

A Clinical Report on Three Avaleha Formulations in the Management of Tamaka Shwasa (Bronchial Asthma)

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ABSTRACT

Almost all the traditional health care delivery systems claim effective management of asthma. Among them, Ayurveda is one with a strong scientific background which was translated into recommendations for clinical management of this condition. Bronchial asthma closely resembles *Tamaka Shwasa* in Ayurveda. With the projected increase in the proportion of the world's population, that is urban from 45% to 59% in 2025, there is likely to be a marked increase in the number of asthmatics worldwide over the next two decades. The WHO and International Asthma Council (IAC) consultation report published in 1998 on Implementation of Asthma Guidelines highlights that, wherever there is the use of traditional medicines in asthma care, the conventional therapy should not be stopped because of lack of evidence of safety and efficacy of these therapies. Clinical researches carried out in different institutes of Ayurveda on *Tamaka Shwasa* with avaleha formulations have been proved with significant results, giving a strong scientific base regarding the safety and efficacy of the Ayurvedic treatment. Here, an attempt has been made to compile the clinical research works of three compound formulations, namely *Vasa khanda kushmanda avaleha*, *Bharangiguda Avaleha* and *Shirishavaleha* on *Tamaka Shwasa* (Bronchial Asthma).

Key words: *Tamaka Shwasa*; Bronchial asthma; *Vasa khanda kushmanda avaleha*; *Bharangiguda Avaleha*; *Shirishavaleha*.

INTRODUCTION

Bronchial asthma¹ is characterized by difficulty in breathing, cough, wheezing and chest tightness. The paroxysm attack can last for days to a month² which results in handicapped days and sleepless nights, thus disturbing the normal lifestyle of a person. It is common and prevalent worldwide, equally affecting both sexes in adults. In children male female ratio is 2:1.³ Since long, this is a burning

problem allotting masses throughout the globe. According to World Health Organization survey of 17.4% of all deaths and 13.3% of all disability, 100-150 million of global population suffer from bronchial asthma, of which 1/10th are Indians. A survey conducted by WHO reported that approximately 1,80,000 deaths are being reported annually.⁴

Breathing difficulty is the main symptom of *Tamaka Shwasa*⁵ and in severe cases it may be associated with darkness in front of the eyes. *Tamaka Shwasa* is considered as *Yapya Vyadhi*⁶, i.e. chronic in nature according to Ayurveda. Modern medicine considers asthma as a manageable disease which is incurable. The etiological factors aimed at *Acharya Charaka*, like *Rajaso dhuma vataabhyaam*⁷ etc, also mimic the etiological factors of Bronchial Asthma. This chronic disease is of multi-factorial origin like environmental pollution, psychological stress, irregular and un-wholesome dietary habits and exposure to wide range of allergens. Ayurvedic science is one with a

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strong scientific background, which was translated into recommendations for clinical management of this dreadful condition.

The WHO and International Asthma Council (IAC) consultation report published in 1998 on Implementation of Asthma Guidelines highlights that, wherever there is use of traditional medicines in asthma care, the conventional therapy should not be stopped because of the lack of evidence of safety and efficacy of these therapies.⁸ Many clinical researches are carried out on *Tamaka Shwasa* where Ayurvedic compound formulations have been proved with significant results, giving a strong scientific base regarding the safety and efficacy of the Ayurvedic treatment. Clinical research works of three compound formulations, namely *VasaKhanda kushmanda avaleha*,⁹ *Bharangiguda Avaleha*¹⁰ and *Shirishavaleha*¹¹ on *Tamaka Shwasa* (Bronchial Asthma) are compiled to highlight the efficacy of the Ayurvedic products.

MATERIALS AND METHODS

a) *VasaKhanda kushmanda Avaleha*

The ingredients of the compound formulation *Vasakhanda kushmanda avaleha* are mentioned in Table 1.

Clinical study design

Trial drug- *VasaKhandaKushmanda Avaleha*

Sample size- 20 patients

Dose- Orally 12 gm twice / day.

Duration- 30 days.

Follow up study: 15 days.

Study design

Single blind clinical study, wherein 20 patients suffering from *Tamaka Shwasa* between the age group 16 - 65 years were selected for the study.¹²

b) *Bharangiguda Avaleha*

The ingredients of the compound formulation *Bharangiguda Avaleha* are mentioned in Table 2.

Clinical study design

Trial drug- *Bharangiguda Avaleha*

Sample size- 16 patients

Dose- Orally 12 gm twice / day with luke warm water.

Duration- 30 days.

Follow up study: 15 days

Study design

Single blind clinical study. Patients suffering from *Tamaka Shwasa* between the age group 20 - 60 years were selected.

c) *Shirishavaleha*

The ingredients of the compound formulation *Shirishavaleha* are mentioned in the Table 3.

Clinical study design

Selected patients were randomly divided into two groups viz.

