WORLD JOURNAL OF PHARMACEUTICAL RESEARCH
SJIF Impact Factor 7.523
Volume 6, Issue 5, 636-645. Research Article ISSN 2277–7105

A COMPARATIVE STUDY OF *VIDANGADI VATI* AND *BHARANGYADI VATI* IN THE MANAGEMENT OF *TAMAK SHWASA* W.S.R TO BRONCHIAL ASTHMA.

[1]Dr. Shital Bhagiya*, [2]Dr. Ankita Limbachiya, [3]Dr. Shrija Mavani and [4]Dr Nirav Unadakat

[1]Dept of Panchkarma, IPGT & RA, Jamnagar.

[2]Dept of Kayachikitsa, Akhandanand Ayurved College, Ahmedabad.

[3]Dept of Panchkarma, IPGT & RA, Jamnagar.

[4]M.D.(kayachiktsa), Consultant, Noble Ayurveda Hospital, Junagadh.

Article Received on
27 Feb. 2017,

Revised on 19 March 2017,
Accepted on 08 April 2017

DOI: 10.20959/wjpr20175-8287

***Corresponding Author'**
Dr. Shital Bhagiya
Dept of Panchkarma, IPGT & RA, Jamnagar.

ABSTRACT

Background: As prevalence of Asthma is increasing steadily over the lateral part of the last century, first in the developed and developing world. Today's life is running so fast that people can't follow *Dincharaya* and *Ritucharya* which has been described in our texts and therefore, patients with chronic airway disorders like *Shwasa* are increasing. *Acharya Charaka* mentioned *Shwasa* as *Ashivisha* like, *Pranhara* and *Paramdurjaya Vyadhi*, Therefore its early management has been stressed so that patient may not be distressed by chronicity of *Shwasa.* Therefor the study was aimed to study etiopathogenesis, symptomatology and epidemiology of the *Tamakshwasa* and to assess efficacy of *Vidangadi vati* and *Bharangyadi vati* in the management of *Tamakshwasa.* **Method:** Thirty patients suffering from *Tamakshwasa* (Bronchial Asthma) between the age group of 16 to 60 years of either sex participated in the study. Study was a randomized, controlled, open label clinical study. Patients were randomly divided into two groups: Group A (*n* = 15) received *Vidangadivati,* 4 tab-tds (500mg for 1 tab.) for 6 weeks with *Ushnajala.* Group B (*n* = 15) *Bharangyadivati* with same dose and duration. Assessments were done after six weeks in both groups. **Result:** In Group A moderate response was found in 53.33% of cases, mild improvement in 26.66% of cases and 20% of patients had no relief. In Group B moderate response was found in 60% of cases, mild improvement in 26.66% of cases and 13.33% of patients had no relief. **Conclusion:** Study showed that *Vidangadi vati* is more effective in *Tamakshwas* then *Bharngyadi vati.*

KEYWORDS: *Bharangyadi Vati*, Bronchial Asthma, *Tamakshwasa*, *Vidangadi Vati*.

INTRODUCTION

At present, many chronic recurrent airway disorders are increasingly seen all over the global population. *Ayurveda* has described one of such disorder as *Tamaka shwasa*. 100 to 150 million people around the globe suffer from *Tamaka shwas* [congruent to bronchial asthma]. This number is continuously rising and worldwide number of deaths from this condition has reached over 180,000 annually.[1] The prevalence rate of chronic asthma in India in the age group 15–59 years is 19 per 1000 population in urban areas and 26 per 1000 in rural areas; and the total number of chronic asthma cases is nearly 32 million.[2]

