

## A COMPARATIVE CLINICAL STUDY OF BHARANGIGUDA AVALEHA AND BHARANGYADI ARISHTA IN THE MANAGEMENT OF SHWASA

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### Abstract

All the time less theories of Ayurveda is availed to the patient only by means of Bhaishajya Kalpana. Avaleha Kalpana and Sandhana Kalpana are the formulations, which are efficacious as well as preferred by the patients and thence, these has been our choice for the research study. The Trial drugs Bharangiguda Avaleha and Bharangyadi Arishta were used in the management of Shwasa. Both the trial drugs were showing good results in shwasa, but better results were found in Bharangiguda Avaleha group.

**Key words:** Bharangiguda Avaleha; Bharangyadi Arishta; Shwasa.

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## INTRODUCTION

Ayurveda can be concised and understood in “Trisutra” i.e. Hetu, Linga and Aushadha from which Aushadha means Bhaishaja.<sup>[1]</sup> Importance of Bhaishaja is mentioned under the heading of Chikitsa Chatuspada in which properties of dravyas should be Bahukalpam, Bahugunam, Sampanam and Yogyam.<sup>[2]</sup> The five basic Kalpanas are Swarasa, Kalka, Kwatha, Hima and Phanta.<sup>[3]</sup> These basic Kalpanas are mentioned in Charaka Samhita and the reason behind their origin can be seen in the Charaka Chikitsasthana.<sup>[4]</sup> Since these basic Kalpanas had several drawbacks such as short shelf life, taste, palatability etc., several Upakalpanas came into existence on the basis of Bahukalpam” for e.g. Avaleha Kalpana, Sandhana Kalpana, Sneha Kalpana etc. Among the above Kalpanas study of “AVALEHA KALPANA” and “ARISHTA KALPANA” has been selected to evaluate the efficacy and to explore the hidden pharmaceutical properties. Moreover because of their relative longer shelf life and their utility in curative, preventive and promotive nature, their role in the field of health is distinctly evident.

Hence, one of the Avaleha Kalpana, Bharangiguda Avaleha from the Reference Chakradutta<sup>[5]</sup> was chosen for the present study. To comprehend the relative efficacy of Arishta Kalpana, the drug Bharangi (*Clerodendron serratum* Linn.) with the usable part as Twaka (Bark)<sup>[6]</sup> and with the support of the presence of the pharmaceutical preparation “Bharangisura”<sup>[7]</sup> the ingredients of Bharangiguda Avaleha were suitably processed to prepare the Bharangyadi Arishta. Arishta was prepared by using yeast as fermenting initiator and as per general method of Sandhana Kalpana.

Shwasa Roga of the Pranavaha Srotas is very commonest disease, occurring in worldwide population. Here, the formulations selected have its efficacy in curing Shwasa Roga as per the classical references. Comparative clinical

study of both the pharmaceutical formulations namely - Bharangiguda Avaleha and Bharangyadi Arishta was planned to carry out under the present study.

## MATERIAL AND METHODS

### Bharangiguda Avaleha

Vrinda Sangraha by Acharya Vrinda Madhava is the first classic in the 9<sup>th</sup> century to describe Bharangiguda Avaleha in the context of Shwasa Roga. Later on in 11<sup>th</sup> century Acharya Chakrapanidatta repeated the same Yoga in Chakradatta and further on five more Acharyas of different time period repeated the same verse of the Bharangiguda Avaleha.<sup>[8]</sup>

### Pharmaceutical procedure

The ingredients, 1 to 2 are coarsely powdered and kept in a vessel. The specified quantity of water was added and mixed to the powder. Haritaki (Ingredient 3) was bundled in a piece of cloth, which was immersed by suspension as in Dola Yantra. The mixture was boiled till the Haritaki becomes soft. The bundle was then removed. The Haritaki and jaggery was added to the decoction and boiled to the required Paka. After attaining avaleha siddha lakshanas the fine powders of Prakshepa Dravyas was added. Honey was added after the Leha has become cool. In this method the seeds from the boiled Haritaki are removed before proceeding to Leha Paka as mentioned above. Dose: 1 Haritaki and ½ Pala (25 g) of Leha.

Anupana: Luke warm water. Therapeutic use: Agnimandhya, Kasa, Shwasa. (Table 1)

### Bharangyadi Arishta

With a plan to evaluate the effectiveness of Bharangiguda Avaleha in the Arishta form, the ingredients of Bharangiguda Avaleha were suitably processed to accomplish Bharangyadi Arishta, which is elaborated in Table 2.

