

Therapeutic Role of *Shwasa Kuthar Rasa* in the Management of *Tamaka Shwasa* (Bronchial Asthma): A Single Group Randomized Clinical Trial

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ABSTRACT

Background: Bronchial Asthma is a disease of airways that is characterized by hyper-responsiveness of the tracheobronchial tree to a variety of stimuli resulting in widespread spasmodic narrowing of the airway. According to WHO 2016, Asthma affects 235 million people worldwide, out of which 15-20 million people are from India. In India, the prevalence of self-reported asthma is 2% among women aged 15-49 years and 1% among young women aged 15-19 years as well as men aged 15-49 years as per the latest report. Prevalence of asthma is more in urban areas than rural area as due to smoke, pollution and environmental factor. In Ayurveda Bronchial Asthma has a high resemblance with *Tamaka Shwasa* which comes under *Pranavaha Srotas*. It is described in *Brihatrayee* as well as *Laghutrayee*. Acharya Charak and Sushruta has given detailed description of *Tamaka Shwasa*.

Aim and Objectives: To study the effect of *shwasa kuthar rasa* in the management of (bronchial asthma) and to find out an effective *Ayurvedic* medicine for *Tamaka Shwasa* (Bronchial Asthma).
Material and

Methods: For this open clinical study, 10 patients of *Tamak Shwasa* (bronchial asthma) were registered from OPD of Kayachikitsa department and admitted in IPD of Pt. Khushilal Govt (Auto.) Ayurveda Hospital Bhopal. The patient was treated with *Shwasa Kuthar Rasa*. Duration of study was 30 days and follow up was done after completion of trial every week for 1 month, assessment was done on the basis of symptomatic relief and increase the range of FEV₁ and FVC value after treatment.

Observation: yielded symptomatic relief after treatment. The overall effect of the treatment in patient suggested that, there is 87.50 % relief in cough (*Kasa*), 90.01% relief in dyspnoea (*Shwasakashta*), 93.37% relief in chest tightness (*Urashool*) and 74.99% relief in wheezing (*Ghurghurak*) and value of FEV₁ and FVC were increased up to 22.29% & 24.43% after treatment.

Conclusion: On the basis of result obtained, it can be concluded that *Shwasa Kuthar Rasa* can be used as an effective medicine in the management of (Bronchial asthma).

Key Words: *Tamaka Shwasa*, Bronchial Asthma, *Shwasa Kuthar Rasa*.

INTRODUCTION

Shwasa word indicates both physiological and pathological state of respiration. Both Ayurveda and Modern medical science agree regarding the *nidana* of the disease as host factors (*Nija Hetu-Dosha Dushti And Aam*) and environmental

factors (*Aagantuja Hetus – Raja, Dhuma, Pragvata* etc). Difficulty in breathing and shortness of breath may be simply termed as *Shwasa* (asthma). *Sushruta* has mentioned the detailed definition of *Shwasaroga* in *Uttartantra*, when the *Prana Vayu* is performing its normal physiological

functions and become vitiated (*Viguna*), *Vata* moving in the reverse order pervades the channels (of vital breath), afflicts the neck and head and stimulates *Kapha* to cause *Margavarodh* (blockage of respiratory passage). Vitiating *Vayu* obstructed by *Kapha* and moves upwards then it results into a disease known as shwasa roga. As per *Ayurveda Shwasa* is mainly caused by the *Vata* and *Kapha Doshas*. *Shwasa* is broadly classified into five types in *Mahashwasa* (Dyspnoea major), *Urdhvaswasa* (Expiratory dyspnoea), *Chinnashwasa* (Chyne-stroke respiratory), *Kshudrashwasa* (Dyspnoea minor), *Tamaka Shwasa* (Bronchial asthma). *Tamaka Shwasa* is a type of *Shwasa Roga* affecting the *Pranavah Srotas*. *Tamaka Shwasa* classified as *Vata Pradhana* and *Kapha Pradhana* disease. In modern science, through etiology, pathogenesis and symptomatology *Tamaka Shwasa* can be correlated with bronchial Asthma. Bronchial Asthma which is a chronic inflammatory disease of airway. Asthma is an episodic disease manifests clinically by paroxysms of dyspnoea, prolonged expiration, exceedingly deep velocity, chest tightness with wheezing sound and coughing particularly at night or early morning which is immensely injurious to life. In *Charak Samhita Tamaka Shwasa* characterised by - “*Pratilomam Yda Vayuh Srotansi Pratipadhyate, Grivam Shirashcha Sangrahya Shleshmanam Samudiryate Cha. Karoti Pinasam Tena Ghurghurkam Tatha, Ativa Tivravegam Cha Shwasam Pranapidakam*”(C. Chi. 17/55-56).

