

A CLINICAL STUDY ON TAMAKA SHWASA (BRONCHIAL ASTHMA) AND ITS MANAGEMENT WITH DEVADARVYADI KWATHA AND VASADI KWATHA

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ABSTRACT

Background: - *Tamaka Shwasa* is a chronic inflammatory disorder of the lung airways. The current suffering population is looking hopefully towards *Ayurveda* for better life. *Ayurveda* has number of formulations to treat *Tamaka Shwasa* with route eradication and is in practice with proven efficacy. **Aims:** - To evaluate the efficacy of *Devadarvyadi Kwatha* and *Vasadi Kwatha* in the management of *Tamaka Shwasa*. **Material and Methods:** - 30 patients were registered into two groups; Group A was treated with *Devadarvyadi Kwatha*, while Group B was with *Vasadi Kwatha* at dose of 40 ml twice a day for the duration of 28 days. Follow up was done after 14 days. The results were assessed in terms of clinical recovery, symptomatic relief, and pulmonary function

improvement. Effect of the treatment was assessed based on subjective and objective parameters. **Results:-** Significant improvement was observed in most of the cardinal and associated symptoms. Significant increase in peak expiratory flow rate, and increased E.S.R., decreased frequency of attacks, improved quality of life were the major observations noticed in both groups. **Conclusions:** -This study highlights the significance of traditional herbal formulations in *Tamaka Shwasa*, which can be used as an effective drug in place or along with modern drugs.

KEYWORDS: - *Tamaka Shwasa*; Bronchial Asthma; *Devadarvyadi Kwatha*; *Vasadi Kwatha*.

INTRODUCTION

According to WHO Asthma is one of the major non communicable diseases. It is a chronic disease of the air passage of the lungs which inflames and narrows them. Around 235 million people currently suffer from Asthma worldwide. It is common disease among children. Most Asthma related deaths occur in low and lower middle income countries.^[1]

With the explosion of the knowledge in the 21st century a new concept of multi factorial causation of disease has arisen due to changing pattern of life styles, living standards, demographic factors, urbanization, over growth of industrialization and auto mobilization. Health emerges from highly complex interaction between factors intrinsic to the patient and environment. In today's environment there is so much pollution, which cannot be avoided because it mostly produced by vehicles and industries. This environment interaction is leading to many respiratory disorders among which one of the major distressing disease is Asthma which has been described in *Ayurveda* as *Shwasa*.

Devadarvyadi Kwatha^[2] and *Vasadi Kwatha*^[3] are herbal medicinal combinations used commonly in the treatment of various disease of *Pranavaha Srotodushti*. By looking at the individual herbal constituents and their pharmacological action as mentioned in Ayurvedic texts, it appears that these combinations should be very effective in combatting the attack of *Tamaka Shwasa*. Therefore in the current study it has been planned to evaluate clinical efficacy of *Devadarvyadi Kwatha* and *Vasadi Kwatha* in treatment of *Tamaka Shwasa*.

MATERIAL AND METHODS

• Source of data

30 patients were randomly selected irrespective of their age, sex, religion, occupation etc. from the OPD and IPD of Govt. Akhandanand Ayurved Hospital. The study obtained Institutional Ethics Committee clearance (No. college 94 dated 01/08/2018) and registered at Clinical Trial Registry of India (CTRI/2019/06/019643). A written informed consent from each patient was taken before enrolling in the clinical trial.

• Inclusion criteria

Patients with minimum symptoms like *Kasa*, *Kanthodhwansa*, *Kapha Nishthivanam*, *Pinasa*, *Shayane Shwasa Pidita*, *Asino Labhate Saukhyam*, *Ushna Abhinandaitam* with aged between 20 to 65 years and less than 10 years of chronicity of *Tamaka Shwasa* were selected.

- **Exclusion criteria**

The patients having asthma due to cardiac pathology and associated with complications like Tuberculosis, corpulmonale, Emphysema, malignancy and tumour, Hypertension, Diabetes Mellitus, and any other diseases which lead to fatal conditions had been excluded and also pregnant and lactating mothers were excluded.

- **Withdrawal criteria**

Patients with severity of more than 2 attacks per day had been withdrawal, Constant fatigue, Increased mucus production, Pneumonia, Severe chest pain, Underperformance or absence from work, Leading to other problem such as high blood pressure.

If patient would suitable as per inclusion criteria and already taking modern medicine then 2 weeks of wash out period had been given.