**Table 1: Ingredients of Bhrangiguda Avaleha**

Sr. No.	Ingredients	Latin/ English name	Quantity	
1.	Bharangi Dashamula (Bilva, Shyonaka, Agnimantha, Patala,	<i>Clerodendron serratum</i> Linn. <i>Aegle marmelos</i> Corr. <i>Oroxylum indicum</i> Vent. <i>Clerodendron phlomoides</i> Linn. <i>Stereospermum suaveolens</i> DC <i>Gmelina arborea</i> Linn.	100 Pala	5 Kg.
2.	Gambhari, Kantakari, Brihati, Gokshura, Shalaparni, Prishniparni)	<i>Solanum xanthocarpum</i> Sch.& Wendl. <i>Solanum indicum</i> Linn. <i>Tribulus terrestris</i> Linn. <i>Desmodium gangaticum</i> DC <i>Uraria picta</i> Desv.	100 Pala	5 Kg.
3.	Haritaki	<i>Terminalia Chebula</i> Retz.	100 Nos.	1 Kg.
4.	Jala Reduced to (Vol. of Water)	Water	4 times 1/4th	44 litre 11 litre
5.	Guda	Jaggery Prakshepa Drayas	1 Tula	5 Kg.
6.	Madhu	Honey <i>Zingiber officinale</i> Rosc.	6 Pala	300 gm.
7.	Trikata (Sunthi, Maricha, Pippali)	<i>Piper nigrum</i> Linn. <i>Piper longum</i> Linn. <i>Cinnamomum zeylanicum</i> Breyn.	3 Pala	150 gm.
8.	Trijata (Tvak, Ela, Patra)	<i>Elettaria Cardamomum</i> Maton <i>Cinnamomum tamala</i> Nees & Eberm	3 Pala	150 gm.
9.	Yavakshara	Mixture of Potassium salts	2 Karsha	25 gm.

**Table 2: Ingredients of Bhrangigudi Arishta**

Sr.No.	Ingredients	Latin/ English name	Quantity	
1.	Bharangi Dashamula (Bilva, Shyonaka, Agnimantha, Patala,	<i>Clerodendron serratum</i> Linn. <i>Aegle marmelos</i> Corr. <i>Oroxylum indicum</i> Vent. <i>Clerodendron phlomoides</i> Linn. <i>Stereospermum suaveolens</i> DC <i>Gmelina arborea</i> Linn.	100 Pala	5 Kg.
2.	Gambhari, Kantakari, Brihati, Gokshura, Shalaparni, Prishniparni)	<i>Solanum xanthocarpum</i> Sch. & Wendl. <i>Solanum indicum</i> Linn. <i>Tribulus terrestris</i> Linn. <i>Desmodium gangaticum</i> DC <i>Uraria picta</i> Desv.	100 Pala	5 Kg.
3.	Haritaki	<i>Terminalia Chebula</i> Retz.	100 Nos.	1 Kg.
4.	Jala taken for Kwatha Reduced to (Vol. of Water)	Water	4 times 1/4 <sup>th</sup>	44 litre 11 litre
5.	Guda	Jaggery	1 Tula	5 Kg.
6.	Yeast	Yeast <b>Prakshepa Drayas</b>	200mg/litre	2.2 g.
7.	Madhu	Honey <i>Zingiber officinale</i> Rosc.	6 Pala	300 g.
8.	Trikata (Sunthi, Maricha, Pippali)	<i>Piper nigrum</i> Linn. <i>Piper longum</i> Linn. <i>Cinnamomum zeylanicum</i> Breyn.	3 Pala	150 g.
9.	Trijata (Tvak, Ela, Patra)	<i>Elettaria Cardamomum</i> Maton <i>Cinnamomum tamala</i> Nees & Eberm	3 Pala	150 g.
10.	Yavakshara	Mixture of Potassium salts	2 Karsha	25 g.

## Pharmaceutical procedure

The procedure to prepare Bharangyadi Arishta is as follows: Kwatha Nirmana – 4 parts of water – to Bharangi, Dashamula and Haritaki – was added and reduced  $\frac{1}{4}$ <sup>th</sup>. Meanwhile the Sandhana Patra was prepared by Dhoopana using Vacha, Jatamansi, Guggulu etc. Guda (Jaggery) was added to the Kwatha, dissolved, filtered, poured into Sandhana Patra. Prescribed amount of Prakshepa drayas were added and yeast in the concentration 200 mg/litre was added. Sandhana Patra was kept under non-ambient conditions to resist atmosphere variations, opened at regular intervals for observations. In about 20-30 days, completion of the Sandhana Prakriya was checked and after confirmation it was filtered, stored in suitable container for further use.

