

THE SHWASAHARA EFFECT OF AGASTYA HARITAKI AVALEHA IN TAMAK-SHWAS (BRONCHIAL ASTHMA): A CLINICAL STUDY

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ABSTRACT

Out of the most morbid disorders, the disease *Shwas* (Asthma) is also becoming a major health problem of the society. The prevalence of *Shwas Vyadhi* & the rate of mortality are also increasing daily. Along with the other causative factors mostly the environmental pollution playing a major aggravating factor of the *Shwas Vyadhi*. In reference to this, '*Agastya Haritaki*' *Kalpa* was chosen to use in *Tamak – Shwas* (Bronchial asthma) as a *Vyadhihara Kalpa* (Curative treatment). *Agastya Haritaki* is a *Rasayana* & *Vyadhihara Kalpa* (Rejuvenating & Curative treatment) which is to be used in *Avegawastha* (non-acute phase) of *Tamak - Shwas* (Bronchial asthma) according to *Charakacharya*. It is an easily acceptable medicine with no or minimal side effects. *Agastya Haritaki Avaleha* was administered in 30 patients for 10 weeks in a prescribed dose. After completion of this treatment again evaluation of general symptoms, physical parameters & other investigations were done. All data generated & collected during the study was subjected to statistical analysis to reach to final results & conclusions. Out of the 30 patients included in the study, none patient showed total relief in symptoms, 21 patients were markedly improved (50-100% relief) while 09 patients showed improvement (25-50% relief). No one patient remained unchanged. On follow up study of *Tamak - Shwas* in all 30 patients over a period of 06 months showed that 22 patients had no attack of *Tamak - Shwas* while 08 patients had attack of *Tamak - Shwas* once in 06 months. This proved sustainability of effect of *Rasayana* this formulation. Thus it is observed that '*Agastya Haritaki Avaleha*' worked as *Vyadhihara* as well as *Rasayana* (Curative & rejuvenative treatment). It enhances the quality of *dhatu*s & this performs its *Vyadhinashana* functions. It gives strength to the *Pranavaha Strotas*, thus recurrences of Respiratory tract infections are also reduced.

Key-Words: *Tamak – Shwas, Vyadhihara, Rasayana, Shwasahara*

INTRODUCTION

Ayurveda deals with preventive, promotive as well as curative aspects. The latest definition of 'Health' as brought out by WHO is 'Total Physical, mental, social & spiritual well - being & not just absence

of a disease' which *Ayurveda* has been preaching over the centuries.

As the time changes, the lifestyle of people is changing day by day. Therefore some diseases, which are troublesome to the

people since the ancient time, are becoming major health hazards of the society, e.g. *Madhumeha* (Diabetes), *Raktagata Vata* (Hypertension), *Rajyakshma* (Tuberculosis), *Arbuda* (Cancer), *Shwas* (Asthma) etc.

Out of the most morbid disorders, the disease *Shwas* (Asthma) is also becoming a major health problem of the society. The prevalence of *Shwas Vyadhi* & the rate of mortality are also increasing daily. Along with the other causative factors mostly the environmental pollution playing a major aggravating factor of the *Shwas Vyadhi*.

Tamak - Shwas i.e. Bronchial asthma is a common disease affecting 10 - 20 % of the population & there is an evidence that the prevalence of *Tamak - Shwas AS* is increasing, but the reason for this being unknown. In various institutions of medicine, the study about the treatment of *Tamak - Shwas* is going on over a larger period of time however still no permanent solution regarding the control & treatment of *Tamak - Shwas* has not been established till today, so this is also an effort, which may be some sort of help for the management of this *vyadhi*.

In the context of various current health problems, leading to impairment of immune system; it becomes the need of a time to study the ancient concept of Rasayana to ameliorate the immune system alongwith curative treatment.

In reference to this, ' *Agastya Haritaki* ' *Kalpa* was chosen to use in *Tamak - Shwas* (Bronchial asthma) as a *Vyadhihara Kalpa* (Curative treatment). *Agastya Haritaki* is a *Rasayana* & *Vyadhihara Kalpa* (Rejuvenating & Curative treatment) which is to be used in *Avegawastha* (non-acute

phase) of *Tamak - Shwas* (Bronchial asthma) according to *Charakacharya*.

