

RANDOMISED COMPARATIVE CLINICAL STUDY TO EVALUATE THE EFFECT OF CHITRAKA HARITAKI AVALEHA AND KANTAKARI GHRITA IN DIFFERENT TYPES OF TAMAKA SHVASA

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ABSTRACT

Background: *Tamaka Svasa* is considered as *Vata* dominant or *Kapha* dominant disease depending upon the clinical presentations. This is afflicting *Pranavaha Srotas* where in *Vata* or *Kapha* dominance is observed with *Sanga* and *Vimargagamana* as *Srotodushti Prakara*. In Ayurvedic literatures, it is said that *Ghrita* intake is ideal in *Vata* dominant *TamakaSvasa* and administration of *Avaleha* is preferred in *Kapha* dominant *Tamaka Svasa*⁴. With this idea behind and increasing prevalence of *TamakaShvasa*, present clinical trial is planned. **Objectives:** To assess the effect of *Chitraka haritaki* and *kantakari ghrita* in the remission of symptoms in patients suffering from *Vatanubandhi* and *Kaphanubandhi Tamaka Svasa*. **Design:** Study type: Interventional; Actual enrolment: 100 participants; Allocation: Randomized; Endpoint classification: Efficacy study; Intervention Model: Parallel Assignment; Masking: Open Label; Primary Purpose: Treatment; Study Start Date: August 2012; Study Completion Date: February 2016. **Setting:** OPD & IPD. of Shri Dharmasthala Manjunatheshwara College of Ayurveda & Hospital, Udupi. **Participants:** Out of 140 screened, 115 patients suffering from *Tamaka shvasa* diagnosed according to the cardinal features and mild persistent and moderate persistent bronchial asthma as per GINA guidelines. Further based on the clinical features it is segregated into *Vatanubandhi* and *Kaphanubandhi tamakashvasa*. (Table 01) Eligible participants were categorised into VC and VK group; KC and KK group after registration.. This randomization was achieved by adapting the permuted block randomization method with the block size of four. Out of 115 registered patients 15 patients did not complete the treatment course for different reasons. **Intervention:** In patients of VC group and KC group *Chitraka Haritaki Avaleha* was given in a dose of 10 g twice daily ½ an hour prior to food intake for a period of 15 days. On the other hand the patients of VK group and KK group were treated orally with *Kantakari Ghrita* in a dose of 25 ml ½ an hour prior breakfast for a period of 15 days. **Outcome measures:** Subjective parameters - breathlessness, cough, sputum and speech. Objective parameters - body position, respiratory rate, labored breathing, breath sounds, and mental status⁹. **Results:** In VC group, KC group, VK group and KK group, changes in the severity of subjective and objective parameters were observed. Some of the parameters showed statistical significance and some other parameters showed insignificant result. The details of the changes in the subjective and objective parameters are depicted in Table 04. **Conclusion:**

Chitraka Haritaki Avaleha and *Kantakari Ghrita* both are effective in *Tamaka Svasa*. Though both formulations are safe, *Chitraka Haritaki Avaleha* (VC and KC groups) has edge over *Kantakari Ghrita* (VK and KK groups).

Keywords: *Vatanubandhi, Kaphanubandhi, Tamaka Shvasa, Chitraka Haritaki Avaleha, Kantakari Ghrita*

INTRODUCTION

The main aim of any medical fraternity is to find the solutions for the ailments predominant in a particular locality which may be either trivial or life threatening. Bronchial asthma is one such disease which will show either trivial nature or life threatening in some other occasions. It is considered to be reversible or irreversible, self limiting or requires medications to pacify the symptoms. As per the natural history of the disease, if the onset is in young adulthood, there is a possibility of subsidence of symptoms in middle age group and there will be a chance of recurrence of the disease after forty years of age. If clinical features of bronchial asthma are analysed, they will resemble the clinical features of *Tamaka Shvasa*¹.