- **Investigation**

Blood: Hb%, differential count (Neutrophil, Eosinophils), erythrocyte sedimentation rate and pulmonary function test were carried out.

- **Diet**

Patients were advised to avoid causes and aggravating factors such as curd, cold drinks, fish and meat, tobacco chewing and smoking, alcohol, excessive physical work, day sleep, and exposure to dust, smoke, pets, and pollens. Patients were advised to use lukewarm water after meal and at bed time. They were also advised for light diet, breathing exercises such as *Pranayama*, use of mask while working, to avoid exposure to dust and smoke, etc.

- **Study design**

30 patients suffering from *Tamaka Shwasa* of either sex between the age group of 20 to 65 years were selected for the study. A special proforma was prepared with all points of history taking, physical signs and symptoms and laboratory investigations to confirm the diagnosis as mentioned in our classics as well as allied sciences. These patients were subjected to *Devadarvyadi Kwatha*^[4] and *Vasadi Kwatha*.^[5]

- **Grouping and Posology**

Devadarvyadi Kwatha, as described in *Yoagartnakara*, *Hikka-Shwasa Rogadhikara* was selected. The list of the herbs is as mentioned below:

Table 1: Drugs of *devadarvyadi kwatha*.

Sr. No.	Name of drug	Latin name	Part
1	<i>Devdaru</i>	<i>Cedrus Deodara Roxb.</i>	1 Part
2	<i>Vacha</i>	<i>Acorus Calamus Linn.</i>	1 Part
3	<i>Vyaghri</i>	<i>Solanum Surattence Burm F.</i>	1 Part
4	<i>Vishva</i>	<i>Zingiber Officinale Roxb. Rosb</i>	1 Part
5	<i>Katphala</i>	<i>Myrica Esculenta Buch. Ham. Ex. D. Don</i>	1 Part
6	<i>Pushkaramoola</i>	<i>Inula Racemora Hook F.</i>	1 Part

In other group, *Vasadi Kwatha* as mentioned in *Bhaishajya Ratnavali* in *Hikka-Shwasa Rogadhikara* (16/27) was selected. The ingredients are enlisted as below:

Table 2: Drugs of *vasadi kwatha*.

Sr. No.	Name of drug	Latin name	Part
1	<i>Vasa</i>	<i>Aghatoda Vasika Nees</i>	1 part
2	<i>Haridra</i>	<i>Curcuma Longa Linn.</i>	1 part
3	<i>Dhanika</i>	<i>Coriandrum Sativum Linn.</i>	1 part
4	<i>Guduchi</i>	<i>Tinospora Cordifolia Linn</i>	1 part
5	<i>Bharangi</i>	<i>Clerodendrum Serratum Linn.</i>	1 part
6	<i>Pippali</i>	<i>Piper Longum Linn.</i>	1 part
7	<i>Nagara</i>	<i>Zingiber Officinale Roxb.</i>	1 part
8	<i>Kantakari</i>	<i>Solanum Surattence Bunn F.</i>	1 part

A total of 30 patients were randomly grouped into A and B, in Group A ($n = 15$) received *Devadarvyadi Kwatha*, while Group B ($n = 15$) *Vasadi Kwatha* received; at dose of 40ml twice a day in the morning and evening for the duration of 28 days. Follow-up period was 14 days in both groups.

• Criteria for Assessment

The improvement in the patients was assessed on the basis of relief in the cardinal signs and symptoms of the disease. Improvement in the relief of *Srotodushti*, *Lakshana* of *Dosha*, *Dushya*, and *Srotasa* were taken into account. In addition, following laboratory assessment were carried out after treatment.

- Haematological investigations after completion of treatment were reported.
- Respiratory function tests were reported during the treatment by using Mini Peak flow meter.

All the signs and symptoms were given scores depending upon their severity before and after treatment.

- **Assessment of total effect of therapy**

The improvement in quality of life were considered in all the below mentioned categories for final assessment.

- Improved: 100% relief of signs and symptoms
- Markedly improved: Improvement between >75% and 99%
- Moderately improved: Improvement between >50% and 75%
- Mild improvement: Improvement between 25% and 50%
- Unchanged: No relief in signs and symptoms.

