
		<i>Guna</i>			<i>Snigdha, Guru, Mrudu</i>
		<i>Virya</i>			<i>Shita</i>
		<i>Vipaka</i>			<i>Madhura</i>
	<i>Karma</i>	<i>Kanthya Kasaghna, Dahanashak, Trushnahara</i>			
2.	<i>Abhaya</i>	<i>Rasa</i>	Anthraquinone, Glycoside, Chebulic acid, Tannic acid, Terchebin, Vit C, Gallic acid	Antitussive, Antimicrobial, Anti-oxidant, Anti-inflammatory	
		<i>Kashaya pradhana Pancharasa (except lavana)</i>			
		<i>Guna</i>			<i>Laghu</i>
		<i>Virya</i>			<i>Ushna</i>
		<i>Vipaka</i>			<i>Madhura</i>
	<i>Karma</i>	<i>Jwaraghna, Arshoghna,</i>			

			<i>Kushtaghna, Prajasthapan. Kasa-swasahara</i>		
3.	<i>Amalaki</i>	<i>Rasa</i>	<i>Amla pradhana Pancharasa (except lavana)</i>	Chlorogenic acid, Punigluconin 1,2,3,4,6-penta-O-galloylglucose, Phyllaemblicin-A, B and C	Antioxidant, Anti-inflammatory, Anti-allergic, Anti-bacterial, Anti-viral, Immunostimulant
		<i>Guna</i>	<i>Laghu, Ruksha</i>		
		<i>Virya</i>	<i>Shita</i>		
		<i>Vipaka</i>	<i>Madhura</i>		
		<i>Karma</i>	<i>Rasayana, Pramehaghna, Dahshaman, Vayasthapan, Jwaraghna. Kasaghna</i>		
4.	<i>Pippali</i>	<i>Rasa</i>	<i>Katu</i>	Essential oil, Piperine, Piplartine, Piperlongumine, Piperlonguminine, Pipernonaline, Piperundecalidine, Pipericide, Sesamine	Antibacterial, Anti-inflammatory, Anti-tubercular, Antispasmodic, Antiasthmatic, Immunostimulator, Analgesic
		<i>Guna</i>	<i>Laghu, Snighdha, Tikshna</i>		
		<i>Virya</i>	<i>Ushna</i>		
		<i>Vipaka</i>	<i>Madhura</i>		
		<i>Karma</i>	<i>Jwaroghna, Pihoghna, Kruminghna</i>		
5.	<i>Duralabha</i>	<i>Rasa</i>	<i>Madhura, Tikta, Kashaya</i>	Galactocatechin. Epigallocatechin, Leudodelphinidin, β -phenethylamine	Antiasthmatic, Antioxidant
		<i>Guna</i>	<i>Laghu</i>		
		<i>Virya</i>	<i>Shita</i>		
		<i>Vipaka</i>	<i>Katu</i>		
		<i>Karma</i>	<i>Jwarahara, Balya, Medohra, Kasahara</i>		
6.	<i>Shringi</i>	<i>Rasa</i>	<i>Kashaya, Tikta</i>	Rhuschromone, Epicatechin, 2,3-dihydroxy-7-methyl xanthone, Agathisflavone, Robustaflavone	Antimicrobial, Antioxidant
		<i>Guna</i>	<i>Laghu, Ruksha</i>		
		<i>Virya</i>	<i>Ushna</i>		
		<i>Vipaka</i>	<i>Katu</i>		
		<i>Karma</i>	<i>Kasahara, Grahi, Dipan</i>		
7.	<i>Kantakari</i>	<i>Rasa</i>	<i>Katu, Tikta</i>	β - carotene, Solasodine, β -solamargine, Solanocarpine, Tomatidieno	Anti-inflammatory, Analgesic, Anti-infectious, Spasmolytic, Immunomodulatory
		<i>Guna</i>	<i>Laghu, Ruksha, Tikshna</i>		
		<i>Virya</i>	<i>Ushna</i>		
		<i>Vipaka</i>	<i>Katu</i>		
		<i>Karma</i>	<i>Dipanpachana, Kasahara, Shothahara, Pratishtyakagna.</i>		
8.	<i>Vruschira</i>	<i>Rasa</i>	<i>Madhura, Tikta, Kashaya</i>	2, Boerhaavinone A,B,C,D, Liriodendrin	Antiasthmatic, Anti-inflammatory, Antioxidant
		<i>Guna</i>	<i>Laghu, Ruksha</i>		
		<i>Virya</i>	<i>Ushna</i>		
		<i>Vipaka</i>	<i>Katu</i>		
		<i>Karma</i>	<i>Soothhara, Kasahara, Dipana, Vishroghara, kushtagna</i>		
9.	<i>Punarnava</i>	<i>Rasa</i>	<i>Madhura, Tikta, Kashaya</i>	β -Sitosterol, Quercetin, Punarnavoside, Punarnavine-1,& 2, Boerhaavinone A,B,C,D, Liriodendrin	Antiasthmatic, Anti-inflammatory, Antioxidant
		<i>Guna</i>	<i>Laghu, Ruksha</i>		
		<i>Virya</i>	<i>Ushna</i>		
		<i>Vipaka</i>	<i>Katu</i>		
		<i>Karma</i>	<i>Soothhara, Kasahara, Dipana, Vishroghara, kushtagna</i>		
10.	<i>Tamalaki</i>	<i>Rasa</i>	<i>Tikta, Kashaya, Madhura</i>	Phyllanthin, Hypophyllanthin, Nirurin, ent-norsecurin	Anti-oxidant Immune modulatory