Tamaka Shwasa is one of the leading causes of dyspnoea or shortness of breath. Sign and symptoms of *Tamaka Shwasa* are very much similar to that of bronchial Asthma. Bronchial asthma is a major global health problem, which can affect the population irrespective of age, sex, economic status etc. At present asthma is reported in 1.2-6.3% adults in most

countries. About 300 million people worldwide suffering from asthma and the number has risen at around 50% in the last decade.

The modern management of bronchial asthma includes bronchodilators, corticosteroids and other drugs having long term adverse effects and dose depending. So, there is need of some alternative medicine for bronchial asthma. Through this case study I would like to validate the role of *Shwasa Kuthar Rasa* with *Ardraka Swaras* (Ginger juice) as *Anupana* in the management of *Tamaka Shwasa* (Bronchial asthma).

AIM AND OBJECTIVES

- 1) To study the effect of *Shwasa Kuthar Rasa* in the management of *Tamaka Shwasa* (Bronchial Asthma).
- 2) To find out an effective *Ayurvedic* medicine for *Tamaka Shwasa* (Bronchial Asthma).

MATERIAL AND METHOD

*Selection and Source of patient

For this open randomized clinical study, 10 patients of *Tamaka Shwasa* (Bronchial Asthma) were registered from OPD of *Kayachikitsa* department and admitted in IPD of Pt. Khushilal Govt. (Auto.) Ayurveda Hospital Bhopal.

*Plan of study

- Patients taking allopathic medicines were stopped during the study period.
- The drugs required for *Shwasa Kuthar Rasa* were procured and prepared in pharmacy of Pt. KLS Govt. Ayurveda College Bhopal.

*Duration of study

30 days

*Follow up

After completion of trial every week for 1 month.

TREATMENT REGIMEN

Table No.-1

Trial drug	Dose	Frequency	Anupana	Duration
<i>Shwasa Kuthar Rasa</i>	125 mg	q.i.d. (4 times in a day)	<i>Ardraka Swarasa</i> (ginger juice)	30 days

INCLUSION CRITERIA (CCRAS PROTOCOL)

Following criteria will be considered for inclusion of the participants in the present study.

1. Age between 18-60 years irrespective of sex.
2. Patients having cardinal sign and symptoms as in Ayurvedic classics and contemporary medicine.
3. Night symptoms more than twice per month but less than once a week.
4. Patients who meet reversibility criteria.
5. FEV₁>80% of the predicted value.
6. Diagnosed mild and moderate cases of asthma (GINA) without any co-morbidity.

EXCLUSION CRITERIA (CCRAS PROTOCOL)

1. FEV₁<80%.
2. Patients having other associated diseases like LVF, URTI, Bronchiectasis, cases of tuberculosis, ILD, OLD.

3. Those who are on regular bronchodilators.
4. Patients having major systemic illness.
5. Patients having Renal and Hepatic disease.
6. Patients with HIV Positive.
7. Pregnant and lactating mothers should be excluded.
8. Patients without written consent form.

PARAMETERS OF ASSESSMENT

1. Coughing, dyspnoea, chest tightness and wheezing (GINA guidelines)
2. PFT (FEV₁ AND FVC)

STATISTICAL ANALYSIS

Statistical analysis was carried out by using Wilcoxon Sign Rank Test for subjective parameters and Paired t-Test for objective parameter. The result was interpreted at P<0.05, P<0.01, P<0.001 as level of significance.