- **Statistical analysis**

The information gathered on the basis of observation was subjected to statistical analysis in terms of mean score (\bar{x}), standard Deviation (S.D.) standard error (S.E.), Wilcoxon test, Mann Whitney Test, Unpaired 't' test, Paired t-test was carried out at the level of 0.05, 0.01, 0.001, 0.0001 of P level. Insignificant $P > 0.05$; Significant $P < 0.05$; Very Significant $P < 0.001$; Extremely Significant $P < 0.0001$

- **Observation**

Total 30 patients completed the course of treatment. Both groups' observation data are given as below:

Table 3: General observations.

Observation	Result (Max %)
Age (51- 65 years)	43.33%
Sex (Male)	66.66 %
Marital Status (Married)	83.33%
Religion (<i>Hindu</i>)	73.33%
Education (Higher Secondary)	33.33 %
Occupation (Service/Job)	36.66%
Socio-Economic Status (Middle Class)	73.33%
<i>Desha (Sadharana)</i>	100%
Onset (Gradual)	73.33%
Chronicity (2 - 5 Years)	66.66%
Postural Aggravation (Sleeping)	76.66%
Treatment History (Taken)	100%
Allopathy Drug History	100%
Past Illness (No)	90%
Family History (Positive)	66.66%
<i>Nidra (Khamdita)</i>	76.66%
<i>Divaswapana</i>	46.66%
<i>Vyasana</i> (Smoking)	26.66%

<i>Agni (Mandagni)</i>	46.66%
<i>Sharirika Prakriti (Vata-Kapha)</i>	46.66%
<i>Manasika Prakriti (Raja-Tama)</i>	40%
<i>Vikriti (Lakshya Nimita)</i>	73.33%
<i>Dosha Parikshana (Kapha Dosha involvement)</i>	41.94%
<i>Srotodushti Parikshana (Pranavaha Srotodushti)</i>	76%
<i>Aharaja Nidana (Shita Ahara)</i>	93.33%
<i>Viharaja Nidana (Vegavidharana)</i>	80%
<i>Manasika Bhavaja</i>	80%
<i>Raja- Dhuma Nidana (Dust)</i>	83.33%
Chief Complaint (<i>Shwasa Vega, Ativege Kasate, Kapha Nishthivanam</i>)	100%
Associated Symptoms (<i>Pinasa</i>)	100%

• RESULTS

Wilcoxon matched-paired signed-ranked test was applied to evaluate effect of therapy in individual group for subjective criteria. Mann –Whitney U-Statistic test applied for comparative effect of therapy in both group. Overall effect of therapy on each scale was calculated with reference to percentage improvement in all symptoms. Paired‘t’ test & Unpaired‘t’ test was applied in both groups for objective criteria. The obtained results have been interpreted as:

Table 4: Effect on chief complaints of Group A.

Symptoms	N	Mean		D.F.	% Relief	W	P	S
		BT	AT					
<i>Shwasa Kashtata Vega</i>	15	2.66	1	1.66	67.77%	120	.0001	ES
Duration of <i>Shwasa Kashtata Vega</i>	10	1.1	0.6	0.5	30%	15	.0625	NS
No. of Emergency Drug Used	13	1.61	0.84	0.76	36.66%	45	0.0039	VS
<i>Ativege Kasate</i>	15	2.2	0.93	1.26	61.11%	120	0.0001	ES
<i>Kapha Nishthivanam</i>	15	2.13	1	1.13	57.77%	120	0.0001	ES
<i>Shleshma Vimokshyate Sukham</i>	15	1.8	0.66	1.13	65.55%	91	0.0002	ES
<i>Parsve Avagrihyate</i>	08	1.75	0.625	1.125	33.33%	28	.0156	S
<i>Ghurghurukam</i>	12	2.083	1.75	0.33	13.33%	10	0.1250	NS

Table 5: Effect on chief complaints of Group B.

Symptoms	N	Mean		D.F.	% Relief	W	P	S
		BT	AT					
<i>Shwasa Kashtata Vega</i>	15	2.6	1.066	1.53	61.11%	120	.0001	ES
Duration of <i>Shwasa Kashtata Vega</i>	09	1.11	0.66	0.44	23.33%	10	0.125	NS

No. of Emergency Drug Used	13	1.61	0.76	0.84	46.66%	66	0.001	ES
<i>Ativege Kasate</i>	15	2.33	1	1.33	60%	120	0.0001	ES
<i>Kapha Nishthivanam</i>	15	2.13	1.067	1.067	52.22%	120	0.0001	ES
<i>Shleshma Vimokshyate Sukham</i>	13	1.69	0.92	0.76	32.22%	28	0.0156	S
<i>Parsve Avagrihyate</i>	14	1.92	0.928	1	44.44%	78	.0005	ES
<i>Ghurghurukam</i>	11	2.36	2.090	0.272	6.66%	78	0.2500	NS

Table 6: Comparative Effect of Both therapies on Chief Complaints by using Mann Whitney U-Statistic test.