Tamaka Shvasa is an *Amasayasamuttha Vikara*² where in vitiated *Vata* and *Kapha Dosha* are the mainly involved. *Mahasrotas* is considered to be *Srotomula* of *Pranavaha Srotas*³. *Hridaya* is considered to be *Srotomula* of *Pranavaha* and *Rasavaha Srotas*⁴ and thus will afflict *Rasa Dhatu*⁵ *Anaha* (distension of the abdomen), *Parshvashula* (chest pain, sides of the chest in particular), *Hridaya Pidana* (tightness of the chest) and *Prana Vilomata* (breathing discomfort) are considered to be the *Purvarupa* of *Shvasa*⁶. It suggests that involvement of *Annavaha Srotas* and *Pranavaha Srotas*. Involvement of *Udakavaha Srotas* can be understood by the presence of *Shoshana* of *Mukha* (dryness of mouth). Thus depending upon the nature of clinical presentation, there will be the involvement of *Pranavaha, Annava* and *Udakavaha Srotas* are usually afflicted during the progression of the disease. Cardinal features such as *Prana Vilomata, Kasa, Shvasa* and *Gurghuraka* which are seen in episodes or paroxysms are pathognomonic of *Tamaka Shvasa*.

Bronchial Asthma is a disorder of the airways sourcing respiratory hypersensitivity, inflammation and constriction of the smooth muscles in the airway, which includes many cells and cellular elements like mast cells, eosinophils, T lymphocytes, macrophages, neutrophils and epithelial cells leading to the symptoms particularly at night or in the early morning.

The organization of a line of treatment for *Tamaka shvasa* varies according to the stage of the illness present. The treatment is planned keeping in mind the episodic nature of illness, nature of clinical presentation. *Vata* dominance and *Kapha* dominance in the patients of *Tamaka Shvasa* show distinct clinical features. *Charaka* is of the opinion that *Vata* dominant *Tamaka Shvasa* are mainly treated best by the administration of *Ghrita* preparations and *Kapha* dominant *Tamaka Shvasa* patients respond best to the administration of *Avaleha*⁷. Hence the study was planned to observe the therapeutic effects of *Chitraka Haritaki Avaleha* and *Kantakari Ghrita* on pacifying the symptoms of *Vatanubandhi* and *Kaphanubandhi Tamaka Shvasa*⁸. (Table 01) Thus the present study entitled 'Randomised comparative clinical study to evaluate the effect of *Chitraka Haritaki Avaleha*⁹ and *Kantakari Ghrita*¹⁰ in different types of *Tamaka Svasa*' is planned to improve the life style of the individual and to increase the symptom free period between the paroxysms of attacks.

Aim and Objectives:

To assess the effect of *Chitraka haritaki* and *kantakari ghrita* in the remission of symptoms in patients suffering from *Vatadhika* and *kaphadhika Tamaka Svasa*.

Design: Study type: Interventional; Actual enrolment: 100 participants; Allocation: Randomized; Endpoint classification: Efficacy study; Intervention Model: Parallel Assignment; Masking: Open Label; Primary Purpose: Treatment; Study Start Date: August 2012; Study Completion Date: February 2016

Setting: OPD & IPD of Shri Dharmasthala Manjunatheshwara College of Ayurveda & Hospital, Udipi.

Participants: Out of 140 screened, 115 patients suffering from *Tamaka shvasa* diagnosed according to the cardinal features and mild persistent and moderate persistent bronchial asthma as per GINA guidelines¹¹. Further based on the clinical features it is segregated into *Vatanubandhi* and *Kaphanubandhi*

tamaka shvasa. Eligible participants were invited to participate in this clinical study and after signing a detailed informed consent they were registered for the study. The *vatanubandhi tamaka shvasa* patients are randomly categorized into the *vatanubandhi chitraka* group (VC group) and *vatanubandhi kantakari* group (VK group). The patients suffering from *kaphanubandhi tamaka shvasa* are randomly categorized into *kaphanubandhi chitraka* group (KC group) and *kaphanubandhi kantakari* group (KK group). This randomization was achieved by adapting the permuted block randomization method with the block size of four. Out of 115 registered patients 15 patients did not complete the treatment course for different reasons.

