



Research Article

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UTILITY OF KASAHARADASHEMANI AMONG AYURVEDA PRACTITIONERS IN KARNATAKA, INDIA: A SURVEY

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ABSTRACT

“Dashemani” or ‘group of ten drugs’ mentioned by Acharya Charaka is a direction to use the medicine for specific conditions. Among the 50 dashemani enumerated, the drugs indicated for Kasa (cough) are termed as “Kasaharadashemani”. Most of the compound formulations mentioned in the exposition of Kasa have ingredients from the dashemani. The study was hence designed to analyze the present trends in the treatment of Kasa with Kasaharadashemani, through a survey study among the Ayurveda practitioners representing all levels of experience. Objective of the study was to evaluate the usage of single drugs and classical compound formulations of Kasaharadashemani in the present-day practice of Kasa. 100 registered practitioners from various academic hospitals of South Karnataka were interviewed with a structured questionnaire. Among the single drugs, Pippali (*Piper longum* Linn.), Abhaya (*Terminalia chebula* Retz.), Amalaki (*Emblia officianalis* Gaertn.) and Draksha (*Vitis vinifera* Linn.) were found commonly utilized for the management of Kasa. Among the compound drugs of Dashemani, the most preferred was Agastya Haritaki (a confectionary) followed by Kantakari ghrita (medicated ghee) and Kantakari avaleha (a confectionary). The data was entered in SPSS software (Statistical Package for the Social Sciences) and the results were analyzed with chi-square test of association. Among the preferred single drugs, Pippali was found to be effective in kaphaja (cough with sputum) and vata kaphaja Kasa (more bouts of cough with sputum), Draksha in vata dominant Kasa, Abhaya in Vataja (dry cough) as well as vata kaphaja Kasa and Amalaki in pittaja Kasa cough with burning sensation). Considering the preferred compound formulations of Dashemani, Kantakari ghrita and Agastya haritaki were preferred in vataja Kasa. Kantakari avaleha was prescribed in vata kaphaja and pittanubandha Kasa. This study serves as a stride towards evidence based medicine in Ayurveda.

Keywords: Ayurveda, dashemani, Evidence based medicine, Kasaharadashemani, Agastya Haritaki, Pippali.

INTRODUCTION

Acharya Charaka mentioned group of ten drugs specifically indicated for the disease Kasa (cough) termed as ‘Kasaharadashemani’. “Dashemani” (group of ten drugs) with a common attribute is a unique effect oriented approach laid down in Sutrasthana (section dealing with fundamental principles). Kasaharadashemani includes Draksha (*Vitis vinifera* Linn.), Abhaya (*Terminalia chebula* Retz.), Amalaki (*Emblia officianalis* Gaertn.), Pippali (*Piper longum* Linn.), Duralabha (*Tragia involucrate* Linn.), Shringi (*Pistachia integerrima* Stewart ex Brandis), Kantakari (*Solanum surattense* Burm.), Vrishchira (*Trianthema portulacastrum* Linn.), Punarnava (*Boerhavia diffusa* Linn.), and Tamalaki (*Phyllanthus niruri* Linn.). Most of the compound formulations mentioned under the exposition of Kasa have drugs from dashemani. In order to establish the scientific approach of Charakacharya (preceptor) in detailing ‘dashemani’, a survey study was thus proposed among Ayurveda physicians in Karnataka to assess the utility of Kasaharadashemani.

This study was designed to evaluate the utility of single drugs and the compound formulations of Kasaharadashemani mentioned under the description of Kasa of Brahatrayi (3 great treatises-Charaka Samhita, Sushruta Samhita and Astanga Hrudaya) through a survey study among the practitioners representing all levels of experience.

MATERIALS AND METHODS

The study was conducted in South Karnataka where there are approximately 20 Ayurveda academic hospitals. The sample size was calculated based on the number of practitioners in these institutions which figured around 400. Based on Macorr sample size calculator, 196 was found to be the sample size, applying a confidence interval of 5. But as the study was designed to assess the utility of Kasaharadashemani with specifications like type and condition of Kasa, only that sample (practitioners) was selected for the study who regularly practices Kasa in their day to day practice. Hence, a total of 100 physicians were interviewed by a structured questionnaire. The study was performed after attaining clearance from institutional ethical committee with IEC No.8/13-14.