Chief Complaints	Mean		% Relief		U	P	S
	Group A	Group B	Group A	Group B			
<i>Shwasa Kashtata Vega</i>	1.66	1.53	67.11%	61.11%	101	0.626	NS
<i>Shwasa Kashtata Duration</i>	0.55	0.44	30%	23.33%	42.5	0.8504	NS
No. of Emergency Drug Used	0.76	0.37	36.66%	46.66%	77	0.6426	NS
<i>Ativege Kasate</i>	1.26	1.33	61.11%	60%	100	0.5183	NS
<i>Kapha Nishthivanam</i>	1.33	1.06	57.77%	52.22%	105	0.715	NS
<i>Shleshma Vimokshyate Sukham</i>	1.33	0.76	65.55%	32.22%	71	0.1971	NS
<i>Parsve Avagrihyate</i>	1.125	1	33.33%	44.44%	50	0.648	NS
<i>Ghurghurukam</i>	0.33	0.27	13.33%	6.66%	62	0.7871	NS

Table 7: Effect on associated complaints of Group A.

Associated Symptoms	N	Mean Score		D.F.	% Relief	W	P	S
		B.T.	A.T					
<i>Pinasa</i>	15	3.066	1.4	1.66	57.77%	120	0.0001	ES
<i>Parshwashula</i>	09	1.4	0.77	0.66	26.66%	21	0.0313	S
<i>Anidra</i>	14	1.85	1.07	0.78	43.33%	66	0.0010	VS
<i>Shayane Shwasa Pidita</i>	09	1.55	0.66	0.88	36.66%	36	0.0078	S
<i>Asino Labhate Saukhyam</i>	07	1.57	0.85	0.71	20%	15	0.0625	NS
<i>Kanthodhwansa</i>	13	1.15	0.5	0.615	46.66%	36	0.0078	VS
<i>Vishushkasyata</i>	09	1.11	0.77	0.33	16.66%	6	0.0025	NS

Table 8: Effect on associated complaints of Group B.

Associated Symptoms	N	Mean Score		D.F.	% Relief	W	P	
		B.T.	A.T					
<i>Pinasa</i>	15	3.13	1	2.13	71.66%	120	.0001	ES
<i>Parshwashula</i>	6	0.8333	0.3333	0.5	13.4%	6	0.2500	NS
<i>Anidra</i>	15	1.93	1.26	0.66	33.33%	55	0.002	VS
<i>Shayane Shwasa Pidita</i>	11	1.81	0.81	1	40%	55	0.002	VS
<i>Asino Labhate Saukhyam</i>	10	1.3	1	0.3	13.33%	6	0.2500	NS
<i>Kanthodhwansa</i>	15	1.53	0.866	0.66	37.77%	45	0.0039	VS
<i>Vishushkasyata</i>	11	1.09	0.63	0.45	26.66%	10	0.125	NS

Table 9: Comparative effect of both therapies on symptoms by using mann whitney U-Statistic test.

Associated Symptoms	Mean		% Relief		U	P	S
	Group A	Group B	Group A	Group B			
<i>Pinasa</i>	1.66	2.13	57.77%	71.66%	68	0.035	S
<i>Parshwashula</i>	0.66	0.5	26.66%	13.4%	22.5	0.5794	NS
<i>Anidra</i>	0.78	0.66	43.33%	33.33%	92.5	0.499	NS
<i>Shayane Shwasa Pidita</i>	0.88	1	36.66%	40%	44.5	0.582	NS
<i>Asino Labhate Saukhyam</i>	0.71	0.3	20%	13.33%	20.5	0.1147	NS
<i>Kanthodhwansa</i>	0.615	0.66	46.66%	37.77%	95	0.9155	NS
<i>Vishushkasyata</i>	0.33	0.45	16.66%	26.66%	46.5	0.82.4	NS

Table 10: Effect on agnibala of Group A.