Bronchial asthma can be clinically correlated with *Tamakashwas* as the signs and symptoms of *Tamakashwas* viz. dyspnoea, cough, and chest tightness are similar to that of bronchial asthma. Also some of the etiological factors like exposure to smoke, dust are similar. According to *Ayurveda*; repeated and long term exposure to various etiological factors[3] causes vitiation of the functions of *Pranavayu*, mainly breathing, which over a period of time initiates structural change (*Sthanvaigunya*) in the organ i.e. lungs. Elasticity and smoothness (*Mriduta* and *Masrunatva*) at the site starts changing to hardness and roughness (*Kathintva*, *Kharatva*) which hampers the normal constriction and dilatation process (*Sankocha* and *Vikasa Prakriya*). To combat the change, secretion of mucous (*Shleshma*) increases, but further dries due to *Ruksha Guna* and clogs the bronchial spaces (*Srotasavarodh)* reducing the lumen of bronchus. Breathing becomes difficult and laboured (*Alpalpa*, *Kupita*, *Sashabda*, *Sashoola*). After severe coughing a small amount of thick and sticky mucous (*Avila, Tantula and Styana Shleshma*) is expectorated. This clears the airway and patient feels better as he can breathe. These types of repeated attacks for a period of more than one year bring about a permanent or irreversible change in the structure of lungs (*Sthanvaigunya*). Therefore the disease becomes '*Yapya'* which means patient cannot be off medication.[4] As long as patient takes care of his diet, exercise and follows prophylactic treatment schedules the disease will not progress.

It is important to note that there are two basic approaches to *Shwas* treatment viz. *Shodhan* and *Shaman*. *Shaman* aims at relieving the congestion and reducing production of mucus. *Rasayan/Apunarbhava*[5] aspect aims at normalising the vitiated *dosha* i.e. *Pranvayu* and strengthening the organ; thereby prevents recurrence of the disease. *Acharya Charaka* has mentioned in treatment of *Shwasa* that Medicines and diet should be *Kaphavata hara, Ushna,*

and *Vatanuloman*.[6] Further, *Charaka* has mentioned that there is a possibility of fatal complications in *Karshana Chikitsa*.[7] *Shamana* and *Brimhana* medicine should be given with or without *Shodhana.*[8] As *Vaatahara* treatment will increase *Kapha* and *Kaphahara* treatment will increase *Vata*, but *Vatanulomana* treatment is good among all of these treatment.[9] Considering all of these views, here, Two *Shamana Yoga- Vidangadi vati* and *Bharangyadi Vati* has been selected for present study.

METHODOLOGY

Aims and Objects

1. To study effect of *Vidangadi vati* and *Bharangyadi vati* in the management of *Tamaka Shwasa*.
2. To study the etiopathogenesis, symptomatology and progress of the disease i.e. *Nidana Panchaka* and predominance of *Dosha* according to *Ayurvedic* classics as well as modern medical science.

Selection of Patients

Patients attending outpatient department of the institute were recruited for the study. The CONSORT statement guidelines have been followed in reporting the outcomes of the study.[10]

Thirty patients diagnosed as having *Tamaka shwas* were recruited from OPD and IPD of the Govt. Akhandanand Ayurved College, Ahmedabad.

Inclusion Criteria

1. Patients with classical signs and symptoms of *Tamakashwasa* were included in this study.
2. Patients were selected from 16 to 60 years of age group.
3. Chronicity varies from 1 to 8 years.

Exclusion Criteria

1. Patients in whom '*Shwas'* is present as a *Upadrava Lakshan*, *Poorvaroop* and *Arishta lakshan* of other disease.
2. Patients in whom the onset of disease is less than one year.
3. Patients with *Shwas* caused due to fatal injury of *Urasthita Marma* (*Stanmool*, *Stanrohit*, *Aapalaap*, *Aapsthambh*).
4. Patients with critical condition of *Shwas*.

5. Patient having complications like CCF, Core-pulmonale, Emphysema, *Rajayakshma* (T.B.), Pneumonia and malignancy etc. are not considered.

Research Design

The present study is a randomized, controlled, open label, parallel group comparative clinical study. The scholars involved in randomization, distribution and administration of study articles were independent from the investigators. Computer generated random numbers were utilized for the study. During study, patients were asked to adhere to the treatment protocol and report any adverse events to the investigators at the earliest. Any clinical manifestation that was likely to cause considerable distress was screened for possible adverse events. The study was approved by Institute Ethics Committee (Id-IEC/10/KC, Government Akhandanand Ayurveda College, Bhadra, Ahmedabad, Date of Approval 18/2/2014).

