

A SINGLE ARM CLINICAL STUDY TO ASSESS UPASHAYATMAKA EFFECT OF TRITIYAKATPHALADI CHURNA IN TAMAKA SHWASA W.S.R TO BRONCHIAL ASTHMA

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ABSTRACT

Shwasa is a *Gambheera* and *Prana hara roga*, which involves *Pranavaha Srotas Avarodha*, causing difficulty in *Shwasa-Uchhshwasa*. *Shwasa roga* is of 5 types. *Tamaka shwasa* is one of the *gambheera vyadhis*. It is a *kapha pradhnya vyadhi*, presenting with *shwasa vega* with *tama pravasha*. Bronchial Asthma is a disease characterized by airway obstruction that is reversible (not completely) either spontaneously or with treatment, airway inflammation, airway hyper responsiveness to a variety of stimuli. It interferes with daily activity, which may lead to life threatening attacks. Ayurveda gives a wide range of treatment modalities despite of the disease being a *yapya vyadhi*. Here 40 subjects diagnosed with *tamaka shwasa*, fulfilling the inclusion criteria were randomly selected. *Tritiyakatphaladi churna* with *madhu* as *anupana* was given orally. The objective of the study is to check whether the yoga gives an *upashayatmaka* effect.

Keywords: *Tamaka shwasa*, bronchial asthma, *tritiyakatphaladi churna*

INTRODUCTION

Prana vayu is the most important amongst the *Pancha vayu*. *Murdhni* is its main *sthana* and its *karmas* are *Shiteevana, Kshavatu and Shwasa* etc.¹ Among the *Abhyantara srotas*, *Pranavaha Srotas* is the most important one, whose *dushti* causes *Hikka, Shwasa, Kasa* etc *vyadhis*. Acharya Charaka has explained five types of *Shwasa roga*, one among those is *Tamaka Shwasa*. He explains that it is a *Kapha vatatmakā vyadhi* and its *udbhava sthana* is *Pitta sthana*.² Here *vayu* attains *Pratilomagati* and reaches *Pranavaha srotas*, takes *Ashraya* in *Greeva* and *Shiras*, causes *dushti* of *Kapha* leading to obstruction of *Vayu* and manifests *Tamaka Shwasa*.³ Acharya Sushruta explains that when *Prana Vayu* along with *Kapha* leaves the *Prakruta karma* and attains *Urdhva gati*, produces *Shwasa-Udhvasa* is called as *Shwasa roga*.⁴ Madhavakara explains that, *Shwasa* is *Kapha vata anubandhi* and *Tamaka shwasa* is *Kapha Pradhanya*.⁵ Ashtanga Hridaya Kara also opines that it is *Kapha vata anubandhi*.⁶ The *laxanas* are, *Ateeva shwasa vega, Kasa vega, Kaphashteevana, Ghurghurakam, Shayana shwasa Peeditam* etc.⁷ *Nidanans* are excessive exposure to *Vayu, Raja, Dhuma, Sheeta sthana, Sheetambu sevana, Aama dosha, Mar-maghata, Ushma-sheeta padartha sevana. Nidanarthakari roga* of *Pandu, Atisara, Jwara* and *Chardi*.⁸ Bronchial asthma- Asthma is a Greek word, which means Panting. It is difficult to define it as it is not one homogeneous condition and because there is no one objective measurement or series of measurements that can be used to make diagnosis of Asthma. The condition was previously considered as Broncho spastic disorder only. It is now recognized as Asthma and is primarily an inflammatory disease. Bronchial Asthma is a disease characterized by airway obstruction that is reversible (not completely) either spontaneously or with treatment, airway inflammation, airway hyperresponsiveness to a variety of stimuli. Chronic inflammatory disorders of the airways in susceptible individuals, inflammatory symptoms are usually associated with widespread but variable airflow obstruction, and an increase in airway response.⁹ Epidemic proportions affecting 155 million individuals in the world. It is a condition which is most troublesome to