RESULT

Table no.-2

Subjective parameters	W/ T+	T-	Mean		MD	%Relief	P-value	Significance
			BT	AT				
Coughing (<i>Kasa</i>)	45	0	0.85	0.10	0.75	87.50	0.0001	Extremely significant
Dyspnoea (<i>Shwasakashta</i>)	28	0	0.78	0.714	0.68	90.01	0.0039	Very significant
Chest Tightness (<i>Urashool</i>)	28	0	1.07	0.074	1.00	93.37	0.005	Extremely significant
Wheezing (<i>Ghurghurak</i>)	45	0	1.07	0.22	0.22	74.99	0.015	Significant
Objective parameter	t value							
FEV ₁	4.18	-	1.85	2.26	0.41	↑22.29	<0.0001	Extremely significant
FVC	4.22	-	1.56	1.94	0.38	↑24.43	<0.0001	Extremely significant

INTERPRETATION

The effect of *Shwasa Kuthar Rasa* was observed in the clinical parameters under criteria for assessment. There was 87.50% relief in cough (*Kasa*), 90.01% relief in dyspnoea (*Shwasakashtata*), 93.37% relief in chest tightness (*Urashool*) and 74.99% relief in wheezing (*Ghurghurak*), which is statistically very significant at the level of P<0.05. In FEV₁ and FVC there were 22.29% and 24.43% of change respectively, which is statistically extremely significant at the level of P<0.0001.

DISCUSSION

Shwaskuthar Rasa counteracts the symptoms of *Tamaka Shwasa* due to the action of its ingredients which directly act on *Pranavaha Srotasa*. *Shwasakuthar Rasa* is a herbomineral drug and it contains minerals such as *Parada* (mercury), *Gandhaka* (sulphur), *Tankana* (borax) and *Manahshila* (arsenic sulphide) in purified form and herbs like purified *Vatsanabha* (*aconitum ferox*), *Pippali* (*p. longum*), *Maricha* (*p. nigrum*) and *Shunthi* (*zingiber officinale*) as per *Ayurvedic* text.

Table No. 3: Showing the Rasapanchaka Karmukta of Shwasakuthar Rasa

Rasa	Katu	Agnideepak, Srotoavarodhahr	Amapachak,
	Tikta	Agnideepan, Srotovishodhan	Pachan,
Guna	Ruksha	Kaphanashak, Amanashak	
	Teekshma	Kapha-Chhedan, Kaphanihsaraka, Srotoshodhak	
	Vyavayi & Vikasi	Vata-Kaphahra, Kapha-Nirharan, quick action in Vegavastha (acute phase)	
Veerya	Ushna	Deepan, Pachan, Swedan, Srotovishodhan	
Vipaka	Katu	Agnideepan, Nashak	Malarupi-Kapha

All the drugs of *Shwasakuthar Rasa* have *Ushna Veerya* and *Vata-Kaphahara* properties. *Vata* and *Kapha* are the main *Doshas* which are involved in *Tamaka Shwasa Samprapti* and this formulation is having *Kapha-Vatashamaka Karma* due to its *Katu Rasa*, *Tikshna-Vyavayi-Vikasi Guna*, *Katu Vipaka* and *Ushna Veerya*. Its most of the ingredients are mainly *Kapha-Nihsaraka* with *Laghu*, *Ruksha* and *Ushna Guna*, therefore it mainly acts on *Agnimandhya* and breaks the *Kapha Dosh Pradhan Samprapti* of *Tamaka Shwasa* and makes relieve in symptoms of *Tamaka Shwasa*.

CONCLUSION

Shwasa Kuthar Rasa is one of the reputed herbal-mineral formulation described in various classical text of Ayurved. Classically the drug is used in diseases related with respiratory system like *Shwasa Roga* (bronchial asthma) and *Kasa* (bronchitis). The present clinical study shows that *Shwas Kuthar Rasa* work effectively in the management of *Tamaka Shwasa* (Bronchial Asthma). Oral medication of *Shwas Kuthar Rasa* can be efficiently done as no adverse effect were observed. There is relief in symptoms of *Tamaka Shwasa*. *Shwas Kuthar Rasa* is significant for *Vata-Kapha Doshas*. Therefore *Dyspnoea*, prolonged expiration and chest tightness have also reduced. *Ardraka Swaras* (Ginger juice) is also indicated as *Anupana* that is also beneficial in *Shwasa* and *Kasa Roga*. Ginger contains two important sulphur based amino acids

called cysteine and methionine which can act as phytochelatin (Important for heavy metal detoxification). While there is scope for further research, but it is important must be given to attain appreciable results in the management of *Tamaka Shwasa* (bronchial asthma). This is the safe and effective formulations indicated for *Tamaka shwasa*.

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