The questionnaire had the domains to understand:

- Single drug usage of Dashemani
- The common compound formulations used in treatment of Kasa
- Condition and type specific treatment in Kasa
- Individual Preferences of the practitioners on Single drugs and compound formulations.

A final list of compound drugs preferred in Kasa was framed based on a pilot study conducted among 25 in-house practitioners. Among them, only those formulations detailed in

the chapter on Kasa (cough) of Brahatrayis (three great treatises) having ingredients of Kasaharadashemani were taken into account during analysis. The data was entered into software Statistical Package for Social Sciences version 16 and analysis of formulations with respect to the Dosha and Avastha (condition) of Kasa was carried out by the chi-square test of association.

OBSERVATIONS AND RESULTS

The commonly preferred drugs among Kasaharadashemani were found to be Pippali (*Piper longum* Linn.), Draksha (*Vitis vinifera* Linn.), Abhaya (*Terminalia chebula* Retz.), Amalaki, (*Emblica officianalis* Gaertn.), Kantakari (*Solanum surattense* Burm.), and Shringi (*Pistachia integerrima* Stewart ex Brandis). [Table 1] Though these were the preferred drugs, the physicians were asked to enlist the first four preferences of single drugs used in Kasa (cough), from which Kasaharadashemani was looked for. It was found that the drugs Pippali, Draksha, Abhaya and Amalaki preferred in their churna (powder) form appeared commonly in prescriptions of Kasa (cough). [Table 2,3]

Each of these drugs was further analyzed with respect to the dosha and avastha (condition) of Kasa (cough). On applying Pearson's chi square association, Pippali churna was found to be preferred in vata kaphaja Kasa (cough with more bouts associated with sputum) with high strength of association ($X=.000$, $V=.668$) and in kaphaja Kasa (cough with sputum) with moderate strength of association ($X=.001$, $V=.343$). The churna was usually prescribed in ama avastha (immature state of dosha) of Kasa ($X=.000$, $V=.885$) [Table 4,5]. Draksha churna was found to have high association with vata kaphaja (cough with more bouts associated with sputum) type of Kasa ($X=.000$, $V=.522$) and moderate association with vataja Kasa (dry cough) ($X=.000$, $V=.368$) and was prescribed both in ama (immature) and nirama avastha (matured state of dosha) ($X=.000$, $V=.579$). [Table 6,7] Abhaya churna, as a preference in vataja ($X=.000$, $V=.731$) and vatakaphaja ($X=.000$, $V=.506$) Kasa, proved to have high strength of association. Considering avastha, it was found to have strongly association with ama avastha ($X=.000$, $V=.626$) as well as in both ama, nirama conditions ($X=.000$, $V=.680$) [Table 8,9]. Amalaki churna as a choice of single drug, was found to have high strength of association with pittaja Kasa (cough associated with burning sensation) ($X=.000$, $V=.653$) and moderate association with tridoshaja Kasa (cough where all

three dosha are involved) ($X=.000$, $V=.359$). Amalaki was found to be preferred in both the ama and nirama avastha of Kasa ($X=.000$, $V=.629$). [Table 10,11].

Among the compound drugs, those having Kasaharadashemani mentioned in Kasadhikara (exposition of Kasa) of Brahatrayi (three great treatises) were scrutinized. The most preferred formulation was Agastya Haritaki, followed by Kantakari ghrita, Kantakari avaleha, Drakshavaleha, Shringyadi churna and Pippalyadi avaleha. [Table 12] Later, it was examined whether these drugs form a part of the preferred choices in Kasa of the subjects interviewed. It was found then that the three commonly preferred formulations were Agastya Haritaki, Kantakari ghrita and Kantakari avaleha. [Table 13]

A total of 39 physicians had Agastya haritaki included under their first three preferred choices of compound drugs prescribed in Kasa. Agastya Haritaki was found to have high strength of association for vataja Kasa ($X=.000$, $V=.505$) and moderate association for vata kaphaja ($X=.002$, $V=.316$) type of Kasa. The utility was significant in dry cough ($X=.000$, $V=.645$). Though it showed significance in chronic cough, strength of association was low. [Table 14,15]