Agnibala	N	Mean Score		D.F.	% Relief	W	P	S
		B.T.	A.T					
<i>Abhyavaharana Shakti</i>	14	1.78	0.71	1.07	69.04%	105	0.0001	ES
<i>Jarana Shakti</i>	15	2	1.06	0.93	47.77%	91	0.0002	ES
<i>Aharakale Ruchi</i>	10	1.8	0.9	0.9	36.11%	36	0.0078	VS
<i>Vata-Mutra-Mala Mukti</i>	11	1.09	0.27	0.81	77.27%	45	0.0039	VS

Table 11: Effect on agnibala of Group A.

Agnibala	N	Mean Score		D.F.	% Relief	W	P	S
		B.T.	A.T					
<i>Abhyavaharana Shakti</i>	15	1.73	0.66	1.066	66.66%	105	0.0001	ES
<i>Jarana Shakti</i>	15	2.4	1.46	0.93	40%	105	0.0001	ES
<i>Aharakale Ruchi</i>	11	1.81	0.63	1.18	54.44%	66	0.0010	VS
<i>Vata-Mutra-Mala Mukti</i>	6	1.16	0.5	0.66	23.33%	10	0.125	NS

Table 12: Comparative effect of both therapies on *agnibala* by using mann whitney U-Statistic test.

<i>Agnibala</i>	Mean		% Relief		U	P	S
	Group A	Group B	Group A	Group B			
<i>Abhyavaharana Shakti</i>	1.07	1.066	69.04%	66.66%	105	0.9709	NS
<i>Jarana Shakti</i>	0.93	0.93	47.77%	40%	112	0.9999	NS
<i>Aharakale Ruchi</i>	0.9	1.18	36.11%	54.44%	41.500	0.2193	NS
<i>Vata-Mutra-Mala Mukti</i>	0.81	0.66	77.27%	23.33%	28	0.5389	NS

Table 13: Effect on *dehabala* of Group A.

<i>Dehabala</i>	N	Mean Score		D.F.	% Relief	W	P	
		B.T.	A.T					
<i>Balavridddhi</i>	15	2	1.06	0.933	50%	105	0.0001	ES
<i>Sharira Upachaya</i>	6	0.66	0.33	0.33	26.66%	7	0.5625	NS
<i>Swara-Varna Yoga</i>	11	1.27	0.45	0.81	50%	36	0.0078	VS

Table 14: Effect on *dehabala* of Group B.

<i>Dehabala</i>	N	Mean Score		D.F.	% Relief	W	P	
		B.T.	A.T					
<i>Balavridddhi</i>	15	2.3	1.33	1	40%	91	0.0002	ES
<i>Sharira Upachaya</i>	0	0	0	0	0	0	0	NS
<i>Swara-Varna Yoga</i>	15	0.93	0.26	0.66	66.66%	65	0.0068	VS

Table 15: Comparative effect of both therapies on *dehabala* by using mann whitney U-Statistic test.

<i>Dehabala</i>	Mean		% Relief		U	P	S
	Group A	Group B	Group A	Group B			
<i>Balavridddhi</i>	0.933	1	50%	40%	106	0.7011	NS
<i>Sharira Upachaya</i>	0.33	0	26.66%	0	0	0	-
<i>Swara-Varna Yoga</i>	0.81	0.66	50%	66.66%	76	0.7008	NS

Table 16: Effect on *sattvabala* of Group A.

<i>Sattvabala</i>	N	Mean Score		D.F.	% Relief	W	P	
		B.T.	A.T					
<i>Nidralabho Yathakalam</i>	14	1.7	0.85	0.85	46.66%	78	0.0005	ES
<i>Sukhena Cha Prabodhakam</i>	15	1.93	1.06	0.86	47.77%	66	0.001	VS
<i>Vaikaram Cha Swapana</i>	14	0	0	0	0	0	0	NS

<i>Adarshanam</i>								
<i>Mano Buddhindriya Avyapatti</i>	15	1.46	0.6	0.86	60%	78	0.0001	ES

Table 17: Effect on *sattvabala* of Group B.

<i>Sattvabala</i>	N	Mean Score		D.F.	% Relief	W	P	S
		B.T.	A.T					
<i>Nidralabho Yathakalam,</i>	14	1.66	1	0.66	33%	0	00	NS
<i>Sukhena Cha Prabodhakam</i>	15	1.66	0.66	1	72.22%	105	0.001	ES
<i>Vaikaram Cha Swapana Adarshanam</i>	14	1.066	1.066	0	0	0	0	NS
<i>Mano Buddhindriya Avyapatti</i>	15	1.5	0.5	1	70%	0	0	NS

Table 18: Comparative effect of both therapies on *dehabala* by using mann whitney U-Statistic test.