## Clinical study

Bharangiguda Avaleha and Bharangyadi Arishta were evaluated for their comparative efficacy on the patients suffering from Shwasa. Assessment was done on the basis of a specially designed proforma for that purpose. Bharangiguda Avaleha in the dose 12 g b.i.d. with lukewarm water and Bharangyadi Arishta in the dose 20 ml b.i.d. with equal quantity of water, duration for both being 30 days were advised and the effects on the signs and symptoms were assessed before treatment and their remission or modification after treatment were noted.

## Selection of Patients

The patients of Shwasa Roga having classical sign and symptomatology were selected. Patients were selected randomly irrespective of their age, sex, religion, etc. from O.P.D. and I.P.D. of Rasashastra and Bhaishajya Kalpana Department, I.P.G.T.&R.A., Jamnagar, Gujarat.

## Grouping of Patients

Selected patients were randomly divided into two group viz. Group-A: Treated with Bharangiguda Avaleha. Group-B: Treated with Bharangyadi Arishta.

## Criteria for the Assessment

Efficacy of the treatment was assessed on the relief produced by drugs on the cardinal sign and symptoms before and after treatment. Laboratory investigations conducted before and after treatment were also considered as criteria for assessment. (Annexure 1)

### Subjective criteria

A subjective criteria like sign and symptoms of patient by scoring pattern was applied.

### Objective criteria

Biophysical parameters like pulse rate, respiratory rate, blood pressure, body weight etc. were observed before and after treatment.

## RESULTS

Total 35 patients of Shwasa Roga were registered out of which 30 patients completed the course of the treatment with follow up and 5 patients left the treatment in between. (Table 3) Majority of the patients in this study has shown Krura Koshtha (56.67%). Followed by 26.67% patients were having Mridu Koshtha. (Table 4) In this study, majority of patients had shown regular bowel i.e. in 66.67%. 23.33% patients had history of constipation. (Table 5) The maximum numbers of 100% patients were having the habit of taking tea or coffee. 33.33% patients were having the habit of smoking. 10% patients were having snuff addiction. Only 6.67% patients were having the addition of Tobacco chewing. (Table 6)

## Annexure 1: Scoring pattern

<b>A.</b>	<b>Cardinal Symptoms</b>	
1.	Shwasakashtata (Dyspnoea)	
-	No Shwasakashtata	0
-	Shwasakashtata after heavy work, relieved by rest	1
-	Shwasakashtata on slight exertion	2
-	Shwasakashtata even at rest	3
2.	<b>Kasa (Cough)</b>	
-	No Kasa	0
-	Kasavega sometimes but does not troublesome.	1
-	Troublesome Kasa, but do not disturbing the sleep.	2
-	Very trouble some Kasa, does not even allowing to sleep at night.	3
3.	<b>Pinasa (Coryza)</b>	
-	No Pinasa	0
-	Pinasa along with attack	1
-	Pinasa even without attack	2
-	Pinasa always persisting	3
4.	<b>Kaphastheevan</b>	
-	No Kaphastheevan	0
-	Occasional Kaphastheevan	1
-	Very often Kaphastheevan	2
-	Always Kaphastheevan	3
5.	<b>Urahshula</b>	
-	No Urahshula	0
-	Urahshula along with the attack	1
-	Very often Urahshula even without attack	2
-	Always Urahshula	3
6.	<b>Parshvashula</b>	
-	No Parshvashula	0
-	Parshvashula along with the attack	1
-	Very often Parshvashula even without attack	2
-	Always Parshvashula	3
7.	<b>Ghurghurakam (Wheezing)</b>	
-	No Wheezing	0
-	Wheezing during attack	1
-	Very often Wheezing	2
-	Always wheezing found	3
8.	<b>Bhrama</b>	
-	No Bhrama	0
-	Occasional Bhrama	1
-	Very often Bhrama	2
-	Always Bhrama	3
<b>B.</b>	<b>Associated Symptoms</b>	
1.	<b>Kanthodhvamsa (Irritation in throat)</b>	
-	No Kanthodhvamsa	0
-	Occasional Kanthodhvamsa	1
-	Very often Kanthodhvamsa	2
-	Always Kanthodhvamsa	3

