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Clinical Study of *Shirishadi* tablet in the management of *Tamaka Shvasa* w.s.r. to Bronchial Asthma

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ABSTRACT

Tamaka Shvasa is described as a most difficult to cure (*Yapya*) among all diseases in *Ayurveda*. In present study *Tamaka Shvasa* is correlated with Bronchial Asthma because of its symptomatology is much similar with *Tamaka Shvasa*. In modern medical science, steroids and bronchodilators are mainly used for its management, but they cause certain side effects. Present study was undertaken to provide safe and effective remedy for *Tamaka Shvasa* through *Ayurvedic* medicaments. *Shirishadi* tablet was given as internal medicine for 30 days. Upto 60% relief was found in signs and symptoms of *Tamaka Shvasa*.

Key words: *Bronchial Asthma, Shirishadi Tablet, Tamaka Shvasa.*

INTRODUCTION

Asthma affects 300 million people world-wide and more than 100 million persons will be diagnosed by 2025.^[1] *Tamaka Shvasa* is *Vata-Kapha Pradhana* and *Pita Sthana Samudbhava Vyadhi*.^[2] When *Vata* is obstructed by *Malaroopa Kapha* in *Pranavaha Srotas*, its movement becomes *Pratiloma* and *Atitivra Vega*.^[3] In *Tamaka Shvasa*, *Nija Hetus* (Intrinsic factors) like unwholesome diet and *Agantus Hetus* like *Raja, Dhuma, Shita Vata* etc. are involved.^[4] Due to *Jatharagnimandya* and *Rasagnimandya*, *Malaroopa Kapha* is produced more in *Tamaka Shvasa*. In these conditions drugs having properties of *Vatanulomana, Vata-Kapha Hara, Ushna* plays an important role in *Chikitsa* of *Tamaka Shvasa*.^[5] For

this purpose, *Shirishadi* tablet was selected. Both contents of tablet have *Vata-Kaphahara, Deepana, Rasayana* and *Shvasaghna* properties.

OBJECTIVES

To assess the efficacy of *Shirishadi* tablet in management of *Tamaka Shvasa* and to provide safe and effective remedy to the patients of *Tamaka Shvasa*.

MATERIALS AND METHODS

Selection of the patients

In present study, 15 patients having classical signs and symptoms of *Tamaka Shvasa* were selected from O.P.D. & I.P.D. of Kayachikitsa, Government Akhandanand Ayurveda Hospital and Maniben Ayurved Hospital, Ahmedabad.

Criteria for Diagnosis

The patients were diagnosed on the basis of classical signs and symptoms of *Tamaka Shvasa* described in *Ayurvedic* classics. The details of each patient were noted in specific proforma.

Inclusion Criteria

1. Patients of *Tamaka Shwasa* in the age group of 16 - 60 were taken.

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2. The patients having clinical features of *Tamaka Shvasa* as per *Ayurvedic* classics and modern medical science were selected.
3. Patients who are weak and especially not able to tolerate *Sansodhana* therapy were considered.
4. Chronicity varies from 1 to 8 years.

Exclusion Criteria

1. Patients having complications like CCF, Cor-pulmonale, Emphysema, Pneumonia, Tuberculosis & malignancy etc were not considered in research work.

Investigations

1. Routine hematological investigation such as Hb%, TLC, DLC, ESR.
2. Microscopic and routine examination of Urine and stool (if needed).
3. Peak Expiratory Flow Rate by Mini Peak Flow meter.
4. X-ray chest and sputum examinations whenever required. These investigations were conducted to exclude any other underlying pathology.

Grouping and management

Shirishadi tablet

- **Dose :** 4 tablet (each contain 500mg) twice a day.
- **Duration :** 4 weeks
- **Anupana :** *Ushnodaka* (Luke warm water)
- **Criteria for Assessment :** The following scoring pattern had prepared for the assessment of the therapy on the basis of signs and symptoms of the disease.

A. Cardinal Symptoms

The Medical Research Council (M.R.C.) dyspnoea scale for grading the degree of breathlessness was adopted for *Shvasakastata*.

Shvasakastata (Breathlessness)

- 0 - Not trouble by breathlessness except on strenuous exercise

- 1 - Troubled by shortness of breath on climbing 2-3 storeys.
- 2 - Walks slower than person of same age or stops after 15 min walking.
- 3 - Stops after walking 100 yards or after a few minute on ground level.
- 4 - Breathlessness at rest.

Ativege Kasate (Frequent bouts of coughing)

- 0 - No *Kasa*
- 1 - *Kasa Vega* sometimes not troublesome.
- 2 - *Kasa Vega* with pain, not disturbing the sleep.
- 3 - Very troublesome, *Kasa* does not even allow to sleep at night.

Parsve Avagrihyate (Chest tightness)

- 0 - No such feeling of chest tightness.
- 1 - Mild chest tightness during attack.
- 2 - Moderate chest tightness during attack.
- 3 - Severe chest tightness during attack.

Ghurghurakam (Wheezing)

- 0 - No wheezing.
- 1 - Wheezing only during attack.
- 2 - Very often wheezing sound.
- 3 - Wheezing throughout the day.

B. Associated Symptoms

Peenasa (Coryza)

- 0 - No *Peenasa*.
- 1 - *Peenasa* along with the attack.
- 2 - Very often *Peenasa* even without attack.
- 3 - Always *Peenasa* persisting.

Anindra (Disturbed sleep due to breathlessness)

- 0 - Sound Sleep.
- 1 - Undisturbed late sleep.
- 2 - Sleep disturbed in late night and early morning.