all age groups with prevalence of 5-10%. In youngsters' boys are more affected than girls and in adults' women are more affected than men. In India prevalence has been reported to 0.6% to 3.2% in rural and urban response is 4%. A lot of factors are responsible for either causation or exacerbation of bronchial asthma. The causative factors may be allergies, infections, occupational environment, Rhinitis and sinusitis etc allergens include, pollen, house dust, food allergies. It has been recognized that viral respiratory infections provoke and alter asthmatic responses. Genetic factors also play a contributing role in pathogenesis of bronchial asthma. It is characterized by wide variation over short periods of time in resistance to flow in the airway. The hallmark of the disease is the airflow obstruction. Three factors narrow airway calibre to limit the flow. (1) Airway smooth muscle contraction. (2) Gland and epithelial secretion and exudation in the airway lumen. (3) Inflammatory oedema and vasodilatation. The epithelial shedding and influx of the Eosinophils into the airway mucosa has been associated with Bronchial asthma.¹⁰ The symptoms include cough, wheezing, shortness of breath, chest tightness and modest degree of sputum production. There is no confirmatory diagnostic blood test, Lung function test; chest x-ray may help in the diagnosis. The line of treatment includes Pharmacological and non-pharmacological therapies. Nonpharmacological therapy includes patient and family education, environmental control, and immunotherapy. Pharmacological therapy includes, anti-inflammatory therapy, administration of Bronchodilators etc.¹¹ *Upashaya* is an *Ahara* or *Vihara* or *Aushadi*, which is *Sukhanubandha* (gives a soothing effect) to the patient and also pacifies the disease. When the *laxanas* are *Goodha, Avyakta* for diagnosis of the *vyadhi*, *Upashaya* and *Anupashaya* are helpful. If any *Ahara, vihara* or *Aushadhi* which is *Hetu, vyadhi vipareeta* that pacifies the symptoms it is the *Upashaya* of that particular disease. And if the condition worsens on administration it is the *Anupashaya*.¹² *Tritiyakātpthaladi choorna*¹³ is one such yoga explained in the *Sharangadhara samhita*, which has *Katphala, Pushkaramoola, Pippali*

and *Shringi* with *Madhu* as *Anupana*. All these are *Ushna* and *Teekshna guna yukta* and have *Kapha Vata hara* action. Hence, they are *Hetu vyadhi Vipareeta Aushadhi* type of *upashaya*. According to the *line of treatment of Tamaka Shwasa*, the drugs having *Vata Kaphagna* and *ushna* properties are to be used in its treatment, keeping this principle; present study was carried out to assess the *Upashayatmaka* effect of *Tiritiyakatphaladi churna* in *Tamaka shwasa* patients.

Objectives of the Study

- To study the *Nidana Panchaka* of *Tamaka shwasa* and aetiopathogenesis of bronchial asthma.
- To assess the *upashayatmaka* effect of *Tiritiyakatphaladichoorna* on *Tamaka shwasa*.

Inclusion Criteria

- Subjects presenting with *Pratyatma lakshana* of *Tamaka shwasa* and cardinal symptoms of Bronchial asthma.
- Age group of 20-60 years irrespective of sex.

Exclusion Criteria:

- Pregnant women and lactating mother.
- Subjects presenting with *Vega kaaleena Tamaka shwasa lakshana*.
- Diabetes mellitus.

- Subjects suffering from HIV, HBsAg, Pulmonary Koch's.
- Breathlessness due to any other pathology other than Bronchial asthma.

Parameters of the study:

Subjective parameters¹⁴:

Ateeva shwasa vega/Dyspnea; Kasa vega/cough; Kaphashteevana; Shayana shwasa peedita; Parshwa shola; Ghurghurakam/wheezing; Krichra bhaashitum; Aasino labhate sukham; Ushno sukham; Uchrito akshi; Lalaata sweda; mukha Shushukata; Megha ambu, sheeta vata, shleshma abhivardhate

Objective Parameters:

White blood cells; Absolute esinophil count; Erythrocyte sedimentation rate; Chest x-ray; Spirometry.

Study Design:

An observational clinical study, where a total of 40 subjects diagnosed with *Tamaka shwasa* were selected incidentally and randomly & were studied under single group.