<b>2. Asino Labhate Saukhyam (Relief on sitting posture)</b>	
- Relief on lying position / No relief on sitting position	0
- Temporarily feels better in sitting posture	1
- Sitting posture gives relief	2
- Spontaneous sitting posture, can't sleep	3
<b>3. Shleshma Vimokshante Muhurtam Labhate Shukham</b>	
- No such feeling	0
- Shleshma Vimokshante Muhurtam Labhate Shukham during attack	1
- Very often Shleshma Vimokshante Muhurtam Labhate Shukham	2
- Always Shleshma Vimokshante Muhurtam Labhate Shukham	3
<b>4. Ushnabhinandati (Liking for hot things)</b>	
- No particular	0
- Likes if available	1
- Always prefer	2
- Can't take cold things	3
<b>5. Lalata Sveda</b>	
- No sweating over forehead	0
- Mild perspiration	1
- Moderate perspiration	2
- Excessive perspiration	3
<b>6. Krichchhrabhashitam</b>	
- No difficulty in speaking	0
- Difficulty in speaking during attack	1
- Difficulty continuous soon after attack	2
- Difficulty continuous for more time	3
<b>7. Vishushkasyata</b>	
- No Vishushkasyata	0
- Occasional Vishushkasyata	1
- Very often Vishushkasyata	2
- Always Vishushkasyata	3
<b>8. Rhonchi / Crepitation</b>	
- Absent on normal breathing	0
- A few Rhonchi / Crepitation on forced breathing	1
- A few scattered bilateral R/C on normal deep breathing	2
- Innumerable high pitched bilateral R/C on normal deep breathing	3

#### Overall Assessment

Total effect of therapy was assessed with respect to Signs and Symptoms as follows -

Percentage of Relief	Effect
100%	Complete remission
> 75%	Markedly improved
50-75%	Moderately improved
25-50%	Mildly improved
<25%	No improvement

Majority of patients were having history of the disease more than 4 years (in 50%). In 26.67% of patients, the chronicity was between 3 and 4 years.

In 13.33% of patients, the chronicity was between 1 and 2 years and in 10% of the patients; the chronicity was less than 1 year. (Table 7)

**Table 3: Status of the 35 patients of Shwasa**

Group	No. of patients		
	Total Registered	LAMA	Completed
A-Bharangiguda Avaleha	18	2	16
B-Bharangyadi Arishta	17	3	14

**Table 4: Koshtha wise distribution of 30 patients of Shwasa**

Koshtha	No. of patients		Total	Percentage
	Group-A	Group-B		
Krura	9	8	17	56.67
Madhyama	4	4	8	26.67
Mridu	3	2	5	16.67

**Table 5: Bowel Habit wise distribution of 30 patients of Shwasa**

Bowel Habit	No. of patients		Total	Percentage
	Group-A	Group-B		
Regular	12	8	20	66.67
Irregular	0	3	3	10.00
Constipation	4	3	7	23.33

**Table 6: Addiction wise distribution of 30 patients of Shwasa**

Addiction	No. of patients		Total	Percentage
	Group-A	Group-B		
Tea / Coffee	16	14	30	100.00
Tobacco chewing	2	0	2	06.67
Snuff	2	1	3	10.00
Smoking	4	6	10	33.33

**Table 7: Chronicity wise distribution of 30 patients of Shwasa**

Chronicity (in years)	No. of patients		Total	Percentage
	Group-A	Group-B		
<1	2	1	3	10.00
1-2	1	3	4	13.33
3-4	3	5	8	26.67
>4	10	5	15	50.00

**Table 8: Family history wise distribution of 30 patients of Shwasa**

Family history	No. of patients		Total	Percentage
	Group-A	Group-B		
Absent	7	7	14	46.67
Present	9	7	16	53.33

The family history of Shwasa was present in 53.33% of the patients and it was absent in the rest of the cases i.e. 46.67%. (Table 8)

**Ahara**

Table of frequency of Nidanas reveals that maximum numbers of patients i.e. 23 out of 30



making 76.67% were consuming the Shitambu. Next to that 73.33% patients had the history of taking Rukshanna and Dadhi. 60% of the patients had shown the habit of taking Samasana Ahara, while for 36.67% patients, it was Masha and in 30% of the patients was found to be taking Vishamasana. Each of the 26.67% of patients, it was found to be taking Madhura, Guru, Snigdha Ahara and Anupa Mamsa. 16.67% patients had given history of Viruddhasana. In 10% of the patients, Adhyasana was one of the Nidana. (Table 9)