Table 1: Classification of *Vatanubandhi* and *Kaphanubandhi Tamaka Shvasa*¹²:

Criteria	<i>Kaphadhika tamaka</i>	<i>Vatadhika tamaka</i>
Dry / productive cough	paroxysm of productive cough mostly with sputum production	dry cough mostly without sputum production
sputum amount	moderate or large	none or mild
on coughing	Remission of Breathlessness following spitting of sputum	paroxysmal cough worsens dyspnoea
morning Sputum	Yes	No
sputum color	white to gray light yellow or green dark yellow or green	no sputum produced / small amount of clear sputum

Intervention:

In patients of VC group and KC group *Chitraka Haritaki Avaleha* was given in a dose of 10 g twice daily ½ an hour prior to food intake for a period of 15 days. On the other hand the patients w of VK group and KK group were treated orally with *Kantakari Ghrita* in a dose of 25 ml ½ an hour prior breakfast for a period of 15 days.

Outcome measures: Subjective parameters - breathlessness, cough, sputum and speech. Objective parameters - labored breathing, breathe sounds, body position, respiratory rate and mental status.

Breathlessness:

1. Mild: Breathlessness with activity
2. Moderate: Breathlessness with talking

3. Severe: Breathlessness at rest
4. Impending respiratory failure: Breathlessness at rest

Speech:

1. Mild: Sentences
2. Moderate: Phrases
3. Severe: Words
4. Impending respiratory failure: Mute

Cough:

1. Morning bouts or after exercise – do not disturb work
2. Continuous cough during day and morning – disturbing work
3. Continuous day, morning and night cough – disturbs activity

4. Continuous day, night and sleep and activity disturbed

Sputum:

1. Less than 2.5 ml/day
2. 2.5 to 15 ml/day
3. 15 to 25 ml/day
4. > 25 ml/day

Laboured breathing:

1. Mild: Usually no use of accessory muscles
2. Moderate: Commonly use of accessory respiratory muscles
3. Severe: Usually use of accessory respiratory muscles
4. Impending respiratory failure: Paradoxical thoraco abdominal movement

Breath sounds:

1. Mild: moderate wheezing at mid to end expiration
2. Moderate: Loud wheeze throughout expiration
3. Severe: Loud inspiratory and expiratory wheeze
4. Impending respiratory failure: Little air movement without wheeze (silent chest)

Body position:

1. Mild: - able to recline
2. Moderate: Prefers sitting
3. Severe: Unable to recline

4. Impending respiratory failure: Unable to recline

Respiratory rate:

1. Mild - >10/ min
2. Moderate >20/ min
3. Severe - > 30/ min
4. Impending respiratory failure > 30/ min

Mental status:

1. Mild: May be agitated
2. Moderate: Usually agitated
3. Severe: Always agitated
4. Impending respiratory failure: Confused or drowsy

Observation:

115 Patients were enrolled for the study from O.P.D and I.P.D of SDM Ayurveda Hospital, Udipi during the period April 2012 to February 2016 and among them 15 dropped out. Among these 62 % were males, 48% of patients belonged to the age group of 45-60 yrs, 94% were Hindu, 52% were Graduates, 73 %were married, 33% 62% of patients had Normal BMI (Table no.01) 33% of the patients had *Vata Pitta prakriti*, 94% exhibited *Madhyama Samhanana* as well as *satva*, *Abhyavaharna Shakti* was recorded in 77%, 80% and had *MadhyamaJarana Shhakti* (table no.02)

Table 2: Demographic description of patients suffering from *tamaka shvasa*

Variable	Detail	VC group		VK group		VK group		KK group		Total	
		N0	%	N0	%	N0	%	N0	%	N0	%
		Gender	Male	14	56	15	57.69	14	56	19	79.16
	Female	11	44	11	42.30	11	44	05	20.83	38	38
Age	16-30 yr	04	16	08	30.76	07	28	03	12.5	22	22
	31-45yr	03	12	08	30.76	08	32	11	45.83	30	30
	45-60yr	12	48	07	26.92	05	20	07	29.16	31	31
	61-70yr	06	24	03	11.53	05	20	03	12.5	17	17
Religion	Hindu	22	88	25	96.15	25	100	22	91.66	94	94
	Muslim	02	08	00	00.00	00	00	02	8.33	04	04
	Christian	01	04	01	03.84	00	00	00	0.00	02	02
per capita income	< 5000	07	28	08	30.76	09	36	06	25	30	30
	>5000	18	72	18	69.23	16	64	18	75	70	70
Educational Status	Illiterate	01	04	04	15.38	00	00	01	04.16	06	06