		<i>Guna</i>	<i>Laghu,, Ruksha</i>	Arabinogalactan	Anti-microbial
		<i>Virya</i>	<i>Shita</i>		
		<i>Vipaka</i>	<i>Madhura</i>		
		<i>Karma</i>	<i>Rakttapittahar, Kasahara, Pramehgna</i>		

Table No. 11: *Karma vivechana of kasahara mahakashaya.*

<i>Dravya</i>	<i>Karma Vivechana</i>
<i>Draksha</i>	Madhura rasa increases <i>kapha dosha</i> thus decreasing the dry cough.
<i>Abhaya</i>	<i>Vatahara</i> due to <i>usna virya</i> , <i>madhura vipaka</i> , <i>kapha samaka</i> due to <i>usna virya</i> and <i>kasaya rasa</i>
<i>Amalaki</i>	<i>Ruksha guna</i> reduces <i>kapha dosha</i> .
<i>Pippali</i>	<i>Kaphahara</i> due to <i>katurasa</i> and <i>vata shamaka</i> because of <i>snigdha guna</i> and <i>madhura vipaka</i>
<i>Duralabha</i>	<i>Ruksha guna</i> reduces <i>kapha dosha</i>
<i>Shringi</i>	<i>Ushna virya</i> and <i>katu vipaka</i> reduces <i>kapha dosha</i>
<i>Kantakari</i>	<i>Vatahara</i> due to <i>usna virya</i> and <i>kaphahara</i> due to <i>usna virya</i> , <i>katu vipaka</i> , <i>tikta katu rasa</i>
<i>Vruschira</i>	<i>Laghu ruksha guna</i> , <i>ushna virya</i> and <i>katu vipaka</i> reduces <i>kapha</i>
<i>Punarnava</i>	<i>Laghu ruksha guna</i> , <i>ushna virya</i> and <i>katu vipaka</i> reduces <i>kapha</i>
<i>Tamalaki</i>	<i>Tika kashaya rasa</i> and <i>laghu ruksha guna</i> reduces <i>kaphadosha</i>