Group-A: Treated with *Shirishavaleha* : Prepared from *Twak* (Bark)

Group-B: Treated with *Shirishavaleha* : Prepared from *Sara* (Heart wood)

Dose

1. *Shirishavaleha (Twak)* : 10g twice daily with Luke warm water

2. *Shirishavaleha (Sara)* : 10g twice daily with Luke warm water

Duration: 28 days (4 weeks)

Follow up study: 15 days

Study design

Single blind clinical study. Patients suffering from *Tamaka Shwasa* between the age group 20 - 60 years were selected.

Table 1: Formulation composition of *VasaKhanda kushmanda avaleha*

Sl.No	Name of Drug	Botanical name	Part	Quantity in gram
1	Vasa (decoction)	<i>Adhatoda vasica</i> Linn.	W P	3072 L
2	Kushmanda	<i>Benincasa cerifera</i> Savi.	Fr	2400
3	Khanda sharakara	Sugar candy	-	4800
4	Ghrita	Cows ghee	-	768
5	Madhu	Honey	-	384
Prakshepa dravyas				
6	Musta	<i>Cyperus rotundus</i> Linn.	Rz	12
7	Amalaki	<i>Phyllanthus emblica</i> Linn.	Fr	12
8	Bharangi	<i>Clerodendrum indicum</i> Linn.	Rt	12
9	Vamshalochana	<i>Bambusa arundinacia</i> willd.	S.C	12
10	Twaka	<i>Cinnamomum zeylanicum</i> Blume.	St Bk	12
11	Ela	<i>Elettaria cardamomum</i> Maton.	Sd	12
12	Talisa patra	<i>Abies webbiana</i> Lindl.	Lf	12
13	Eluva	<i>Aloe barbadensis</i> Mill.	Lf	48
14	Shunti	<i>Zingiber officinale</i> Rosc.	Rz	48
15	Dhanyaka	<i>Coriandnum sativum</i> Linn.	Fr	48
16	Maricha	<i>Piper nigrum</i> Linn.	Fr	48
17	Pippali	<i>Piper longum</i> Linn.	Fr	192

Table 2: Formulation composition of *Bharangiguda avaleha*

Sl.No	Name of Drug	Botanical name	Part	Quantity in gram
1	Bharangi	<i>Clerodendrum Serratum</i> Linn.	Rt	5000
2	Bilva	<i>Aegle Marmelos</i> Corr.	Rt	5000
3	Shyonaka	<i>Oroxylum indicum</i> Vent.	Rt	
4	Agnimantha	<i>Clerodendron phlomoides</i> Linn.	Rt	
5	Patala	<i>Stereospermum Suaveolens</i> DC.	Rt	
6	Gambhari	<i>Gmelina arborea</i> Linn.	Rt	
7	Shaliparni	<i>Desmodium gangaticum</i> DC.	W P	
8	Prishnaparni	<i>Uraria Picta</i> Desv.	W P	
9	Brihati	<i>Solanum indicum</i> Linn.	W P	
10	Kantakari	<i>Solanum xanthocarpum</i> Sch. & Wendl.	W P	
11	Gokshura	<i>Tribulus terrestris</i> Linn.	W P	
12	Hareetaki	<i>Terminalia chebula</i> Retz.	Fruit rind	1000
13	Jala	Water		44 L
14	Decoction	¼ th reduction		11 L
15	Guda	Jaggery	-	5000
16	Madhu	Honey	-	300
Prakshepa dravyas				
17	Maricha	<i>Piper nigrum</i> Linn.	Fr	150
18	Pippali	<i>Piper longum</i> Linn.	Fr	
19	Shunti	<i>Zingiber officinale</i> Rosc.	Rz	
20	Twaka	<i>Cinnamomum zeylanicum</i> Blume.	St Bk	150
21	Ela	<i>Elettaria cardamomum</i> Maton.	Sd	
22	Talisa patra	<i>Abies webbiana</i> Lindl.	Lf	
23	Yavakshara	Mixture of Potassium salts	-	25

Table 3: Formulation composition of Shirishavaleha

Sl.No	Ingredient	Botanical Name	Part	Quantity in gram
1.	<i>Shirisha</i>	<i>Albizia lebeck</i> Benth.	Bk / Ht Wd	2400
2.	<i>Guda</i>	Jaggery	-	9600
3.	<i>Jala (w/w)</i>	Water	-	24.500 L
Prakshepa dravyas				
4.	<i>Pippali</i>	<i>Piper longum</i> Linn.	Fr	48
5.	<i>Priyangu</i>	<i>Callicarpa macrophylla</i> Vahl.	Fl	48
6.	<i>Kushtha</i>	<i>Saussurea lappa</i> CB Clarke	Rt	48
7.	<i>Ela</i>	<i>Elettaria cardemomum</i> Maton.	Sd	48
8.	<i>Nilini</i>	<i>Indigofera tinctoria</i> Linn.	Rt	48
9.	<i>Haridra</i>	<i>Curcuma longa</i> Linn.	Rz	48
10.	<i>Daruharidra</i>	<i>Berberis aristata</i> DC.	St	48
11.	<i>Shunthi</i>	<i>Zingiber officinale</i> Roscoe.	Rz	48
12.	<i>Nagkeshara</i>	<i>Mesua ferrea</i> Linn.	Stmn	48