Treatment Groups

After the confirmed diagnosis of *Tamaka Shwasa* (Bronchial Asthma), 30 patients were randomly categorized into the following two groups.

(1) GROUP A –*Vidangadi vati*[11]

Drug: *Vidangadi vati* (Table 1).

Dose: 6 grams/day in divided doses 4 tab. (each tab. Contains 500 mg.).

***Anupan*:** *Ushnodak* (Luke warm water).

Duration: 6 weeks.

(2) GROUP – B - *Bharangyadi Vati*[12]

Drug: *Bharangyadi Vati* (Table 2)

Dose: 6 grams/day in divided doses 4 tab. (each tab. Contains 500 mg.)

***Anupan*:** *Ushnodak* (Luke warm water)

Duration: 6 weeks

Criteria For Assessment

- Assessment was done clinically on the basis of decrease in complains and improvement in health parameters.
- Improvement in the relief of *Dushti*, *Lakshana* of *Dosha*, *Dushya*, and *Srotas* were taken into account. In addition, following laboratory assessment were carried out after treatment.

a) Hematological investigations after completion of treatment were reported.
b) Respiratory function tests were repeated 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. They are as follows: *Swash kastata, Ativega Kasate, Parshve Avagrihyate, Ghurghurakam* as Cardian Symptoms and *Peenasa, Anindra, Shayane Shwasa Pidita, Asinolabhate Saukhyam, Lalate Sweda, Vishushkasyata* as Associated symptoms.

OBSERVATIONS

The observation showed that Maximum number of the patients belonged to middle Class (53.33%) with ratio of male (46.66%) and female (53.33%) among them 83.33% were from Hindu Religion. 83.33% patients belonged to urban area with chronicity of 1 to 3 years (50%) among them 76.66 patients were Vegetarian.

In *Sharirika Prakriti* maximum patients were of *Vata-Kapha Prakriti* (56.66%) and in *Manasika Prakruti* 60% were of *Raja-Tama*. Maximum patients were of *Madhyam Sara* (70%), *Madhyam Samhanana* (83.33%) *and Madhyam Satmya* (63.33%). Maximum patients preferred *Madhur Rasa* (86.66%) and *Katu Rasa* (90%). Maximum patients (86.66%) were having *Alpa Nidra*. *Manasa Bhava* like *Chinta* was present in 60% of patients.

The major *Nidana* factors reported by the patients were having *Vishamashana 83.33%*. In Allergic factor dust was present in majority of cases (51.16%). Cardinal signs and symptoms reported were *Shwasakastata* (100%), *AtivegatKasate (100%), Parsve Avagrihyate* (100%) and *Ghurghurakam* (100%). The associated symptoms found were *Peenasa* (96.66%), *Anindra* (90%), *Shayane Shwasa Pidita* (96.66%), *Asinolabhate Saukhyam* (96.66%), *Lalate Sweda* (90%) and *Vishushkasyata* (86.66%).

RESULTS

Group A provided Highly significant result in *Shwasakastata* (32.43%), *Ativege kaste* (48.89%), *Ghurghrakam* (46.67%), significant result in *Parsve Avagrihyate* (25.56%). Group B provide highly significant result in *Shwasakasatata* (36.84%), *Ativege kaste* (48.89%), *Ghurghrakam* (41.11%), *Parsve Avagrihyate* (43.33%)(Table 3).

The relief obtained in Group A 66.67% in *Vishuskasyata*, 64.71% in *Anindra*, 61.90% *in Peenasa*, 58.82% in *Lalate Sweda*, 46.43% in *Aasino Labhate Saukhyam* and 38.46% in *Shayane Shwasa Piditam* which were significant(<0.01). In group B 68.18% relief was found in *Vishuskasyata*, 67.78% in *Asinolabhate Saukhyam*, 65.56% in *Peenasa*, 64.44% in *Anindra*, 52.63% in *Lalate Sweda* and 42.83% in *Shayane Shwasa Piditam*. All were highly significant except *Lalate Sweda* (Table 4).