Eighteen physicians had Kantakari ghrita included under their first three choices of compound drugs. Kantakari ghrita proved to have high strength of association with vataja Kasa ($X=.000$, $V=.711$) and moderate association with vatakaphaja Kasa ($X=.000$, $V=.375$). The utility was significant in dry cough with high strength of association ($X=.000$, $V=.897$). [Table 16,17]

Ten physicians had Kantakari avaleha in their first three choices of compound drugs. Kantakari avaleha was found to be significant in vataja ($X=.000$, $V=.429$), kaphaja ($X=.000$, $V=.302$), vatapittaja ($X=.000$, $V=.302$), and vatakaphaja Kasa but high strength of association was noted only for vatakaphaja Kasa ($X=.000$, $V=.612$). Considering the avastha, it had high strength of association with wet, dry and chronic cough ($X=.000$, $V=.528$). [Table 18,19]

The condition specific treatment with the single drugs and compound formulations of 'Kasaharadashemani' can be hence summarized as in [Table 20, 21].

Table 1: Utility of kasaharadashemani by Ayurveda practitioners

Drug	Svarasa	Kalka	Kwata	Hima	Phanta	Churna	Ksheer Paka	Other	Total
Draksha	3	20	6	6	-	5	-	1	41
Abhaya	-	-	1	-	-	35	-	1	37
Amalaki	1	1	1	-	-	30	-	1	34
Pippali	-	2	3	-	-	55	2	-	62
Duralabh	-	-	2	-	-	2	-	-	4
Sringi	-	-	2	-	-	21	-	-	23
Kantakari	2	1	8	-	-	13	-	-	24
Vrishchir	1	-	-	-	-	-	-	-	1
Punarnav	3	1	1	-	-	2	-	-	7
Tamalaki	13	2	-	-	-	1	-	-	16
Total	23	27	24	6	0	164	2	3	249

Table 2: First four choices of drugs in prescription with frequency

Drugs of kasaharadashemani in the first four choices	Frequency
Pippali	62
Draksha,abhaya,amalaki	14 each

Table 3: Preferred drugs with dosage form and frequency

Drug	Preferred dosage form	Frequency
Pippali	Churna	60
Abhaya	Churna	14
Amalaki	Churna	11
Draksha	Churna	5

Table 4: Pippali churna-Type of kasa

Type	P value	S/NS	Cramers Value	Strength of association
Vata	.243	NS	.117	L.A
Pitta	Constant			
Kapha	.001	HS	.343	M.A
Vata Pitta	Constant			
Pitta Kapha	.218	NS	.123	L.A
VataKapha	.000	HS	.668	H.A
Tridoshaja	.412	NS	.082	Little if any
Irrespective of dosha	Constant			

Table 5: Pippali churna-Condition of kasa

Condition	P value	S/NS	Cramers value	Strength of Association
Ama	.000	HS	.885	H.A
Nirama	.338	NS	.096	Little if any
Both	.061	NS	.187	L.A

Table 6: Draksha churna-Type of kasa

Type	P value	S/NS	Cramers value	Strength of association
Vata	.000	HS	.368	M.A
Pitta	.743	NS	.033	Little if any
Kapha	constant			
VataPitta	.818	NS	.023	Little if any
PittaKapha	constant			
VataKapha	.000	HS	.522	H.A
Tridosha	constant			
Irrespective	constant			

Table 7: Draksha churna-Condition of kasa

Condition	P value	S/NS	Cramers value	Strength of association
Ama	.003	HS	.295	L.A
Nirama	.242	NS	.117	L.A
Both	.000	HS	.579	H.A

Table 8: Abhaya churna –Type of kasa

Type	P value	S/NS	Cramers value	Strength of association
Vata	.000	HS	.731	H.A
Pitta	Constant			
Kapha	Constant			
VataPitta	Constant			
PittaKapha	Constant			
VataKapha	.000	HS	.506	H.A
Tridosha	Constant			
Irrespective of dosha	.000	HS	.354	M.A

Table 9: Abhaya churna –Condition of kasa

Condition	P value	S/NS	Cramers value	Strength of association
Ama	.000	HS	.626	H.A
Nirama	.013	S	.249	L.A
both	.000	HS	.680	H.A