	Primary	04	16	05	19.23	03	12	07	29.16	19	19
	Secondary	07	28	07	26.92	16	64	08	33.33	38	38
	PUC	00	00	00	00.00	01	04	00	00.00	01	01
	Graduate	13	52	10	38.46	05	20	08	33.33	36	36
Occupation	Student	03	12	01	03.84	04	16	01	04.16	09	09
	Business	00	00	02	07.69	00	00	03	12.50	05	05
	House wife	06	24	06	23.07	12	48	07	29.16	31	31
	Employee	16	64	17	65.38	09	36	13	54.16	55	55
Marital status	Married	20	80	21	80.76	15	60	17	70.83	73	73
	Unmarried	04	16	04	15.38	07	28	06	25.00	21	21
	Widowed	01	04	01	03.84	03	12	01	04.16	06	06
Desa	Jangala	00	00	00	00.00	00	00	00	00.00	00	00
	Anupa	01	04	03	11.53	01	04	04	16.66	09	09
	Sadharana	24	96	23	88.46	24	96	20	83.33	91	91
Diet	Vegetarian	02	08	06	23.07	03	12	08	33.33	19	19
	Mixed	23	92	20	76.92	22	88	16	66.66	81	81
Addiction	Tobacco	20	80	15	57.69	21	84	11	54.83	67	67
	Alcohol	22	88	11	42.30	18	72	19	79.16	70	70
	Tea / coffee	15	60	10	38.46	08	32	11	54.83	44	44
	None	02	08	04	15.38	04	16	05	20.83	15	15
BMI	≥30.00	00	00	00	00.00	01	04	00	00.00	01	01
	≥25.00	02	08	07	26.92	19	76	08	33.33	36	36
	18.50 - 24.99	22	88	19	73.07	05	20	16	66.66	62	62
	<18.50	01	04	00	00.00	00	00	00	00.00	01	01

Table 3: Observations of *dashavidhapariksha* in patients of *tamaka shvasa*

<i>Pariksha</i>	Detail	VC group		VK group		KC group		KK group		Total	
		N0	%	N0	%	N0	%	N0	%	N0	%
<i>Prakriti</i>	<i>Vata</i>	04	16	01	03.84	00	00	05	20.83	10	10
	<i>Pitta</i>	01	04	02	07.69	01	04	00	00.00	04	04
	<i>Kapha</i>	01	04	01	03.84	01	04	01	04.16	04	04
	<i>Vata pitta</i>	07	28	15	57.69	08	32	03	12.50	33	33
	<i>Pitta kapha</i>	04	16	02	07.69	06	24	05	20.83	17	17
	<i>Kapha vata</i>	08	32	05	19.23	09	36	10	41.66	32	32
<i>Sara</i>	<i>Pravara</i>	00	00	00	00.00	00	00	0	00	00	00
	<i>Madhyama</i>	24	96	26	100.0	23	92	22	91.66	95	95
	<i>Avara</i>	01	04	00	00.00	02	08	02	8.33	05	05
<i>Samhanan</i>	<i>Pravara</i>	00	00	00	00.00	01	04	00	00.00	01	01
	<i>Madhyama</i>	24	96	24	92.30	24	96	22	91.66	94	94
	<i>Avara</i>	01	04	02	07.69	00	00	02	08.33	05	05
<i>Satmya</i>	<i>Pravara</i>	00	00	00	00.00	00	00	02	08.33	02	02
	<i>Madhyama</i>	23	92	25	95.15	24	96	22	91.66	94	94
	<i>Avara</i>	02	08	01	03.84	01	04	00	00.00	04	04