Grade of improvement:

Marked relief - Above 75% improvement

Moderate relief - 50%-75% improvement

Mild relief - 25%-50% Improvement

No relief - Below 25% improvement

Observations and Results:

Table 1: *Nidana* wise distribution of the patients

Aharaja Hetu

Aharaja hetu	No. of Patients	Percentage
<i>Rukshanna</i>	14	35
<i>Vishamashana</i>	23	57.5
<i>Adhyashana</i>	33	82.5
<i>Sheeta Ashana</i>	38	95
<i>Sheeta pana</i>	35	87.5
<i>Vidahi ahara</i>	11	27.5
<i>Anoopa mamsa</i>	22	55
<i>Pishtanna</i>	19	47.5
<i>Guru ahara</i>	29	72.5
<i>Shleshmala dravya</i>	29	72.5
<i>Snigdha dravya</i>	32	80

Table 2: Viharaja Hetu

Viharaja Hetu	No. of Patients	Percentage
Raja	28	70
Dhuma	12	30
Ati vyayama	9	22.5
Sheeta sthana	24	60
Sheeta ambu snana	23	57.5
Vega dharana	23	57.5

Table 3: Purvarupa in 40 patients of Tamaka Shwasa

Purvarupa	No. of Patients	Percentage
Anaha	11	27.5
Parshwashoola	39	97.5
Hridaya peeda	26	65
Bhakta dwesha	30	75
Arti	34	85
Adhmana	15	37.5
Shankha nistoda	14	35

Table 4: Roopa in 40 patients of Tamaka Shwasa

Laxanas	No. of Patients	Percentage
Shwasa vega	40	100
Kasa vega	40	100
Kapha shteevana	32	80
Shayana shwasa peeda	39	97.5
Parshwashoola	40	100
Ghurghurakam	40	100
Krichra bhasha	30	75
Ushna sukham	39	97.5
Uchrito akshi	33	82.5
Lalata sweda	28	70
Mukha shushkata	35	87.5
Sheeta Abhivardhanam	40	100
Asino labhate sukham	35	87.5

Table 5: Effect of therapy on subjective parameters

Parameters	MEAN		Mean Differ- ence	% OF Relief	S.D	S.E	Z'	P
	BT	AT						
Kasa vega	2.33	0.35	1.98	79.58	0.62	0.098	20.18	<0.00001
Shwasa vega	2.13	0.18	1.95	89.17	0.5	0.079	24.64	<0.00001
Kapha shteevana	1.88	0.58	1.3	61.98	0.94	0.148	8.74	<0.00001
Shayana shwasa peeda	2.3	0.28	2.03	82.91	0.66	0.104	19.43	<0.00001
Parshwashoola	2.7	0.43	2.28	75	0.75	0.118	19.21	<0.00001
Ghurghurakam	2.55	0.28	2.28	83.33	0.68	0.107	21.19	<0.00001
Krichra bhasha	1.9	0.23	1.68	80.55	1.07	0.169	9.92	<0.00001
Ushna sukham	2	0.18	1.83	91.45	0.68	0.107	17	<0.00001

<i>Uchrita akshi</i>	2.05	0.1	1.95	92.42	1.04	0.164	11.85	<0.00001
<i>Lalata sweda</i>	1.68	0.15	1.55	90.23	1.13	0.178	8.66	<0.00001
<i>Mukha shushkata</i>	2.03	0.25	1.78	83.81	0.92	0.145	12.22	<0.00001
<i>Meghambu,sheetavata,abhivardhana</i>	2.48	0.85	1.63	52.08	0.67	0.106	15.37	<0.00001
<i>Asino labhate sukham</i>	2.2	0.25	1.98	82.86	0.95	0.15	13.17	<0.00001

Table 6: Effect of therapy on objective parameters

Paramaters	Mean		Mean Difference	% Of Relief	S.D	S.E	Z'	P
	BT	AT						
TLC	0.35	0	0.35	100	0.86	0.136	2.57	0.005085
ESR in males	2.64	0.35	2.29	76.88	0.663	0.11	19.8	<0.00001
ESR in females	2.89	0.22	2.66	85.18	0.5	0.16	16.002	<0.00001
Ratio of FVC/FEV1	1.78	0.75	1.05	68.8	0.51	0.08	13.01	<0.00001

Table 7: Overall Effect of Tiritiyakatphaladi choorna on 40 Patients of Tamaka shwasa

Relief	No. of Patients	Percentage	Remarks
> 75%	12	30	MARKED RELIEF
50% - 75%	27	67.5	MODERATE RELIEF
25% - 50%	1	2.5	MILD RELIEF
< 25%	0	0	NO RELIEF

DISCUSSION

Discussion helps in expansion of knowledge, by stimulation of thinking in a new way. The textual facts and the results obtained from the research have been discussed in this part. In general, “Shwasa” means respiration, it is a physiological phenomenon. When difficulty occurs in respiration it is called *Shwasa roga*.