### Vihara

Out of the total number of 30 patients, 60% reported excessive exposure to Dhuma, 56.67% reported to Raja. 50% of the patients reported to Pragvata. 43.33% reported having the Divaswapna as Nidana. Each of the 36.67% of the patients showed the etiological factor as Bharakarshita and Vegavidharana. Each of the 33.33% of the patients reported Shitasthana and Ativyayama. 10% reported Adhvayana as the Nidana. (Table 9)

Nidanarthakara Bhava: From the 30 patients, Pinasa was Nidanarthakara Bhava in 40% of patients. 33.33% of the patients, it was Daurbalya. Each of the 23.33% of the patients showed Kasa and Vibandha as the Nidanarthakara Bhava, while 16.67% patients reported with Pandu. (Table 9)

### Aggravating Factors

Among the aggravating factors, the Meghambu was dominant one found in 76.67%, 60% of the patients reported Durdina as an aggravating factor. Each of the 53.33% of the patients showed Shitavata and Shita-Padartha as the aggravating factors. (Table 9) In this present study Sashabda Shwasa was found in 76.67% of patients. 53.33% patients showed Atisrushtam Shwasa, while 46.67% patients had Sashula Shwasa. Atibaddha Shwasa was observed in 36.67% of patients

and 33.33% of the patients suffered from Kupitam Alpalpam Shwasa. (Table 10) Anannabhilasha of Annavaha Srotodushti was found in majority i.e. 66.67% followed by Arochaka in 40% of patients. Avipaka was observed in only 23.33% patients. (Table 11) Each of the 40% of the patients showed Osta Shosha and Kantha Shosha as the Uadakavaha Srotodushti lakshna. In 26.67% of patients, it was found to be Talushosha, and Jihvashosha was present in 20% of patients. (Table 12) In all the 30 patients, Shwasakashtata and Kasa were observed. Kaphastheevan was found in 93.33% of the patients. 80% presented with Ghurghurakam and Pinasa was complained by 76.67%. Urahshula was present in 63.33% of the patients. Parshvashula was seen in 46.67% patients. In least number of patients, 40% Bhrama was found. (Table 13) Out of 30 patients, Ushnabhinandati and Asino Labhate Saukhyam were found in 96.67%. Each of 93.33% of the patients showed Latata Sveda and Shleshma Vimokshante Muhurtam Sukham. Kanthodhvamsa was seen in 86.67% of patients. 53.33% showed Krichchhrabhashitam. 46.67% of patients complained of Vishushkasyata and 43.33% patients were having the history of Uchchhritaksha Lakshana. (Table 14)

### Effect of therapies

#### Effect of Bharangyadi Avaleha on Cardinal Symptoms

In the Bharangiguda Avaleha group of 16 patients of Shwasa, there was 77.45% relief in Shwasakashtata, which was statistically highly significant ( $P < 0.001$ ). There was relief in Kasa upto 78.35% which was statistically highly significant ( $P < 0.001$ ). Pinasa was relieved upto 88.10% which was statistically highly significant ( $P < 0.001$ ).

Each symptom Urahshula and Parshvashula were reduced by 100%, which were statistically highly significant ( $P < 0.001$ ).



**Table 9: Frequency of Nidana in 30 patients of Shwasa**

Nidana	No. of patients		Total	Percentage
	Group-A	Group-B		
<b>Aharaja</b>				
Shitambu	12	11	23	76.67
Rukshanna	12	10	22	73.33
Madhura, Guru, Snigdha	4	4	8	26.67
Vishamasana	5	4	9	30.00
Viruddhasana	3	2	5	16.67
Samasana	9	9	18	60.00
Adhyasana	1	2	3	10.00
Dadhi	12	10	22	73.33
Masha	5	6	11	36.67
Anupa Mamsa	5	3	8	26.67
<b>Viharaja</b>				
Raja	9	8	17	56.67
Dhuma	9	9	18	60.00
Pragvata	9	6	15	50.00
Shita Sthana	4	6	10	33.33
Ativyayama	4	6	10	33.33
Adhvayana	2	1	3	10.00
Bharakarshita	8	3	11	36.67
Divaswapna	7	6	13	43.33
Vegavidharana	6	5	11	36.67
<b>Nidanarthakara Bhava</b>				
Pinasa	8	4	12	40.00
Pandu	2	3	5	16.67
Kasa	2	5	7	23.33
Vibandha	4	3	7	23.33
Daurbalya	8	2	10	33.33
<b>Aggravating Factors</b>				
Meghambu	13	10	23	76.67
Durdina	9	9	18	60.00
Shita Vata	9	7	16	53.33
Shita Padartha	8	8	16	53.33