Table 10: Amalaki churna-Type of kasa

Type	P value	S/NS	Cramers value	Strength of association
Vata	constant			
Pitta	.000	HS	.653	H.A
Kapha	constant			
VataPitta	.724	NS	.035	Little if any
PittaKapha	.004	HS	.286	L.A
VataKapha	constant			
Tridoshaja	.000	HS	.359	M.A
Irrespective of dosha	.004	HS	.286	L.A

Table 11: Amalaki churna-Condition of kasa

Condition	P value	S/NS	Cramers value	Strength of association
Ama	.004	HS	.286	L.A
Nirama	.004	HS	.286	L.A
Both	.000	HS	.629	H.A

Table 12: Frequency of compound drugs

Compound formulation	Frequency
Sitopaladi churna	93
Talisadi churna	94
Eladi Churna	43
Lavangadi Churna	55
Vyoshadi gutika	57
Dashamoola katutraya kashayam	68
Shringyadi churna	39
Kanakasava	62
Kantakari ghrita	54
Agastya Haritaki	84
Kantakari avaleha	44
Pippalyadi avaleha	19
Drakshavaleha	42

Table 13: Preferred formulations with dashemani and frequency

Formulation preferred	Frequency (n=100)
Agastya haritaki	39
Kantakari ghrita	18
Kantakari avaleha	10

Table 14: Agastya haritaki –Type of kasa

Type	P value	S/NS	Cramers Value	Strength of association
Vata	.000	HS	.505	H.A
Pitta	.209	NS	.126	L.A
Kapha	.028	S	.220	L.A
VataPitta	.011	S	.255	L.A
PittaKapha	.074	NS	.179	L.A
VataKapha	.002	HS	.316	M.A
Tridoshaja	.028	S	.220	L.A
Irrespective of dosha	.004	HS	.287	L.A

Table 15: Agastya haritaki-Condition of kasa

Condition	P value	S/NS	Cramers value	Strength of association
Ardra	.011	S	.255	L.A
Shushka	.000	HS	.645	H.A
Both	.001	HS	.343	M.A
Deerghakalina	.004	HS	.287	L.A

Table 16: Kantakari ghrita - Type of kasa

Type	P value	S/NS	Cramers value	Strength of Association
Vata	.000	HS	.711	H.A
Pitta	Constant			
Kapha	Constant			
VataPitta	.000	HS	.490	M.A
PittaKapha	Constant			
VataKapha	.000	HS	.375	M.A
Tridoshaja	Constant			
Irrespective of dosha	Constant			

Table 17: Kantakari ghrita-Condition of kasa

Condition	P value	S/NS	Cramers value	Strength of association
Ardra	.032	S	.215	L.A
Shushka	.000	HS	.897	H.A
Both	constant			
Deerghakalina	.002	HS	.305	M.A

Table 18: Kantakari avaleha-Type of kasa

Type	P value	S/NS	Cramers value	Strength of association
Vata	.000	HS	.429	M.A
Pitta	Constant			
Kapha	.003	HS	.302	M.A
VataPitta	.003	HS	.302	M.A
PittaKapha	Constant			
VataKapha	.000	HS	.612	H.A
Tridoshaja	Constant			
Irrespective of dosha	.003	HS	.302	M.A

Table 19: Kantakari avaleha –Condition of kasa

Condition	P value	S/NS	Cramers value	Strength of association
Ardra	.000	HS	.528	H.A
Shushka	.000	HS	.528	H.A
Both	constant			
Deerghakalina	.000	HS	.528	H.A

Table 20: Utility of preferred single drugs based on dosha and condition

Dosha /condition	Drug
Vataja, vatakaphaja	Abhaya
Pittanubandha	Amalaki
Kaphaja and vata kaphaja	Pippali
Ama	Pippali Abhaya
Both ama and nirama	Abhaya,amalaki

Table 21: Utility of preferred compound drugs based on dosha and condition

Dosha/condition	Preferred formulation
Vata	Kantakari ghrita,Agastya haritaki
Vatakapha	Kantakari avaleha
Pittanubandha	Kantakari avaleha
Shuska	Kantakari ghrita, Agastya haritaki, Kantakari Avaleha
Ardra	Kantakari avaleha
Deerghakalina	Kantakari avaleha