In the *shwasa roga* the entire malfunction is done by *Vata* and *kapha dosha*. When we observe the *nidan*s mentioned in the classics they are divided into two categories, 1) which cause *kapha dushti* 2) which cause *vata dushti*.

The abnormality causing *doshas* mainly undergo two changes.

1. *Kapha* undergoes quantitative *vridhi*.
2. *Vata* takes *pratiloma gati*.

In the context of *Tamaka shwasa*, *shamana chikitsa* is given more importance than that of *shodhana*. Acharya Charaka states that any *dravya* having *kapha-vata hara* action, *Ushna veerya*, *vata anulomana* action should be taken for treatment.

Katphala has *Kashayatikta* and *katu rasa pradhana*, has *ushna veerya* and it has *Kapha shamaka* property. *Pippali* has *Katu rasa*, *Snigdha*, *tikshna guna yukta*, *ushna veerya*, has *deepana* and *kasa hara* action.

Karkataka shringi is *Kashaya* and *tikta rasa pradhana*, has *laghu guna*, *ushna veerya*. It has *kapha vata hara* action and it is mainly *kasaghna*. *Pushkar-amoola* is *tikta* and *katu rasa pradhanya*. *Tikshna*, *laghu guna yukta*. Has *ushna veerya*. It has *kapha vata hara* action. It is *hridya*, *shwasaghna* and mainly acts on *Parshwashoola*

All the 40 patients showed complete reduction in the TLC after the therapy. 20 out of 31 male patients had shown marked reduction in the ESR, while 11 of them had a higher count even after the therapy. 7 out of 7 female patients showed marked reduction in the ESR, while 2 of them had maintained the counts. 39 patients had shown marked reduction in the AEC count after the therapy and 1 of them had slightly high count i.e. between 451-550. 12 patients had shown marked changes (>80%) in the FVC: FEV1 ratio of spirometry readings. 28 of them had readings after therapy ranging between 79% – 40%. In the chest x - ray 8 patients had bronchial wall thickening before and after therapy, 7 of them showed reduction in bronchial wall thickening and 1 patient showed no changes even after the therapy. 39 patients had shown moderate to marked overall relief and 1 patient had not shown significant reduction in the symptoms.

CONCLUSION

Tamaka shwasa is a condition which develops due to *dushti* of *Avalambaka Kapha* and *Prana vayu*. It is characterized by *avarodha in Pranavaha srotas, agni vishamata* and *dushti of Pitta sthana*.

The disease was commonly found in 41-60 age groups, who suffered from the disease for more than 10 years. Maximum of the subjects were male personnel's, belonged to middle class. Majority of them were govt employees, retired persons, lived in urban areas and mostly exposed to allergic factors, consumed mixed diet, had *agnimandya*, with disease running in the families. Maximum of them were of *Kapha-vata prakruti*, which is in accordance with the *doshik* predominance in the disease. Majority of them were smokers, tobacco chewers. The disease usually exacerbated in the winters and rainy seasons.

The majority of the *nidanas* observed were, exposure to *Raja, dhuma, sheeta vata* and other allergic factors, consumption of *sheeta ahara, sheeta pana, shleshmala dravya, vataprakopaka dravyas* and *manasika* factors, *chinta, shoka*.

Nidana parivarjana and *ushnopachara* was advised.

The drugs of the *Tritiyakatphaladi choorna* had following effects: *Vata-Kapha hara, shwasa hara*, anti-histamine, anti-inflammatory effect and bronco spasm inhibition.

'Z' test was applied to the obtained data to analyse the results statistically. In 40 subjects, 12 (30%) of them had marked relief, 27 (67.5%) had moderate relief and 1 (2.5%) had mild relief.

No adverse effects of the drugs were seen in any of the subjects.

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