In Group A Highly significant results were found in Neutrophils 7.15% ↓, Eosinophil 32.39% ↓ and ESR 22.56% ↓, Hb 8.56% ↑ and TLC 7.09% ↓, PEFR 18.83% ↑. In Group B Highly significant results were found in Hb 7.84% ↑, Eosinophil 29.82% ↓ and ESR 20.12% ↓ , TLC 11.9%↓ ,Neutrophils 7.53% ↓, PEFR 24.35% ↑(Table 5).

In both Groups Highly significant results were found in Peak Expiratory Flow Rate with 18.83% relief in Group A and 24.35% Relief in Group B (Table 6).

Overall effect of therapy

In Group A complete remission was not found, while moderate response was found in 53.33% of cases, mild improvement was found in 26.66% of cases and 20% of patients had no relief. In Group B complete remission was not found, while moderate response was found in 60% of cases, mild improvement was found in 26.66% of cases and 13.33% of patients had no relief (Table 7).

TABELS

Table No 1: Contnent of *Vidandadi vati.*

Sr.no.	Drug	Latine name	Ratio
1	*Vidang*	Embelia ribes	1 part
2	*Nagar*	Ziziber officinale	1 part
3	*Rasana*	Pluchea lanceolata	1 part
4	*Pippali*	Piper longum	1 part
5	*Hingu*	Ferula narthex	1 part
6	*Saindhav*	Sodii chloridum	1 part
7	*Bharangi*	Clerodendrum serratum	1 part
8	*Yavakshar*	Potasii carbonas	1 part

Table no 2: Content of *Bharangyadi Vati.*

Sr.no	Drug	Latin name	Ratio
1.	*Bharangi*	Clerodendrum serratum	1 part
2.	*Guduchi*	Tinospora cordifolia	1 part
3.	*Nagarmotha*	Cyperus rotundus	1 part
4.	*Devadaru*	Cedrus deodara	1 part
5.	*Bhrihati*	Solanum indicum	1 part
6.	*Sunthi*	Zinzibr officinale	1 part
7.	*Pippali*	Solanum surattense	1 part
8.	*Pushkarmula*	Inula racemosa	1 part

Table no 3: Effect of therapy in cardinal symptoms of 15 Patients of *TamakaShwasa.*

Sr. No.	Complaints	Mean Score		D.F.	% Relief	W	P	
		B.T	A.T.					
1	*Shwasakastata*	2.47	1.67	0.83	32.43	66	<0.001	HS
		2.53	1.60	0.93	36.84	91	<0.001	HS
2	*Ativegekasate*	1.93	1.00	0.93	48.89	91	<0.001	HS
		2.27	1.13	1.13	48.89	91	<0.001	HS
3	*Parshve avagrihyte*	1.73	1.20	0.53	25.56	28	0.016	S
		1.80	1.07	0.73	43.33	66	<0.001	HS
4	*Ghurghurakam*	2.13	1.20	0.93	46.67	105	<0.001	HS
		2.20	1.20	1.00	41.11	66	<0.001	HS

Table No 4: Effect of therapy in associated symptoms of 15 Patients of *TamakaShwasa*

Sr. No.	Symptoms	Gr.	Mean Score		D.F.	% Relief	W	P	
			B.T	A.T.					
1	*Peenasa*	A	1.40	0.53	0.87	61.90	45	0.004	S
		B	2.00	0.67	1.33	65.56	105	<0.001	HS
2	*Anindra*	A	1.13	0.40	0.73	64.71	55	0.002	S
		B	1.53	0.53	1.00	64.44	78	<0.001	HS
3	*ShayaneShwasaPiditam*	A	1.73	1.07	0.67	38.46	55	0.002	S
		B	1.40	0.80	0.60	42.86	45	0.004	S
4	*Asinolabhatesaukhyam*	A	1.87	1.0	0.87	46.43	45	0.004	S
		B	1.53	0.53	1.00	67.78	78	<0.001	HS
5	*LalateSweda*	A	1.13	0.47	0.67	58.82	45	0.004	S
		B	1.27	0.60	0.67	52.63	55	0.002	S
6	*Vishuskasya*	A	1.20	0.40	0.80	66.67	55	0.002	S
		B	1.47	0.47	1.00	68.18	78	<0.001	HS