Having considered all these facts, this particular subject was proposed to study from different perspective with the attempt, supported by evidence based Ayurveda.

Materials & Methods:

Type of Study: Open uncontrolled (Single-Arm) Clinical Study

Criteria for Selection of Patients

A) Inclusion Criteria

- 1) Age group between 20 to 60 years of age
- 2) Sex- Both males and females
- 3) Patients having signs and symptoms of *Tamak-shwas* (Bronchial Asthma) in *Awegawastha* (non-acute phase)

B) Exclusion Criteria

- Patients having age below 20 years and more than 60 years.
- Patients having asthma or breathlessness due to renal or cardiac Causes
- Patients having acute attacks or status asthmatics stage
- Patients having other systemic disorders like Diabetes mellitus, Carcinoma, Pulmonary T. B., hepatitis
- Patients having HIV, AIDS & other STDS

Ethical Clearance & Consent:

The study design was approved by the institutional ethical committee, and signed informed consent was obtained from all the patients.

Plan of Clinical Trial:

Number of Patients: Total number of patients included in this study was 30.

Drug: *Agastya Haritaki Avaleha* was prepared with the help of *Rasashastra* & *Bhaishajya Kalpana Dept*

Dose: 01 Pala (4 tola = 40gms) in two divided dosage, with empty stomach

Duration of Treatment: 10 weeks

Follow up: Was taken after every one week.

Diet: Patient's regular diet

Criteria for the Assessment of Patients & Results of the Treatment:

The efficacy of the therapy was assessed on the basis of subjective as well as objective criteria. Most of the symptoms & signs of *Tamak Shwas* (Bronchial asthma) described in Ayurveda are subjective in nature. Hence multidimensional scoring system was adapted for statistical analysis and to give results on subjective parameters. Score was given according to the severity of symptoms as follows:

- A] *Shwas - Kashtata* (Dyspnoea)
- B] *Kasa* (Coughing)
- C] *Aasino Labhate Saukhyam* (Relief in sitting posture)
- D] *Peenas* (Nasal discharge)
- E] *Anidra* (Sleeplessness)
- F] *Sweda - Pravritti* (Perspiration)
- G] *Ghurghurakam* (Rhonchi)

Investigations:

Following investigations were done for every patient before starting the treatment & after completion of the treatment.

- Blood Investigations: Haemoglobin, R.B.Cs, ESR, TLC and DLC
- Lung Function Tests (LFT)
 1. Respiratory Rate (R/R)
 2. Expansion of chest (EOC)
 3. Breath Holding Time (BHT)
 4. Peak Expiratory Flow Rate (PEFR) – FEV1-
 5. Inspiration Time
 6. Expiration Time

7.

X-Ray Chest – PA View and ECG was done to exclude any other pathology.

Patients undergoing trial were examined clinically at every follow up to maintain a record of the same. Record and follow up of all the patients included in the trial was documented and maintained in the case record form.

Assessment of Effect of Therapy:

The effect of the therapy was assessed in terms of cured (100% relief), markedly improved (50% to 100% relief), improved (25% to 50% relief) and unchanged (Less than 25% or no relief).

All the data generated & collected during the study was subjected to statistical analysis to reach final results & conclusions.

A) For objective Parameters (Quantitative Data) (i.e. Improvement in Physical Parameters & Improvement in Hematological parameters) parametric tests are applied i.e. student's 't' test.

B) For subjective Parameters (Qualitative Data) (Relief in Symptoms) Non - Parametric test is applied i.e. Wilcoxon signed Rank Test

Results: Clinical Assessment of Patients

The patients suffering from *Tamak-Shwas* (Bronchial asthma) which were included in the trial had to undergo clinical examination at every follow up of one week for clinical assessment of the improvement in signs & symptoms. For the assessment of patients, the specific criteria was used which has been already described in Materials & Methods (Design of Study). On the basis of those criteria the statistical analysis of improvement in symptoms & signs was done.