**Table 10: Pranavaha Sroto Dushti Lakshanas observed in 30 patients of Shwasa**

Dushti Lakshana	No. of patients		Total	Percentage
	Group-A	Group-B		
Atisrushtam Shwasa	10	6	16	53.33
Atibaddha Shwasa	7	4	11	36.67
Kutipam Alpalpam Shwasa	5	5	10	33.33
Sashabda Shwasa	12	11	23	76.67
Sashula Shwasa	7	7	14	46.67

**Table 11: Annavaha Sroto Dushti Lakshanas observed in 30 patients of Shwasa**

Dushti Lakshana	No. of patients		Total	Percentage
	Group-A	Group-B		
Anannabilasha	12	8	20	66.67
Arochaka	7	5	12	40.00
Avipaka	2	5	7	23.33

**Table 12: Udakavaha Sroto Dushti Lakshanas observed in 30 patients of Shwasa**

Dushti Lakshana	No. of patients		Total	Percentage
	Group-A	Group-B		
Jihva Shosha	2	4	6	20.00
Talu Shosha	5	3	8	26.67
Ostha Shosha	9	3	12	40.00
Kantha Shosha	5	7	12	40.00

**Table 13: Cardinal symptoms found in 30 patients of Shwasa**

Cardinal symptoms	No. of patients		Total	Percentage
	Group-A	Group-B		
Shwasakashtata	16	14	30	100.00
Kasa	16	14	30	100.00
Pinasa	15	8	23	76.67
Urahshula	10	9	19	63.33
Parshvashula	7	7	14	46.67
Ghurghurakam	14	10	24	80.00
Bhrama	5	7	12	40.00
Kaphastheevan	15	13	28	93.33

**Table 14: Associated symptoms found in 30 patients of Shwasa**

Associated symptoms	No. of patients		Total	Percentage
	Group-A	Group-B		
Krichchhrabhashitam	10	6	16	53.33
Kanthodhvamsa	14	12	26	86.67
Lalata Sveda	16	12	28	93.33
Uchchhritaksha	7	6	13	43.33
Vishushkasyata	6	8	14	46.67
Ushnabhinandati	15	14	29	96.67
Asino Labhate Saukhyam	16	13	29	96.67
Shleshma Vimokshante Muhurtam Sukham	16	12	28	93.33

The feature of Ghurghurakam was reduced by 72.46%, which was statistically highly significant ( $P < 0.001$ ). The symptom of Bhrama was reduced by 80%, which was statistically significant ( $P < 0.05$ ). There was relief in Kaphastheevan upto 92.78%, which was statistically highly significant ( $P < 0.001$ ). (Table 15)

#### Effect of Bharangyadi Avaleha on Associated Symptoms

In the Bharangiguda Avaleha group of 16 patients of Shwasa, the relief obtained in Kanthodhvamsa was upto 93.45% which was statistically highly significant ( $P < 0.001$ ). The feature of 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 feature of Vishushkasyata was relieved by 83.50%, which was statistically highly significant ( $P < 0.001$ ). The relief in Lalata Sveda was 78.90%, which was statistically highly significant ( $P < 0.001$ ). The symptom of Shleshma Vimokshante Muhurtam Sukham was reduced by 54.11%, which was statistically highly significant ( $P < 0.001$ ). The relief in Ushnabhinandati was 42.78%, which was statistically highly significant ( $P < 0.001$ ). The feature of Asino Labhate Saukhyam was reduced by 40.18%, which was statistically highly significant ( $P < 0.001$ ). (Table 16)

### Effect of Bharangyadi Arishta on Cardinal Symptoms

In the Bharangyadi Arishta group of 14 patients of Shwasa there was 78.12% relief in Bhrama, which was statistically insignificant ( $P > 0.05$ ). The relief in Urahshula was 77.08%, which was statistically highly significant ( $P < 0.001$ ). Parshvashula was reduced upto 71.42%, which was statistically highly significant ( $P < 0.001$ ). The symptom of Pinasa was reduced upto 46.93% but which was statistically highly significant ( $P < 0.001$ ). The relief obtained in Ghurghurakam was upto 45%, which was statistically highly significant ( $P < 0.001$ ). There was relief in Kaphastheevan upto 43.75%, which was statistically highly significant ( $P < 0.001$ ). (Table 17)