DISCUSSION

Kasaharadashemani consists of ten herbs with multi-dimensional properties. This group of drugs can be classified into two groups; one which acts predominantly on the disease Kasa and the other which predominantly act on other aspects like Agni (digestive fire), Dhatu (body tissues) or Bala/Oja (strength). The drugs which directly act on the disease Kasa like Kantakari, Pippali, Shringi and Sweta Punarnava/ Vrishchira act by kaphavatahara property. The drugs such as Kantakari, Pippali and Shringi act locally at the site of throat and cause liquefaction of obstructed Kapha. The vatahara drugs such as Haritaki cause

Vata anulomana and correct the deranged vata. The drugs with vata pittahara (Duralabha, Draksha) and kapha pittahara (Bhumyamalaki) properties come into action when there is Daha (burning sensation) like symptoms due to the association of Pitta. The drugs such as Haritaki and Shringi with Kashaya Rasa (astringent taste) do the mucosal modulation which cut off the contact of antigen and receptors. This process explains the symptomatic relief from Kasa. The drugs Pippali, Haritaki, Sweta Punarnava and Kantakari do action of pachana followed by deepana and anulomana. This process sets right the digestion, assimilation and metabolism. Further the drugs such as

Amalaki, Punarnava, Haritaki, Draksha and Pippali nourish the body with their rasayana (rejuvenation) effect.²

Out of the 65 formulations mentioned by Charaka, Pippali is present in 41 formulations, Draksha in 18, Abhaya and Amalaki in 15, Shringi and Kantakari in 11, Tamalaki in five, Punarnava in two and Vrishchira in one. Except nine formulations, all have at least one among Dashemani. Thus, among the ten drugs Pippali, Draksha, Abhaya and Amalaki are preferred by Acharya Charaka for Kasa.³

In Sushruta Samhita, out of 16 formulations, two are without Dashemani. The commonly found drugs in the text are Pippali (in ten formulations), Haritaki (in five formulations), Amalaki (in four formulations), Draksha and Shringi (in three formulations). None of the formulations have Punarnava and Tamalaki.⁴

Astanga Hrudaya has enumerated a total of 50 formulations, out of which 13 do not have dashemani as an ingredient. The commonly used drugs in the formulations are Pippali (in 26 formulations), Kantakari (in 11 formulations), Abhaya (in ten formulations), Draksha (in eight formulations) and Amalaki (in seven formulations). All ingredients of Kasaharadashemani are utilized by Acharya Vagbhata under exposition of Kasa. The drug Vrishchira is present only in one formulation, Tamalaki in two and Punarnava in three.⁵ Thus, it is found that "Dashemani" of Acharya Charaka were incorporated by the later preceptors also keeping in view their clinical utility.

From the survey conducted, the commonly preferred single drugs were found to be Pippali, Draksha, Abhaya and Amalaki. Pippali is one of the prime rasayana (rejuvenator) drugs in Ayurveda and is widely used to treat various respiratory diseases.⁶ The deepaniya gana (group of digestive stimulants) of Acharya Charaka begins with Pippali and hence it is preferred in ama avastha of Kasa.⁷

According to the Samanya – Vishesa (generic concomitance and variant factor) principle, Pippali with the guna like katu Rasa (pungent taste), laghu (light), and tikshna guna (penetrating), causes alleviation of Kapha Dosha with opposite properties like madhura (sweet), guru (heavy) and manda (slow activity). Pippali with tikshna Guna causes bhedana (breaking) of Kapha, which is stuck to the srotas by picchila (slimy) and sandra guna (solidity). Once the Dosha is separated from the srotas, the ushna Guna of the drug leads to vilayana (liquefaction) of Kapha and generates easy expectoration. This clears the channels and hence, vitiation of vata gets corrected.⁸

Recently, a study was undertaken to evaluate the anti-inflammatory activity of two varieties of Pippali in acute and sub-acute experimental models of inflammation in albino rats. It was found that Chhoti variety of Pippali suppressed inflammation of both acute and subacute phase, while Badi variety of Pippali only of acute phase. Thus, for the therapeutic utility, Chhoti variety of Pippali may be considered over the Badi variety. Piperine, which is the prime constituent of Pippali is reported to be having significant anti-inflammatory activity. It enhances the bioavailability of the drugs by increasing absorption of drug and preventing the enzymatic metabolism of drug in liver. It is effective against many of the gram negative and gram positive bacteria.⁹