Table No. 12: *Drugs of swasahara mahakashaya.*

S. No.	Sanskrit Name	English Name	Latin Name	Family	Part Used
1.	<i>Shati</i>	Spiked ginger lily	<i>Hedychium spicatum</i> Buch-Ham	Zingiberaceae	Rhizome
2.	<i>Pushkaramula</i>	Elicampane	<i>Inula racemose</i> Hook. F.	Asteraceae	Root
3.	<i>Amlavetas</i>	Indian rhubarb	<i>Garcinia pedunculata</i> Roxb.	Guttiferae	Fruit
4.	<i>Ela</i>	Cardamom	<i>Elettaria cardamomum</i> Maton.	Zingiberaceae	Seed
5.	<i>Hingu</i>	Asafoetida	<i>Ferula narthex</i> Boiss.	Umbelliferae	Resin
6.	<i>Agaru</i>	Agarwood	<i>Aquilaria agallocha</i> Roxb.	Thymelaeaceae	Heartwood
7.	<i>Surasa</i>	Holy basil	<i>Ocimum sanctum</i> Linn.	Lamiaceae	Leaf, Root, Seed
8.	<i>Tamalaki</i>	Gale of wind	<i>Phyllanthus niruri</i> Linn.	Euphorbiaceae	Whole plant
9.	<i>Jeevanti</i>	Leptadenia	<i>Leptadenia reticulata</i> Wight and Arn.	Asclepidaceae	Roots
10.	<i>Chanda</i>	Wild ginger	<i>Costus speciosus</i> (J.Koenig) Sm.	Zingiberaceae	Rhizome

Table No. 13: *Rasapanchaka, chemical constituents and pharmaceutical action of drugs of shwasahara mahakashaya.*

S. No.	<i>Dravya</i>	<i>Rasapanchaka</i>		Chemical constituents	Pharmaceutical Action
1.	<i>Shati</i>	<i>Rasa</i>	<i>Katu, Tikta, Kashaya</i>	Sitosterol, diterpenehedych enone, 7 hydroxy hedychenone.	Anti-tussive, Expectorant, Bronchodilator
		<i>Guna</i>	<i>Laghu, Tikshna</i>		
		<i>Virya</i>	<i>Ushna</i>		
		<i>Vipaka</i>	<i>Katu</i>		
2.	<i>Pushkaramula</i>	<i>Rasa</i>	<i>Tikta, Katu</i>	Alantolactone, Dihydroisoalant otolactone, β -Sitosterol, Dihydroinunolid e, Neo-Alantolactone, Sesquiterpene lactone-inunol, Alantodiene	Expectorant, anti-inflammatory, Analgesic, Anti-spasmodic
		<i>Guna</i>	<i>Laghu, Tikshna</i>		
		<i>Virya</i>	<i>Ushna</i>		
		<i>Vipaka</i>	<i>Katu</i>		
3.	<i>Amlavetas</i>	<i>Rasa</i>	<i>Amla</i>	Pedunculol, Garcinol,	Cardiac tonic, , Carminative
		<i>Guna</i>	<i>Laghu, Ruksha,</i>		