<i>Sattvabala</i>	Mean		% Relief		U	P	S
	Group A	Group B	Group A	Group B			
<i>Nidralabho Yathakalam</i>	0.85	0.66	46.66%	33%	0	0	-
<i>Sukhena Cha Prabodhakam</i>	0.86	1	47.77%	72.22%	93	0.3286	NS
<i>Vaikaram Cha Swapana Adarshanam</i>	0	0	0	0	0	0	-
<i>Mano Buddhindriya Avyapti</i>	0.86	1	60%	70%	0	0	-

Table 19: Effect on the Hematological Values of 15 Patients of *Tamaka Shwasa* Group A.

Parameter	Mean Score			% Relief	SD +/-	SE +/-	‘t’	P
	B.T	A.T	D.F.					
Hb	12.56	13.07	-0.5133	4.35%	0.45	0.11	4.35	0.0001
T.L.C.	7138.66	6469	642.66	9.21%	594.66	153.5	4.184	0.0009
Neutrophils	67.86	63.13	4.73	6.54%	5.79	1.49	3.161	0.0069
Eosinophils	4.26	2.6	1.66	35.52%	0.97	0.25	6.614	0.0001
E.S.R.	18.066	12.8	5.266	31.94%	1.032	0.266	19.75	0.0001

Table 20: Effect on the Hematological Values of 15 Patients of *Tamaka Shwasa* Group B.

Parameter	Mean Score			% Relief	SD +/-	SE +/-	't'	P
	B.T	A.T	D.F.					
Hb	12.74	13.11	-0.37	-3.28%	0.566	0.14	2.55	0.023
T.L.C.	7326.66	6629.33	697.33	9.37%	660.40	170.51	4.090	0.0011
Neutrophils	67.2	62.22	4.93	7.14%	5.39	1.39	3.54	0.0032
Eosinophils	4.866	3.13	1.73	33.023%	1.099	0.28	6.614	0.0001
E.S.R.	18.33	12.53	5.6	30.023%	2.06	0.53	10.512	0.0001

Table 21: Comparative effect of both therapies on haematological investigations by using Unpaired 't' Test.

Lab. Findings	Mean		% Relief		F	't'	P	S
	Group A	Group B	Group A	Group B				
Hb	-0.5133	-0.37	-4.35%	-3.28%	1.539	0.4622	0.7455	NS
T.L.C.	642.66	697.33	9.21%	9.37%	1.233	0.2382	0.8135	NS
Neutrophils	4.73	4.93	6.54%	7.14%	1.157	0.0978	0.9228	NS
Eosinophil	1.66	1.73	35.52%	33.023%	1.270	0.1756	0.8619	NS
E.S.R	5.266	5.6	31.94%	30.023%	3.991	0.5595	0.5803	NS

Table 22: Effect on peak expiratory flow rate.

Group	Mean Score			% Relief	SD +/-	SE +/-	't'	P
	B.T	A.T	D.F.					
A	239.33	298	58.88	25.11%	29.24	7.55	7.77	0.0008
B	229.33	272.66	43.33	21.78%	18.38	4.74	9.127	0.0001

Table 23: Comparative Effect of Both therapies on P.E.F.R by using Unpaired 't' Test.

Mean		% Relief		F	't'	P	S
Group A	Group B	Group A	Group B				
29.44	18.38	25.11%	21.78%	2.530	1.719	0.0966	NS

Table 24: Overall effect of therapy on 30 patients of *tamaka shwasa*.

Assessment	Group A		Group B	
	No. of Pt.'s	%	No. of Pt.'s	%
Complete Remission (100)	0	0	0	0
Markedly Improvement (76-99)	01	6.66%	0	0
Moderate Improvement (51-75)	07	46.66%	09	60%
Mild Improvement (26-50)	07	46.66%	06	40%
No Effect (25)	0	0	0	0

• DISCUSSION

The fundamentals of *Ayurvedic* pharmacology are capable to give a better scientific lead in mode of drug action. Pharmacology of *Ayurveda* is based on the theory of *Rasa*, *Guna*, *Virya*,

Vipaka and *Prabhava* which were the simplest parameters in those days to find out the action of the drug. *Samprapti Vighatana* is said to be the treatment. Therefore the action of a drug means to dismantle the *Samprapti Ghatakas* of the disease. Hence to explain the mode of action of a drug means to establish a relationship between the *Samprapti Ghatakas* of the disease and pent fold principles of *Rasa, Guna, Virya, Vipaka* and *Prabhava* of a drug.