- 3 - No sleep.

Shayane Shvasa Pidita (Breathlessness during lying posture)

- 0 - No Shvasa Pidita during Sleep.
- 1 - Occasional Shvasa Pidita during Sleep.
- 2 - Very often Shvasa Pidita during Sleep.
- 3 - Always Shvasa Pidita during Sleep.

Asinolabhate Saukhyam (Comfort in sitting posture)

- 0 - can sleep easily.
- 1 - 1 pillow required.
- 2 - 2 pillow required.
- 3 - 3 pillow required.
- 4 - cant sleep, spontaneous sitting upright.

Lalate Sweda (Sweating over forehead)

- 0 - No Sweating over forehead.
- 1 - Mild perspiration.
- 2 - Moderate perspiration.
- 3 - Excessive perspiration.

Vishushkasyata (Dryness of mouth)

- 0 - No Vishushkasyata.
- 1 - Occasional Vishushkasyata.
- 2 - Very often Vishushkasyata
- 3 - Always Vishushkasyata.

Assessment on the basis of complaints

Controlled	-	100% relief in complaints
Marked Relief	-	≥ 75% relief in complaints
Moderate Relief	-	≥ 50 - 74 % relief in complaints
Mild Relief	-	≥ 25 - 49 % relief in complaints
No Relief	-	< 25% relief in complaints

STATISTICAL ANALYSIS

The paired 't' test had used for analyzing the data generated during the study. The value of P<0.05 or 0.01 is considered as statistically significant, the value of P<0.001 is considered statistically highly significant, the value of P>0.05 is considered statistically insignificant.

RESULT

Improvement in cardinal symptoms were Shwasakastata 60%, Ativege Kasate 58.06%, Parsve Avagrihyate 60.97% and Ghurghurakam 50% which were highly significant.

The total effect on signs and symptoms is as shown below in Table 1, effect on Hematological values and P.E.F.R. in Table 2. The Table 3 depicts the overall effect of therapy.

Table 1: Total effect of therapy on signs and symptoms of Tamaka Shwasa.

n	Mean Score		% Relief	X	S.D. ±	S.E. ±	t	p
	BT	AT						
15	18.08	8.2	54.61	9.88	1.99	0.51	19.15	<0.001

Table 2: Effect on the Haematocrit Values of 15 Patients of Tamaka Shwasa.

Parameter	Mean Score		% Relief	S.D. ±	S.E. ±	t	p
	B.T.	A.T.					
Hb%	11.93	12.02	3.35 ↑	0.47	0.12	3.29	<0.01
TLC	8146.6	7753.3	4.82 ↓	499.23	128.9	3.05	<0.01
Neutrophils	4.93	2.33	52.70 ↓	2.16	0.55	4.65	<0.001
Eosinophils	74.53	70.13	5.90 ↓	3.64	0.94	4.68	<0.001
E.S.R.	25.6	17.4	32.03 ↓	4.98	1.28	6.36	<0.001

P.E.F.R.	174	241. 33	27.90	28.1 4	7.26	9.2 6	<0.0 01
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Table 3: Overall Effect on 15 Patient of Tamaka Shvasa

Assessment	Group A	
	No. of Pts	%
Marked responses (>75%)	0	0
Moderate response (50-75%)	13	86.66
Mild improvement (25-50%)	2	13.33
No response (<25%)	0	0

Overall effects show that complete remission was not found while 86.66% of cases found moderate relief and 13.33% cases found mild relief in this group.

DISCUSSION

Statistically highly significant effect was observed on *Shwasakastata*, *Ativege Kasate*, *Parsve Avagrihyate*, *Ghurghurakam*, *Anindra*, *Shayane Shwasa Pidita*, *Asino Labhate Saukhyam*, *Lalate Sweda* and *Vishushkasyata* while significant effect was noted on *Peenasa*.

The increase in the Peak Expiratory Flow Rate values after treatment suggest the improvement in airway obstruction in alveoli of lungs and increase in ventilatory functions.

Probable mode of action

In *Tamaka Shwasa Vata-Kapha* are main *Dosha* while it originates in *Pittasthana*,^[6] so *Pitta* also involves indirectly. *Shirisha* is *Tridoshaghna* while *Pippali* is *Vata-Kapha Hara*, *Pitaavirodhi*^[7] and *Rasayana Dravya* of *Pranavaha Srotasa*. *Pippali* is pivotal for the purification process in the body, because it cleans the *Srotas* that transports nutrients and help in the removal of wastes from the body. The main factor in the disease is *Malarooopa Kapha* along with *Vata* and the properties of *Deepana* and *Pachana* of drug help to decrease production of *Malarooopa Kapha* from *Rasa Dhatu* and consequently obstruction of *Vata* will

clear. Extract from *Shirisha* include polyphenols, flavonoids, terpenes, amines etc. all of which are observed to have potential anti-allergic activity^[8] while Piperine, major compound of *Pippali* has strong anti oxidant, immunomodulatory and anti inflammatory activity.^[9]

CONCLUSION

Shirisha is best *Vishaghna* (anti poisonous) *Dravya*.^[10] It contains anti allergic and anti asthmatic activity. *Pippali* is good *Rasayana Dravya* of *Pranavaha Srotas* (respiratory system). In *Tamaka Shwasa* immunity is decreased and *Pippali* is good immunomodulatory drug. Overall both *Pippali* and *Shirish* showed good anti asthmatic activity and found beneficial in cases of allergic bronchial asthma. *Shirishadi* tablet can be taken for long time and have no any side effects if it is taken in proper dose.

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