### Effect of Bharangyadi Arishta on Associated Symptoms

In the Bharangyadi Arishta group of 14 patients of Shwasa, there was 84.79% relief in Krichchhrabhashitam, which was statistically highly significant ( $P < 0.001$ ). The symptom of Kanthodhvamsa was relieved by 74.03%, which was statistically highly significant ( $P < 0.001$ ). There was relief in Vishushkasyata upto 70%, which was statistically highly significant ( $P < 0.001$ ). The relief in Lalata Sveda was upto 67.81%, which was statistically highly significant ( $P < 0.001$ ). The symptom of Uchchhritaksha was reduced by 64.37%, which was statistically significant ( $P < 0.01$ ). The feature of Ushnabhinandati was relieved upto 43%, which was statistically highly significant ( $P < 0.001$ ). The relief in Shleshma Vimokshante Muhurtam Sukham was 40.82%, which was statistically highly relieved upto 35.29%, which was statistically highly significant ( $P < 0.001$ ). (Table 18)

### Cardinal Symptoms

On the Cardinal symptoms of Shwasa, Bharangiguda Avaleha and Bharangyadi Arishta both were showing highly significant

result at  $P < 0.001$ . But the percentage of relief was more in Bharangiguda Avaleha treated group 84.18%, where as it was 54.59% in Bharangyadi Arishta. (Table 19)

### Associated Symptoms

In comparative effect of Bharangiguda Avaleha and Bharangyadi Arishta shows that both were statistically highly significant result at  $P < 0.001$ , but the percentage wise maximum relief was observed in Bharangiguda Avaleha treated patients in 69.72%. (Table 20)

In Bharangiguda Avaleha group, the relief of crepitation was 84.79%, which was statistically highly significant ( $P < 0.001$ ). In the Bharangyadi Arishta group crepitation was reduced by 55.55%, which was statistically significant ( $P < 0.05$ ). Bharangiguda Avaleha and Bharangyadi Arishta were showing highly significant relief on Rhonchi. But the percentage of relief was more in Bharangiguda Avaleha treated group i.e. 73.52%, which was statistically highly significant. (Table 21)

In the Bharangyadi Arishta group, there was an increase in Hb level by 3.28%, which was statistically insignificant ( $P > 0.05$ ). The level of ESR was decreased by 10.18%, which was statistically insignificant ( $P > 0.05$ ). The change in Lymphocyte, Neutrophils, Eosinophil and TLC were insignificant ( $P > 0.05$ ). (Table 23)

### Overall effect

In the Bharangiguda Avaleha group, 1 patients i.e., 6.25% attained complete remission. There was a marked improvement in the status of 7 patients i.e., 43.75% and 8 patients i.e., 50% attained moderate improvement. In the Bharangyadi Arishta group, 1 patient i.e., 7.14% attained marked improvement. There was a moderate improvement in the status of 8 patients, i.e., 57.15% and 5 patients i.e., 35.71% attained mild improvement. (Table 24)

**Table 15: Effect of Bharangiguda Avaleha on the Cardinal symptoms of 16 patients of Shwasa**

Sr. No.	n	Cardinal Symptoms	Mean score		% of relief	SD (±)	SE (±)	t	P
			BT	AT					
1	16	Shwasakastata	2.75	0.62	77.45	0.50	0.12	17.00	<0.001
2	16	Kasa	2.31	0.50	78.35	0.98	0.24	07.39	<0.001
3	15	Pinasa	2.27	0.27	88.10	0.65	0.17	11.83	<0.001
4	10	Urahshula	1.40	0.00	100.00	0.52	0.16	08.57	<0.001
5	07	Parshvashula	1.14	0.00	100.00	0.38	0.14	08.00	<0.001
6	14	Ghurghurakam	2.07	0.57	72.46	0.52	0.14	10.82	<0.001
7	05	Bhrama	1.00	0.20	80.00	0.45	0.20	04.00	<0.05
8	15	Kaphastheevan	1.80	0.13	92.78	0.49	0.12	13.23	<0.001

**Table 16: Effect of Bharangiguda Avaleha on the associated symptoms of 16 patients of Shwasa**

Sr. No.	n	Associated Symptoms	Mean score		% of relief	SD (±)	SE (±)	t	P
			BT	AT					
1	10	Krichchhrabhashitam	1.8	0.2	88.89	0.52	0.16	9.80	<0.001
2	14	Kanthodhvamsa	2.14	0.14	93.45	0.39	0.10	19.08	<0.001
3	16	Lalata Sveda	2.37	0.50	78.90	0.50	0.12	15.00	<0.001
4	07	Uchchhritaksha	1.71	0.28	83.62	0.79	0.30	4.80	<0.01
5	06	Vishushkasyata	2.00	0.33	83.50	0.52	0.21	7.90	<0.001
6	15	Ushnabhinandati	1.87	1.07	42.78	0.68	0.17	4.58	<0.001
7	16	Asino Labhate Saukhyam	2.19	1.31	40.18	0.72	0.18	4.87	<0.001
8	16	Shleshma Vimokshante Muhurtam Sukham	2.31	1.06	54.11	0.68	0.17	7.32	<0.001