Satva	Pravara	00	00	00	00.00	00	00	02	08.33	02	02
	Madhyama	23	92	25	96.15	24	96	22	91.66	94	94
	Avara	02	08	01	03.84	01	04	00	00.00	04	04
abhyavaharana shakthi	Pravara	03	12	00	00.00	02	08	04	16.66	09	09
	Madhyama	16	64	22	84.61	20	80	19	79.16	77	77
	Avara	06	24	04	15.38	03	12	01	04.16	14	14
jaranashakthi	Pravara	02	00	00	00.00	01	00	03	00.00	6	06
	Madhyama	17	00	22	00.00	21	00	20	00.00	80	80
	Avara	06	00	04	00.00	03	00	01	00.00	14	14
Vyayama Shakthi	Pravara	03	04	01	04	02	16	02	00	08	08
	Madhyama	16	60	16	52	16	28	11	52	59	59
	Avara	06	36	09	44	07	56	11	48	33	33
vayas	Balya	05	20	03	11.53	02	08	06	12.50	16	16
	Madhyama	15	60	19	73.07	18	72	08	33.33	60	60
	Vridhha	05	20	04	15.38	05	20	10	41.66	24	24

Results:

Assessment was done on 15th day using the subjective and objective parameters to identify the therapeutic effect of interventional drugs on four groups and follow up was done after a period of 30 days to determine any ill effects and adverse reactions and recurrences of the interventional drugs: In *Vatanubandhi Tamaka Svasa* treated with *Chitraka Haritaki Avaleha* statistically significant reduction in the severity of subjective and objective parameters. The mean severity score at baseline of breathlessness was 1.560, cough was 1.760, sputum was 1.560, speech was 1.360, body position was 1.800, respiratory rate was 1.480, laboured breathing was 1.640, breath sounds was 1.640, heart rate was 1.240 and mental status was 1.160 that came down to 1.160, 1.3200, 1.280, 1.160, 1.040, 1.240, 1.280 and 1.000 respectively. In *Kaphanubandhi Tamaka Shvasa* treated with *Chitraka Haritaki Avaleha* the severity score at baseline of breathlessness was 1.000, cough was 1.240, sputum was 1.440, speech was 1.0, body position was 1.480, respiratory rate was 1.520, laboured breathing was 1.400, breath sounds was 1.840, heart rate was 1.160 and mental status was 1.000 that came down to 1.000, 1.080, 0.080, 1.0, 1.000, 1.160, 1.280, 1.000 and 1.000 respectively. In

Vatanubandhi Tamaka Shvasa treated with *Kantakari Ghrita* the severity score at baseline of breathlessness was 1.231, cough was 1.346, sputum was 1.538, speech was 1.115, body position was 1.577, respiratory rate was 1.500, laboured breathing was 1.423, breath sounds was 1.538, heart rate was 1.077 and mental status was 1.000 that came down to 1.160, 1.269, 1.308, 1.115, 1.154, 1.038, 1.346, 1.260 and 1.000 respectively. In *Kaphanubandhi Tamaka Shvasa* treated with *Kantakari Ghrita* the severity score at baseline of breathlessness was 1.083, cough was 1.346, sputum was 1.167, speech was 1.042, body position was 1.125, respiratory rate was 1.833, laboured breathing was 1.208, breath sounds was 1.750, and mental status was 1.000 that came down to 1.000, 1.269, 1.167, 1.042, 1.083, 1.583, 1.208, 1.500, 0.000 and 1.000 respectively. The effect of intervention with *Chitraka Haritaki Avaleha* showed statistically significant improvement in breathlessness, cough, sputum, speech, body position, respiratory rate, laboured breathing, breath sounds, mental status and insignificant in heart rate. The effect of intervention with *Kantakari Ghrita* is statistically significant in sputum, speech, body position, respiratory rate, breath sounds, and insignificant in the assessment of breathlessness, cough,

laboured breathing, mental status. When compared to the effect of interventional drugs in between the groups on applying Mann Whitney Rank Sum Test, statistically significant results found in breathless-

ness, body position, respiratory rate, laboured breathing, breath sounds, heart rate, mental status and insignificant results were found in cough, sputum, and speech.