Percentage of Relief in General Symptoms Score -

1)	Shwas - Kashtata	-	76.12%
2)	Kasa	-	77.14%
3)	Aasino Labhate Saukhyam	-	70.17%
4)	Peenas	-	78.43%
5)	Anidra	-	55.56%
6)	Sweda - Pravritti	-	62.50%
7)	Rhonchi	-	65.63%

Table No: 1 Showing Effect on Physical Parameters of Patients of Tamak- Shwas

Sr. No.	Physical Parameters in their respective units	Mean of Difference \pm SD	S.E.	t_{29}	p
1	Respiratory Rate (R/R)	4.20 \pm 1.43	0.26	16.1	<0.001 Highly significant
2	Expansion of Chest (EOC)	1.50 \pm 0.69	0.13	11.54	<0.001 Highly significant
3	Breath Holding Time (BHT)	2.70 \pm 1.26	0.23	11.74	<0.001 Highly significant
4	PEFR-FEV1	28.00 \pm 12.15	2.22	12.61	<0.001 Highly significant
5	Inspiration Time	0.93 \pm 0.36	0.07	13.29	<0.001 Highly significant
6	Expiration Time	1.03 \pm 0.41	0.07	14.71	<0.001 Highly significant

Table No 2. Effect on Haematological Investigations of Patients of Tamak- Shwas

Sr. No.	Haematological Investigations in their respective units	Mean of Difference \pm SD	S.E.	t_{29}	p
1	Haemoglobin (Hb gm %)	0.44 \pm 0.54	0.10	4.40	<0.001 Highly significant
2	Total R.B.Cs (TRC)	0.11 \pm 0.14	0.03	3.67	<0.001 Highly significant
3	Total Leucocyte Count (TLC)	200 \pm 954.12	174.11	1.15	>0.05 Not significant
4	Eosinophil Count	1.43 \pm 1.77	0.32	4.47	<0.001 Highly significant
5	Neutrophil Count	0.47 \pm 6.38	1.16	0.41	>0.05 Not significant

6	Lymphocyte Count	1.67 ± 8.07	1.74	1.14	>0.05 Not significant
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Table No: 3. Statistical Analysis of Symptoms of Patients of Tamak-Shwas Wilcoxon-matched-pairs signed-ranks Test

Sr. No.	Symptom		Mean	SD	SE	Sum of all Signed Ranks	No. of Pairs	Value of 'Z'	p
1	Shwas-Kashtata (Dyspnoea)	BT	2.23	0.43	0.08	465.0	30	4.78	<0.001 Highly Significant
		AT	0.53	0.51	0.09				
		Diffe.	1.70	0.54	0.097				
2	Kasa (Coughing)	BT	2.33	0.48	0.09	465.0	30	4.78	<0.001 Highly Significant
		AT	0.53	0.51	0.09				
		Diffe.	1.80	0.48	0.09				
3	Aasino Labhate Saukhyam	BT	1.90	0.40	0.073	378.0	27	6.42	<0.001 Highly Significant
		AT	0.57	0.50	0.092				
		Diffe.	1.33	0.66	0.12				
4	Peenas	BT	1.70	0.88	0.16	378.0	27	6.42	<0.001 Highly Significant
		AT	0.36	0.49	0.089				
		Diffe.	1.33	0.71	0.13				
5	Anidra	BT	1.50	0.51	0.09	325.0	25	4.37	<0.001 Highly Significant
		AT	0.67	0.66	0.12				
		Diffe.	0.83	0.37	0.07				
6	Sweda-Pravritti	BT	1.07	0.58	0.11	210.0	20	3.92	<0.001 Highly Significant
		AT	0.40	0.50	0.09				
		Diffe.	0.67	0.48	0.09				
7	Rhonchi	BT	2.13	0.57	0.104	465.0	30	4.78	<0.001 Highly Significant
		AT	0.73	0.64	0.12				
		Diffe.	1.40	0.50	0.09				