Table No 5: Effect on the Haematocrit Values of 15 Patients of *TamakaShwasa.*

Sr. No.	Parameter	Gr.	Mean Score		D.F.	% Relife	W	P	
			B.T.	A.T.					
1	Hb%	A	11.57	12.53	0.96	8.56	120	<0.001	HS
		B	11.99	12.93	0.94	7.84	105	<0.001	HS
2	TLC	A	7870	7260	610	7.09	101	<0.001	HS
		B	7893.33	6946.47	946.67	11.9	120	<0.001	HS
3	Neutrophils	A	61.53	57.00	4.53	7.15	105	<0.001	HS
		B	61.93	57.27	4.66	7.53	114	<0.001	HS
4	Eosinophils	A	6.13	4.00	2.13	32.39	91	<0.001	HS
		B	3.8	2.67	1.13	29.82	66	<0.001	HS
5	E.S.R.	A	26.00	19.73	6.27	22.56	91	<0.001	HS
		B	32.47	25.93	6.53	20.12	120	<0.001	HS

Table No 6: Effect on Peak Expiratory Flow Rate

Gr.	Mean Score		D.F.	% Relief	W	P	
	B.T	A.T.					
A	199.07	236.27	37.20	18.83	120	<0.001	HS
B	193.87	241.07	47.20	24.35	120	<0.001	HS

Table No 7: Overall Effects on 30 Patient of *TamakaShwasa*

Assessment	Group A		Group B	
	No. of Patients	%	No. of Patients.	%
Controlled (100%)	0	00	0	00
Marked responses (>75%)	0	00	0	00
Moderate response (50-75%)	8	53.33	9	60
Mild improvement (25-50%)	4	26.66	4	26.66
No response (<25%)	3	20	2	13.33

DISCUSSION

In *Shwasakastata* and *Ativegekasate* 32.43% and 48.89% relief was from Group-A while 36.84% and 48.89% relief was from Group-B respectively. Ingredients of both groups worked on *Jatharagni* and consequently on *Rasagni*. Due to proper work of *Jatharagni* and *Rasagni, Malaroopa Shleshma* is not produced which decreases *Shwasakastata* and *Ativegekaste*.

In *Parsve Avagrihyate* 25.56% relief was in Group-A while 43.33% relief was in Group B. *Parsve Avagrihyate* can be taken as chest tightness and this is suggesting obstruction in path of air. *Parsve Avagrihyate* decreases with reduction of *Malaroopa Shleshma.*

In *Ghurghurakam* in Group-A 46.67% relief and in Group-B 41.11% relief was noted. When *Jatharagni* doesn't work properly, conversion of *Rasa Dhatu* in next *Dhatu* is also disturbed and *Malaroopa Shleshma* is produced more and more. When patients come in contact with allergens this *Malaroopa Shleshma*is secreted in *Shwasa Marga* and musical sounds *(Ghurghurakam)* are produced. Both *Vidangadi vati* and *Bharangyadi Vati* are *Srotoshodhaka* which helped in reducing *Ghurghurakam.*

In Group-A 61.90% relief was found in *Peenasa* while in Group-B 65.56% relief was found. There are *Rasayana Dravyas* in both groups which help to build up immunity.

In Group-A Patients got relief in *Anindra* was 64.71% while in Group-B 64.44% relief was found in *Anindra*. The Patients generally wakes between 2 and 3 a.m. with chest tightness, cough and wheezing dyspnoea.