Table 4: Therapeutic effects of interventional drugs in different study groups of *TamakaShvasa*

Outcome	group	Mean		Dif mean	paired t test				Between groups*		
		BT (±SE)	AT (±SE)		±SD	±SE	T	P	MWUs	T	P
Breathlessness	VC	1.56 (0.117)	1.16 (0.075)	0.400	0.50	0.10	4.000	<0.001	262.5	687.5	0.041
	KC	1.00 (0.0)	1.00 (0.00)	0.00	0.0	0.0	0.00	1.000			
	VK	1.231 (0.084)	1.160 (0.074)	0.074	0.50	0.10	4.00	<0.001	372.0	352.0	0.026
	KK	1.083 (0.058)	1.000 (0.000)	0.083	0.00	0.00	0.00	1.000			
Cough	VC	1.76 (0.194)	1.32 (0.111)	0.44	0.583	0.117	3.773	<0.001	236.5	713.5	0.048
	KC	1.24 (0.087)	1.08 (0.055)	0.16	0.374	0.075	2.138	0.043			
	VK	1.346 (0.0951)	1.269 (0.0887)	0.0769	0.560	0.110	0.700	0.490	357.0	567.0	0.212
	KK	1.167 (0.0777)	1.125 (0.0690)	0.0417	0.204	0.0417	1.000	0.328			
Sputum	VC	1.56 (0.154)	1.28 (0.108)	0.280	0.542	0.108	2.585	0.016	333.0	617.0	0.642
	KC	1.44 (0.101)	1.36 (0.098)	0.0800	0.400	0.080	0.000	1.000			
	VK	1.538 (0.0997)	1.308 (0.0923)	0.230	0.430	0.0843	2.739	0.016	356.0	568.0	0.254
	KK	1.167 (0.0777)	1.167 (0.0777)	0.000	0.000	0.000	0.000	1.000			
Speech	VC	1.360 (0.0980)	1.160 (0.0748)	0.200	0.408	0.0816	2.449	0.022	262.5	687.5	0.041
	KC	1.000 (0.000)	1.000 (0.000)	0.000	0.000	0.000	0.000	1.000			
	VK	1.115 (0.0639)	1.115 (0.0639)	0.000	0.400	0.0784	0.000	1.000	335.0	589.0	0.353
	KK	1.042 (0.0417)	1.042 (0.0417)	0.000	0.295	0.000	0.000	1.000			
Laboured breathing	VC	1.640 (0.114)	1.240 (0.0873)	0.400	0.500	0.1000	4.000	<0.001	287.50	662.5	0.493
	KC	1.400 (0.1000)	1.160 (0.0748)	0.240	0.436	0.0872	2.753	0.011			
	VK	1.423 (0.0988)	1.346 (1.208)	0.0769	0.484	0.0948	0.811	0.425	355.000	569.0	0.289
	KK	1.208 (0.0847)	1.208 (0.0847)	0.000	0.000	0.000	0.000	1.000			
Breath sounds	VC	1.640 (0.172)	1.280 (0.092)	0.360	0.569	0.114	3.116	0.004	303.50	646.5	0.829
	KC	1.840 (0.125)	1.280 (0.108)	0.560	0.583	0.117	4.802	<0.001			
	VK	1.538 (0.138)	1.260 (0.0887)	0.269	0.604	0.118	2.273	0.115	249.5	674.5	0.150
	KK	1.750 (0.124)	1.500 (0.120)	0.250	0.000	0.000	3.715	<0.001			
body position	VC	1.800 (0.141)	1.160 (0.075)	0.640	0.638	0.128	5.018	<0.001	262.50	687.5	0.041
	KC	1.480 (0.102)	1.000 (0.000)	0.480	0.510	0.102	4.707	<0.001			
	VK	1.577 (0.138)	1.154 (0.0722)	0.423	0.703	0.138	3.070	0.005	334.0	590.0	0.458
	KK	1.125 (0.0690)	1.083 (0.0576)	0.042	0.204	0.0417	1.000	0.328			
Respiratory rate	VC	1.480 (0.102)	1.040 (0.040)	0.440	0.583	0.117	3.773	<0.001	300.0	650.0	0.337
	KC	1.520 (0.102)	1.000 (0.000)	0.520	0.510	0.102	5.099	<0.001			
	VK	1.500 (0.1000)	1.038 (0.0385)	0.462	0.508	0.0997	4.629	<0.001	142.0	782.0	<0.001
	KK	1.833 (0.0777)	1.583 (0.103)	0.250	0.442	0.0903	2.769	0.011			
Mental status	VC	1.160 (0.075)	1.000 (0.000)	0.160	0.374	0.075	2.138	0.043	312.5	637.5	<0.001
	KC	1.000 (0.000)	1.000 (0.000)	0.000	0.000	0.000	0.000	1.000			
	VK	1.000 (0.000)	1.000 (0.000)	0.000	0.000	0.000	0.000	1.000	312.0	612.0	<0.001
	KK	1.000 (0.000)	1.000 (0.000)	0.000	0.000	0.000	0.000	1.000			