Group A - Devadarvyadi kwatha was prepared by mixing equal quantities of 6 drugs i.e. *Devadaru, Vacha, Vishva, Vyaghri, Kataphala* and *Pushkaramoola*. The *Devadarvyadi Kwatha* in *Tamaka Shwasa* is expected to work on *Pranavaha-Udakavaha-Rasavaha* and *Annavaha Srotasa* and should provide *Dipana-Pachana, Vatanulomana, Anulomana, Vata-Kaphahara* property. All drugs of *Devadarvyadi Kwatha* has *Kaphashamaka* property by 83.33%, 83.33% *Tikta* and *Katu Rasa* respectively, 66.66% *Tikshna Guna*, 83.33% *Katu Vipaka*. *Vatashamaka* property by 33.33% *Snigdha Guna*, 100% *Ushna Virya* and 16.66 % *Madhura Vipaka*, 100% *Laghu Guna*.

Group B - Vasadi kwatha was prepared by mixing equal quantities of 8 drugs i.e. *Vasa, Dhanyaka, Haridra, Guduchi, Bharangi, Pippali, Sunthi* and *Kantakari*. *Vasadi Kwatha* was having *Katu Rasa, Tikta Rasa, Ushna Virya, Katu Vipaka* and *Kapha- Vata Shamaka*, properties which are effective in antagonizing the *Tamaka Shwasa Roga*. Here, in *Vasadi Kwatha*, *Vasa* have the property of *Kaphaghna & Kaphanisaraka* by *Tikta Rasa, Katu Rasa, Ushna Virya, Katu Vipaka* and *Kapha-Vata Shamaka* properties in nature. All drugs of *Vasadi Kwatha Yoga* has 77.77% *Kapha-Vatashamaka* and 77.77 % *Ushna Virya* property. This *Yoga* is dominated by 66.66% *Katu Rasa* and *Tikta Rasa*, so this *Yoga* has *Kapha Shamaka* Property by 66.66% *Katu Rasa*, 66.66% *Tikta Rasa*, 55.55% *Katu Vipaka* and *Vatashamana* property by 11.11% *Madhura Rasa*, 77.77% *Ushna Virya* and 44.44% *Madhura Vipaka*. This is essential for treatment of *Tamaka Shwasa*.

By combine action of all these drugs improves *Jatharagni* as well as *Dhatvagni*. After the quality and quantity of *Rasa* and *Rakta Dhatu* improves, due to *Srotoshodhana* property of drugs, *Srotosanga* is decreased and *Dhatu* again Nourish all parts of body.

• Discussion on overall effect of therapy

Group-A:- Complete remission was not found in group of *Devadarvyadi Kwatha* though 6.66% of cases found marked relief while 46.66% of cases found moderate relief and mild relief in this group.

Group-B: - In this group also complete remission and marked relief was not found while 60% of cases found moderate relief and 40% of cases found mild relief.

No any patient was found with complete remission in both groups because of *Yapya* nature of *Tamaka Shwasa*.

The overall assessment considering the improvement in *Rogabala*, *Agnibala Dehabala*, and *Chetasabala* considering all the parameters outlined in the assessment criteria were 53.46%, 63.38, 52.77%, 42.58 respectively in Group A and 49.022%, 55.07%, 43.33%, 46.58% respectively in Group B.

So, Group A shows better result compare to Group B.

• CONCLUSION

Subsequent to methodical analysis, it may be concluded that *Devadarvyadi Kwatha* and *Vasadi Kwatha* are effective in the management of *Tamaka Shwasa* when *Doshas* are in morbid stage; and it can be adopted at any time when the patient needs. The *Kapha-Vatahara* drug used in the present study marvelous effect shows on *Tamaka Shwasa*.

- Comparing both Group A and B, in Group A total improvement was 53.37% and in Group B total improvement was 48.86%.
- At the end of this study conclude that null hypothesis (H0) is rejected and alternative hypothesis (H1) is accepted. i.e. *Devadarvyadi-Kwatha* will be more effective than *Vasadi-Kwatha* in management of *Tamaka Shwasa*.

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