In Group- A 38.46% relief was in *Shayane Shwasa Piditam*a and In Group-B 42.86% relief was noted. During attack of *Tamaka Shwasa* patients cannot sleep because *Vayu* is trapped by *Kapha*. *Vidangadi vati* is *Srotoshodhaka* and *Vatanulomaka* which help to clear path of *Vata. Bharangyadi vati* contains *Deepana* property which helps to reduced production of *Malaroopa Kapha.*

Haemoglobin was increased by 8.56% in Group A and 7.84% in Group B. In *TamakaShwasa Malaroopa Kapha* is more produced and *Sara Roopa Dhatus* are not produced properly. For production of all *Dhatu Jatharagni* must be in it balance state. Here both groups have good effect on *Jatharagni* which in turn helps to produce more *Sara Roopa Dhatus* (Haemoglobin).

TLC was decreased by 7.09%, Neutrophils and Eosinophil's were decreased by 7.15% and 32.39% respectively in Group A. TLC and Neutrophils were decreased by 11.9% and 7.53% respectively and Eosinophil's were decreased by 29.82% in Group B. High eosinophil's value suggests allergic condition and extrinsic type of Asthma. *Pippali* and *Vidang* has good *Rasayana* effect that help to decrease eosinophil count.

CONCLUSION

Vatapradhana Samprapti and *Kaphapradhana Samprapti* may be correlated with pathophysiology of asthma like inflammation and endo-bronchial obstruction. Exposure to *Raja* and *Dhuma* may precipitate the symptoms. The patients having positive family history

in 1st degree relative are more prone to develop *Tamaka Shvasa.* Maximum patients were of *Vata Kapha Prakriti* indicates more susceptibility for this disease.

Study showed that *Vidangadi vati* is more effective in *Tamaka shwas* then *Bharngyadi vati* in all the parameters.

REFERANCE

1. http://www.who.int/mediacentre/factsheets/fs206/en.
2. World Health Organizations, Regional Office for South-East Asia. Non communicable diseases in the South-East Asia Region: Situation and response 2011. ISBN 978-92-9022-413-6 (NLM classification: WT 500)].
3. Vaidya J.T. Acharya, editor. Charaka Samhita of Agnivesha, Chikitsa Sthana; Shwas Roga Chikitsa Adhyayay, 17/11-16. Varanasi: Chowkambha orientalia, 2011; 533.
4. Paradkar H.S, Ashtanga Hridaya, Commentary of Arundatta and Hemadri, 13th Edition, Chaukhambha Sanskrit Sansthanan, Varanasi, 2000.
5. Shastri K., *Rasa Tarangini*; 11th Ed.; Motilal Banarasidas, Delhi, 1979.
6. Vaidya J.T. Acharya, editor. Charaka Samhita of Agnivesha, Chikitsa Sthana; Shwas Roga Chikitsa Adhyayay,17/147. Varanasi: Chowkambha orientalia, 2011; 539.
7. Vaidya J.T. Acharya, editor. Charaka Samhita of Agnivesha, Chikitsa Sthana; Shwas Roga Chikitsa Adhyayay,17/149. Varanasi: Chowkambha orientalia, 2011; 539.
8. Vaidya J.T. Acharya, editor. Charaka Samhita of Agnivesha, Chikitsa Sthana; Shwas Roga Chikitsa Adhyayay,17/150. Varanasi: Chowkambha orientalia, 2011; 539.
9. Vaidya J.T. Acharya, editor. Charaka Samhita of Agnivesha, Chikitsa Sthana; Shwas Roga Chikitsa Adhyayay, 17/148. Varanasi: Chowkambha orientalia, 2011; 539.
10. Moher D, Schulz KF, Altman DG. The CONSORT statement: Revised recommendations for improving the quality of reports of parallel‐group randomized trials. Ann Intern Med, 2001; 134: 657‐62.
11. Paradkar H.S, Ashtanga Hridaya, Commentary of Arundatta and Hemadri, Chikitsa Sthana 3/12, 13th Edition, Chowkambha Sanskrit Sansthanan, Varanasi, 2000.
12. Bhaishjya Ratnavali, with Siddhipradahindi commentary by Siddhinandan Mishra, Jvara Chikitsa 154. Chaukhmbha Surbharti Prakashana, 2007.