RESULTS AND DISCUSSION

Discussion on *VasaKhandaKushmanda Avaleha*

Highly significant relief was seen in parameters like *Kasa*, *Kaphanisteevanam* at $p < 0.001$ and significant relief at $p < 0.02$ was seen in the parameters like *Shwasa*, *Ghurghuraka*, *Kantodhvamsa*, *Krichra-Bhasana* and *Anidra*. Highly significant relief was seen in the parameter *Aseeno labhatesukham* and *PEFR* at $p < 0.001$. On analyzing the results, statistically insignificant relief was found in parameters like *Peenasa* and *Parshvaghraha*.

Effect of *VasaKhandaKushmanda Avaleha* on the peak flow meter

The trial drug *VasaKhandaKushmanda Avaleha* showed insignificant relief $p > 0.02$ after 15 days of treatment. But after 30 days of treatment and during follow up it showed highly significant relief $p < 0.001$ with an improvement of 44.73% and 26.31% respectively. No adverse effects were found during the study.

Bharangiguda Avaleha

In the *Bharangiguda Avaleha* group of 16 patients of *Tamaka Shwasa*, there was 77.45% relief in *Shwasakashtata*, relief in *Kasa* upto

78.35%, *Pinasa* was relieved upto 88.10% all of which were statistically highly significant ($p < 0.001$). Symptoms *Urahshula* and *Parshvashula* were reduced by 100%, which were statistically highly significant ($p < 0.001$). The feature of *Ghurghurakam*, *Kaphastheevan*, *Kanthodhvamsa* was reduced by 72.46%, 92.78%, 93.45% respectively and are statistically highly significant ($p < 0.001$). On the Cardinal symptoms of *Shwasa*, *Bharangiguda Avaleha* showed highly significant result at $p < 0.001$. The percentage of relief was 84.18% in *Bharangiguda Avaleha* treated group.

The symptom *Bhrama* was reduced by 80%, which was statistically significant ($p < 0.05$). *Krichchhrabhashitam* was reduced upto 88.89%, which was statistically highly significant ($p < 0.001$). The relief in *Uchchhritaksha* was 83.62%, which was statistically significant ($p < 0.01$). The symptom *Vishushkasyata*, *Lalata Sveda*, *Shleshma Vimokshante*, *Muhurtam*, *Sukham*, *Ushnabhinandati*, *Asino Labhate Saukhyam* were relieved by 83.50%, 78.90%, 54.11%, 42.78%, 40.18% respectively and were statistically highly significant ($p < 0.001$). Overall effect of therapy reveals that *Bharangiguda Avaleha* has got good effect in treating the patients of *Tamaka Shwasa Roga*.

Discussion on Shirishavaleha

Both groups of *Shirishavaleha* showed highly significant results at $p < 0.01$ level over frequency, intensity as well as duration of dyspnoea. But the percentage change was more in Group - B, i.e. 55.06%, 55.55% and 58.2% than that of Group - A, i.e. 40.45%, 50.23% and 53%. Highly significant results were obtained on *Kasa*, *Kapha Sthivana* and *Pinasa* in both groups $p < 0.001$, while percentage change was more in Group - B. Results on *Parshwa Shoola* were found to be significant in Group - A ($p < 0.05$) while in Group - B, it was highly significant ($p < 0.01$). Highly significant relief on the symptom *Kanthe Ghuraghurakam* was observed in both the groups. Both the groups showed highly significant results on *Aasino Labhate saukhyam* and *Shleshma Vimochyate Saukhyam* at $p < 0.001$. Maximum 50% of the patients showed moderate improvement, followed by 21.15% patients with marked improvement and 19.23% mild improvement. 11.54 % of the registered patients didn't have much change.

In the treatment of *Shwasa*, *Acharyas* give more importance to *Shamana* and *Brihmana* therapies by explaining the complications of *Shodhana chikitsa*.¹³ *Avalehas* are *Shamana* and *Brihmana* dosage forms. Hence, the statement given by the *Acharyas* are proved with scientific background. All the three compound avaleha formulations showed good results in the management of *Tamaka Shwasa* (Bronchial Asthma).

CONCLUSION

The clinical research works of three compound *avaleha* formulations, namely *VasaKhanda kushmanda avaleha*, *Bharangiguda Avaleha* and *Shirishavaleha* in the management of *Tamaka Shwasa* (Bronchial Asthma) have shown highly significant results. No adverse effects were found during the treatment duration. These clinical researches have given a strong scientific base regarding the safety and efficacy of the Ayurvedic treatment on

Tamaka Shwasa (Bronchial asthma), which will help the society to get rid of the ailment.

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