The decoction of immature fruits and roots of Pippali is reported to be useful in chronic bronchitis, cough and cold. Clinical studies have revealed that Pippali is very effective in the treatment of bronchial asthma in children. Studies conducted on

children revealed that long-term use of fruits decreased (58.3%) severity of bronchial asthma attacks.¹⁰

Draksha possess madhura rasa (sweet), snigdha (moist), guru (heavy), mridu guna (soft), madhura vipaka (sweet at the end of metabolism) and is vatapittahara.¹¹ It can be indicated in vata pradhana kaphaja Kasa (vata dominant cough) and acts as rasayana. The anti-inflammatory activity of *Vitis vinifera* L. may be attributed to the presence of high content of flavonoids viz, quercetin, rutin, kaempferol, and luteolin in addition to phenolic acids and β -sitosterol which are all reported to have anti-inflammatory effect. The antioxidant activity of *Vitis vinifera* L. may be attributed to the presence of phenolic acids and flavonoids.¹²

Abhaya/Haritaki has madhura (sweet), amla (sour), katu (pungent), tikta (bitter), kashaya (astringent) rasa, laghu (light), ruksha (dry) guna, usna virya (hot potency), madhura vipaka and tridosha shamaka (pacifies all dosha) properties.¹³ Haritaki is also named as 'pathya', since it removes obstructions from channels in the body. Based on a recent study report, the ethyl acetate and methanolic extract of fruit of *T. chebula* demonstrated significant antitussive activity and the obtained percentage inhibition of cough reflex is approximately comparable as standard drug, Codiene phosphate. These effects are the important evidence for the traditional use of fruit of *T. chebula* in the treatment of cough and respiratory disorders.¹⁴

The extract of *Terminalia chebula* possesses antitussive activity against sulphur dioxide gas evoked cough in mice. It is supposed that several pharmacological properties (mainly anti-inflammatory, antioxidant, spasmolytic, antibacterial, and anti-phlegmatic) may contribute in antitussive efficacy of *Terminalia chebula*. These pharmacological properties of extract of *Terminalia chebula* may validate the popular use of this herb in cough related to numerous respiratory diseases.¹⁵

Amalaki has amla pradhana, pancha rasa (five tastes dominated by sour), guru, ruksa guna, shita virya (cold potency), madhura vipaka and is tridosahara as well as a rasayana.¹⁶ Amalaki was tested for its antitussive activity in conscious cats by mechanical stimulation of the laryngopharyngeal and tracheobronchial mucous areas of airways. Antitussive activity of Amalaki was more effective than the non-narcotic antitussive agent dropropizine but less effective than shown by the classical narcotic antitussive drug codeine. It is supposed that the dry extract of *Embllica officianalis* exhibit the antitussive activity not only due to antiphlogistic, antispasmodic and antioxidant efficacy effects, but also to its effect on mucus secretion in the airways.¹⁷

In consideration to the compound formulations of dashemani, Agastya Haritaki Rasayana is an important Ayurvedic confectionary formulation containing twenty-eight ingredients prescribed in the dose of 6-12 g with warm water or milk as anupana.^{18,19} Among the Dashemani, Haritaki, Kantakari and Pippali are present in this formulation. The other drugs include dashamula (ten roots) which are vata kaphahara as well as shothahara (alleviates swelling), so helps to relieve the congestion in the lungs.²⁰ Bharangi (*Clerodendrum serratum* Linn.), pushkaramula (*Inula racemoosa* Hook.), apamarga (*Achyranthes aspera* Linn.) and shati (*Hedychium spicatum* Buch. Ham.) also have shothahara (anti-inflammatory) properties which help in tackling the inflammatory changes in the respiratory tract.²¹⁻²⁴ This compound preparation attributed with agnideepaka (digestive stimulant) property rectifies the Udbhava sthana (site of origin) of the disease. Avaleha is dominant of prithvi (solid) and aap bhuta (water element) which

nullify the vata involved in samprapti (pathogenesis), hence preferably used in dry and chronic stages of cough. One of the recent studies to evaluate the effect of Agastya Haritaki in shwasa (bronchial asthma), proved it to be vyadhihara (pacifies disease) as well as rasayana, reducing the recurrence of attacks. It was easy to prepare, affordable & well tolerated by the patients with no undesired effects.²⁵