Table No. 4 Showing Total Effect of Therapy on 30 Patients of Tamak- Shwas

Sr. No.	Total Effect of Therapy	No. of Patients	Percentage
1.	Cured (100%)	00	0%
2.	Markedly Improved (50-100%)	21	70%
3.	Improved (25-50%)	09	30%
4.	Unchanged (0-25%)	00	0%
Total		30	100%

Observation of Recurrences of Shwas-Vega within period of 6 months

Recurrence of *shwas* was observed in all 30 patients on follow up study of six months. 22 patients (73.3%) had no attack of

shwas up to six months while 08 patients (26.67%) had attack once or twice with in the period of 6 months.

DISCUSSION

Considering the symptomatology, etiology, prognosis and treatment of the *Tamak-Shwas*, the resemblance is drawn in favour of Bronchial Asthma, a common respiratory disorder. Asthma is a disease of airways which is characterized by increased responsiveness of the tracheo-bronchial tree to a multiplicity of stimuli.

In *Tamak-Shwas* the imbalanced status of *Vata & Kapha Dosha* remains in *Lina - Awastha*. *Pranavaha strotas* is the main place of manifestation of the disease in *Vegawastha* (acute phase). *Charakacharya* has stated the *Shodhana Chikitsa* for *Balavan* patient having dominance of *kapha Dosha* while *Shamana* in the form of *Tarpana* or *Brimhana chikitsa* for *Hinabala* patient having dominance of *Vayu Dosha*. *Shamana* is advised for *Bala & Vriddha* also. Diet & medicine in *Shwas* should have properties such as *Ushna, Vatanulomana, Vata - Kaphaharaka & mostly Anilapaham*.

Agastya Haritaki Avaleha is one of the *Rasayana kalpa* explained by *Charakacharya* especially for the diseases of *Pranavaha Strotas*. It performs both functions-*Rasayana* as well as *Vyadhihara*. It was easy to prepare, affordable & well tolerated to the patients with no undesired effects.

Shwas Kashtata, Ghurghurakam (Rhonchi), *Peenas & Kasa* were the most prominent symptoms present in the patients included in this study. *Agastya Haritaki Avaleha* was given to the patients mostly in the *Awegwastha* (non-acute phase) for 10

weeks which showed significant subside of symptoms which were shown by percentage of relief in symptoms & by statistical analysis which was highly significant.

The onset of action of this drug could be in the very first week, symptoms started to fall from the first week & improvement was noticed in the further weeks of treatment. Hence it should be continued to further more, to reduce the risk of relapse & severity of *Tamak-Shwas*.

There was improvement in physical parameters i.e. pulmonary function tests seen after completion of treatment which was highly significant statistically. There was significant improvement in Hemoglobin level & Total R.B.Cs count. Eosinophil count was markedly reduced which showed clinical efficacy of '*Agastya Haritaki Avaleha*' mainly on Allergic asthma. There was significant effect on E. S. R. value which may be evident to prevention in recurrent Respiratory Tract infections (RTIs) which predispose or exacerbate asthmatic attacks.

Out of the 30 patients included in the study, none patient showed total relief in symptoms, 21 patients were markedly improved (50-100% relief) while 09 patients showed improvement (25-50% relief). No one patient remained unchanged.

On Follow Up study of six months in all 30 patients for observation of recurrence of *Shwas - Vega* showed that 22 patients (73.33%) had no attack of *shwas* while 08 patients (26.67%) had attack once in the period of 6 months. It was done to prove the sustainability of effects of *Rasayana*.

In this study, drug is given only for 10 weeks. As *Tamak - Shwas* is a *Yapya Vyadhi* (palliable disease) as mentioned by

Charakacharya, if this drug given over a long period of time, relapse would not be there & results would be more significant.

Thus by taking all these facts into consideration it can be said that there is major advantage of this classical formulation for the patient as it prolonged the duration between two attacks & decreased period of attack allow the patients to continue their day-to-day activities & saves improvement time of people & renders the patients better Quality of Life.

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