			<i>Tikshna</i>	Cambogin, Mallic acid	Expectorant
		<i>Viry</i>	<i>Ushna</i>		
		<i>Vipaka</i>	<i>Amla</i>		
		<i>Karma</i>	<i>Kasa-shwasahara, Hikkanigrahana</i>		
4.	<i>Ela</i>	<i>Rasa</i>	<i>Katu, Madhura</i>	Barnneal, Camphene p- cymene, geraneol, Heptane, D- Limonene, Linalool, Menthone. Methylheptenon e. Myrcene. Nerol, Nerylacetete, a & B Pinenes	Soothing, Expectorant, Antitussive, Detoxifier, Carminative,
		<i>Guna</i>	<i>Laghu, Ruksha</i>		
		<i>Viry</i>	<i>Shita</i>		
		<i>Vipaka</i>	<i>Madhura</i>		
		<i>Karma</i>	<i>Kaphanissaraka</i>		
5.	<i>Hingu</i>	<i>Rasa</i>	<i>Katu</i>	Phellandrene, Kamolanol, Umbelliferone	Anti-spasmodic, Anti-inflammaory, Analgesic, Antioxidant, Anti-infectious
		<i>Guna</i>	<i>Laghu, Snigdha, Tikshna</i>		
		<i>Viry</i>	<i>Ushna</i>		
		<i>Vipaka</i>	<i>Katu</i>		
		<i>Karma</i>	<i>Jantughna, Kaphanissaraka, Shwasahara</i>		
6.	<i>Agaru</i>	<i>Rasa</i>	<i>Katu, Tikta</i>	Agarospinol, Aquilochin, Holocellulose, Lignan, Pentosans, Essential oils viz. Agarol	Digestive, Immune modulator, antitussive, Analgesic
		<i>Guna</i>	<i>Laghu, Ruksha, Tikshna</i>		
		<i>Viry</i>	<i>Ushna</i>		
		<i>Vipaka</i>	<i>Katu</i>		
		<i>Karma</i>	<i>Shwasahara</i>		
7.	<i>Surasa</i>	<i>Rasa</i>	<i>Katu, Tikta</i>	Bornylacete, Cadinene, Camphene, Camphor, Carvacrol, Eugenol, Eugenol, Humelene, Limonene	Broncho dilator, Expectorant, Immunomodulator, Anti-inflammatory, Antiviral, Antibacterial, Anti-allergic
		<i>Guna</i>	<i>Laghu, Ruksha, Tikshna</i>		
		<i>Viry</i>	<i>Ushna</i>		
		<i>Vipaka</i>	<i>Katu</i>		
		<i>Karma</i>	<i>Kasahara, Swasahara</i>		
8.	<i>Tamalaki</i>	<i>Rasa</i>	<i>Tikta, Kashaya, Madhura</i>	Ligans, Glycosides, Flavonoids, Alkaloids, Ellagitans, Phenyle Proponoids, Amarin, Gernanin, Corilagin	Antitussive, Expectorant, Antispasmodic. Analgesic
		<i>Guna</i>	<i>Laghu, Ruksha</i>		
		<i>Viry</i>	<i>Shita</i>		
		<i>Vipaka</i>	<i>Madhura</i>		
		<i>Karma</i>	<i>Rakttapittahar, Kasahara, Pramehgna</i>		
9.	<i>Jeevanti</i>	<i>Rasa</i>	<i>Madhura</i>	n- triacontane, Cetyl, β - sitosterol, β - amyrin acetate, Lupanol 3-0- diglucoside, Leptidine glycoside.	Nutritive, Nourishing, Rejuvenative
		<i>Guna</i>	<i>Laghu, Snigdha</i>		
		<i>Viry</i>	<i>Shita</i>		
		<i>Vipaka</i>	<i>Madhura</i>		
		<i>Karma</i>	<i>Kaphanissaraka</i>		

10.	Chanda	Rasa	Tikta, Kashaya	Costusosides, Saponins- dioscin, gracillin, β -sitosterol β -D glucoside.	Broncho dilator
		Guna	Laghu, Ruksha		
		Virya	Shita		
		Vipaka	Katu		
		Karma	Kasahara, Swasahara		

TableNo. 14: Karma vivechana of swasahara mahakashaya.