Kantakari Ghrita contains Kantakari, Amrutha (*Tinospora cordifolia* (Willd.Miers) and Ghrita (ghee), which are beneficial in dry cough.²⁶ Kantakari (*Solanum xanthocarpum*) is kasahara (cough relieving), shodhahara (anti-inflammatory) and Kantya (good for throat); Amrutha is tridosahara, rasayana and medhya (good for intellect).^{27,28} The treatment principle of Vataja Kasa states “Kasamadau Snehairupacharet” which means to start the management with oleation therapies.²⁹

Kantakari avaleha is another confectionary with twenty ingredients out of which are present, Kantakari, Shringi and Pippali, which are Kasaharadashemani. It is prescribed in the dosage 6-12 g with milk or water as anupana³⁰ The other ingredients like Bharangi and Shati are anti-inflammatory. This formulation, Kantakari Avaleha, is found to be effective in controlling Kasa, peenasa (running nose) and swasa kruchratha (breathing difficulty).³¹

Kantakari, the main ingredient of the above preferred formulations, has been described to have tikta (bitter) and katu rasa (pungent taste), ruksha (dry) and laghu guna (light), ushna virya (hot potency) and katu vipaka (pungent at the end of metabolism), hence deepana (digestive stimulant) in nature.³² It is quoted as the best drug of choice for Kasa by Acharya Vagbhata³³. Kantakari powder is anti-tussive and is effective in bronchial asthma and nonspecific cough. Its root is an expectorant. Glycoalkaloid and fatty acid fractions of the *Solanum xanthocarpum* extract cause liberation of histamine from chopped lung tissue. The effect of the drug on bronchial asthma may be attributed to the depletion of histamine from bronchial and lung-tissue. The expectorant action is due to inorganic nitrate content. It is prescribed in cough, asthma, pain in chest, used in the form of electuary. The drug is used as anti-asthmatic, hypoglycaemic, anti-inflammatory, antitumor, antitussive, antipyretic, antispasmodic, antihistaminic, hypotensive and cytotoxic activity.³⁴

In a clinical trial of Bronchial asthma on 44 patients, decoction of Kantakari in doses of 60-200ml daily with honey was given for a period of 15-20 days on an average. Out of 21 cases of Sleshma pradhana (kapha dominant) Tamaka svasa (bronchial asthma), 70-75% shown complete or significant response and out of 23 cases of Vata pradhana Tamaksvasa 30% showed complete response and in more than 50% cases significant reduction in intensity of dyspnoea and cough was observed.³⁵

CONCLUSION

The commonly preferred drugs from Kasaharadashemani among the Ayurveda practitioners in South Karnataka were Pippali, Draksha, Abhaya and Amalaki. In consideration to the dosha involved, it was concluded that Pippali was effective in kaphaja and vata kaphaja Kasa, Draksha in vata dominant Kasa, Abhaya in Vataja as well as Vatakaphaja Kasa and Amalaki in pittaja Kasa. In view of the condition specificity, in ama avastha of Kasa, Pippali churna was found utilized, while Abhaya churna and Amalaki churna were prescribed both in ama and nirama avastha of Kasa.

Among the compound formulations of dashemani, Agastya Haritaki was the most preferred formulation followed by Kantakari ghrita and Kantakari avaleha. Kantakari ghrita and Agastya haritaki were preferred in Vataja Kasa which was shushka (dry) in nature. Kantakari avaleha was the preferred choice in vata kaphaja Kasa and pittanubandha Kasa and was prescribed in wet, dry as well as chronic conditions of cough. Kantakari ghrita, followed by Agastya Haritaki and Kantakari avaleha were usually prescribed in dry cough in the respective order. The present study thus redefined the scientific backdrop of “Dashemani” enumerated by Charakacharya in Sutrasthana (section dealing with fundamental principles) with its clinical significance. This survey serves as a stride towards evidence based medicine in Ayurveda.

Abbreviations: S=Significant, NS=Non significant, HS=Highly significant, L.A=Low strength of association, M.A= medium strength of association, H.A=High strength of association

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