DISCUSSION

Chitraka Haritaki Avaleha consisting of *Chitraka*, *Amalaki*, *Guduchi*, *Dashamula*, *Haritaki*, *Vysoha*, *Trijataka*, *Madhu* in specified proportions might be effective in reducing *Kapha Dosha* improving ex-pectoration and thereby clearing way for the movement of *Vata Dosha*. If the analysis of the ingredients of *chitraka haritaki* is done, *Chitraka* is having *Ushna*, *Tikshna* qualities, is responsible for the inflammatory process. But drugs such as *Dashamula*, *Amalaki* and *Guduchi* are having opposite qualities of *Chitraka* i.e. anti inflammatory activity. *Madhu* also has *Kasaya Rasa* as *Pradhana Rasa* which is responsible for *Pitta Samana*, thus responsible for anti inflammatory process. The study reveals that reduction severity of breathlessness, cough, sputum in patients treated with *Chitraka Haritaki* is effective with statistical significance.

Kantakari Ghrita is consisting of *Kantakari*, *Ghrita*, *Bala*, *Shunthi*, *Maricha*, *Pippali*, *Vidanga*, *Shati*, *Chitraka*, *Souvarchala*, *Lavana*, *Yavakshara*, *Pushkaramula*, *Brihati*, *Haritaki*, *Yavani*, *Dadima*, *Draksha*, *Punarnava*, *Cavya*, *Duralabha*, *Amlavetasa*, *Sringi*, *Tamalaki*, *Bharangi*, *Rasna*, *Gokshura* in specified proportions should be effective in reducing *Vata Dosha* improving the signs of severity of breathlessness, abnormal breath sounds, abnormal body position and thereby improving the movement of *Vata Dosha* in *Pranavaha Srotas*. *Kantakari*, the drug itself is considered to be best among *Pranavaha Sroto Vikara* due to its expectorant activity and steroid activity. The study reveals that reduction in severity of breathlessness, abnormal breath sounds, abnormal body position in patients treated with *Kantakari Ghrita* is effective with statistical significance.

Vatanubandhi Tamaka Shvasa is best treated by *Ghrita* as documented in the *Charaka Samhita*. The severity of breathlessness, cough, sputum and abnormal breath sounds to the tune of improvement of symptoms. Confirms the reduction of *Vata Dosha* by

the medication. In comparison patients treated with *Chitraka Haritaki Avaleha* also showed improvements in these respects. However, better results expected in *Kantakari Ghrita* the results showed that overall effects shown in *Chitraka Haritaki Avaleha* than *Kantakari Ghrita*.

When reason is analyzed, it can be said that the dosage of medicine has shown the result. The dosage of *Avaleha* is 1 *Karsha*. In the current study, 10 g of dosage was adopted. The dosage of *Ghrita* for *Samana* purpose is specified for *Madhyama* and *Pravara* dosage is 150 to 200 g. This principle is not adopted in the present study. Hence, *Siddha Vaidya Parampara* dosage of 25 ml is adopted. Therapeutic responses depend upon the dosage – this is a well known fact and since textual dosage is not adopted, minimal response in the patients is justified. Hence, it can be said that *Chitraka Haritaki Avaleha* and *Kantakari Ghrita* both are effective in *Tamaka Shvasa*. Though both formulations are safe, *Chitraka Haritaki Avaleha* has edge over *Kantakari Ghrita*. This gives the scope for further study with inclusion of actual dosage of *Ghrita* to compare therapeutic effects distinguishing *Vatanubandhi* and *Kaphanubandhi Tamaka Shvasa*.

CONCLUSION

By observing the subjective and objective parameters, it is found that both formulations are Safe; *Chitraka Haritaki Avaleha* has edge over *Kantakari Ghrita*. During the intervention of these drugs, no adverse drug reactions were noted.

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