Dravya	Karma Vivechana
Shati	Kapha-Vataavshamaka due to ushna virya
Pushkaramula	Kaphahara due to Katu tikta rasa, ushna virya, katu vipaka, vatahara due to ushna viya
Amlavetas	Kaphavatashamaka due to ushna virya
Ela	Laghu ruksha guna reduces kapha madhura vipaka reduces vata
Hingu	Kapha-Vataavshamaka due to ushna virya
Aguru	Laghu, ruksha, tikshna guna, katu-tikta rasa reduces kapha and ushnavirya reduces vata
Surasa	Laghu, ruksha, tikshna guna, ushna virya and katu vipaka reduces kapha
Tamalaki	Tika kashaya rasa and laghu ruksha guna reduces kaphadosha
Jeevanti	Madhura rasa and vipaka and snigdha guna reduces vata
Chanda	Tikta kashaya rasa, laghu ruksha guna and katu vipaka reduces kapha

RESULT AND DISCUSSION

The rasapanchaka of four mahakashaya group can be summarized in terms of distribution of most repeated and prominent qualities as in table no.15.

Table No. 15: Rasa panchaka of charakokta mahakashaya.

Mahakashaya	Rasa	Guna	Virya	Vipaka
Kanthy Mahakashaya	Madhura Katu Tikta	Snigdha	Shita	Madhura
Hikkanigrahana Mahakashaya	Katu Tikta Kashaya	Laghu Teekshna	Ushna	Katu
Kasahara Mahakashaya	Kashaya Tikta Madhura	Laghu Ruksha	Shita	Madhura
Swasahara Mahakashaya	Katu Tikta	Laghu Ruksha	Ushna	Katu

Table No. 16: Qualities of predominant rasapanchaka among dashemani.

Madhura rasa	Balakara, Kantya, sthairyakara, Grhana mukha jihwa oshta prahaladana
Katu rasa	Vaktrasodaka, Ghranamasravayati, Bandhanschunatti, Marganvivrnoti
Tikta rasa	Lekhana, Kanthasodhana
Kashaya rasa	Ropana, Sosana, Lekhana
Laghu guna	Vatakara, Kaphahara, Ropana, Sigrapaki
Ruksha guna	Kaphahara, Vatakara, Katinyakara
Teekshna guna	Kaphahara, Sodhana, Pakakara, Lekhana
Snigdha guna	Vatahara, Kaphakara
Shita virya	Kaphavatakara, Visyandana, Prahladana, Kledana, Prasadana
Ushna virya	Vatahara, kaphahara
Madhura vipaka	Snigdha, guru, Vatahara, Kaphahara
Katu vipaka	Ruksha, Kaphara, Vatakara

The dravyas of kanthya mahakashaya with snigdha, sheeta virya removes the dryness of throat and maintain the moisture of throat. Certain drugs like pippali, kaitarya, bruhati, kantikari with ushna guna, katu tikta rasa removes excess kapha and kleda nashaka. Thus both rukshata and kanthopalepata in the throat can be

effectively managed by the kanthya dravyas. Kasa is manifested due to vata kapha prakopa resulting in sanga of srotas, where as in swasa and hikka, kapha pradhana vata dosha is involved leading to sanga and vimargagamana. Use of dravyas having kashaya, tikta, katu rasa does shosana and lekhan along with

kanthasodhana, *marganvivrnoti* and *bandhanschunatti* respectively. In detail analysis of chemical compounds of each group it was found that the drugs have various properties as like antiasthmatic, anti-inflammatory, spasmolytic, immunomodulatory, antitussive, anti-microbial, anti-oxidant, broncho dilator, expectorant. It is said that some dravyas act by their *rasa*, some by their *virya*, some by their *guna*, some by *paka* and others by their *prabhava* to achieve desired pharmacological effect.

CONCLUSION

From the above literary review, it is evident that *Acharya Charaka* has described the herbal drugs in a qualitative manner to combat *pranavaha srotovikaras*. The drugs of *kanthya*, *hikkani grahana*, *kasahara* and *swasahara mahakashayas* have anti inflammatory, analgesic, expectorant, anti-spasmodic, bronchodilating, anti-asthmatic, antioxidant etc. So these drugs provide better options to prepare polyherbal formulations on the basis of their pharmacological actions in limiting repeated upper respiratory tract allergies & infections.

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