**Table 17: Effect of Bharangyadi Arishta on the Cardinal symptoms of 14 patients of Shwasa**

Sr. No.	n	Cardinal Symptoms	Mean score		% of relief	SD (±)	SE (±)	t	P
			BT	AT					
1	14	Shwasakastata	2.78	1.50	46.04	0.73	0.19	6.62	<0.001
2	14	Kasa	2.14	1.14	46.72	0.68	0.18	5.50	<0.001
3	08	Pinasa	2.12	1.12	46.93	0.00	0.00	0.00	>0.05
4	09	Urahshula	1.44	0.33	77.08	0.60	0.20	5.54	<0.001
5	07	Parshvashula	2.00	0.57	71.42	0.53	0.20	7.07	<0.001
6	10	Ghurghurakam	2.00	1.10	45.00	0.32	0.10	9.00	<0.001
7	07	Bhrama	1.28	0.28	78.12	0.00	0.00	0.00	>0.05
8	13	Kaphastheevan	1.92	1.08	43.75	0.37	0.10	8.12	<0.001

**Table 18: Effect of Bharangyadi Arishta on the Associated symptoms of 14 patients of Shwasa**

Sr. No.	N	Associated Symptoms	Mean score		% of relief	SD (±)	SE (±)	t	P
			BT	AT					
1	06	Krichchhrabhashitam	2.17	0.33	84.79	0.41	0.17	11.00	<0.001
2	12	Kanthodhvamsa	2.58	0.67	74.03	0.51	0.15	12.89	<0.001
3	12	Lalata Sveda	2.33	0.75	67.81	0.51	0.15	10.65	<0.001
4	06	Uchchhritaksha	2.33	0.83	64.37	0.55	0.22	06.70	<0.01
5	08	Vishushkasyata	2.50	0.75	70.00	0.89	0.31	05.58	<0.001
6	14	Ushnabhinandati	2.00	1.14	43.00	0.53	0.14	06.00	<0.001
7	13	Asino Labhate Saukhyam	2.38	1.54	35.29	0.55	0.15	05.50	<0.001
8	12	Shleshma Vimokshante Muhurtam Sukham	2.67	1.58	40.82	0.67	0.19	05.61	<0.001

**Table 19: Effect of Each therapy on the cardinal symptoms of 30 patients of Shwasa**

Group	N	Mean score		% of relief	SD (±)	SE (±)	t	P
		BT	AT					
Bharangiguda Avaleha	8	14.48	2.29	84.18	0.46	0.16	9.25	<0.001
Bharangyadi Arishta	8	15.68	7.12	54.59	0.20	0.07	15.35	<0.001

**Table 20: Total Effect of Each therapy on the Associated symptoms of 30 patients of Shwasa**

Group	n	Mean score		% of relief	SD (±)	SE (±)	t	P
		BT	AT					
Bharangiguda Avaleha	8	16.15	4.89	69.72	0.41	0.14	9.69	<0.001
Bharangyadi Arishta	8	18.96	7.59	59.97	0.43	0.15	9.27	<0.001

**Table 21: Effect of Test Drugs on Crepitation, Rhonchi of 30 patients of Shwasa**

Group	n	Mean score		% of relief	SD (±)	SE (±)	t	P
		BT	AT					
Crepitation								
Bharangiguda Avaleha	6	2.17	0.33	84.79	0.40	0.17	11	<0.001
Bharangyadi Arishta	4	2.25	1.00	55.55	1.25	0.25	5	<0.05
Rhonchi								
Bharangiguda Avaleha	15	2.53	0.67	73.52	0.35	0.09	20.54	<0.001
Bharangyadi Arishta	12	2.33	1.33	42.92	0.43	0.12	8.12	<0.001

**Table 22: Effect of Bharangiguda Avaleha on Haematocrit values of 16 patients of Shwasa**

Parameter	Mean score		% of change	SD (±)	SE (±)	t	P
	BT	AT					
Hb%	14.11	13.92	1.35	1.05	0.26	0.73	>0.05
ESR	10.87	6.56	39.65	6.83	1.71	2.53	<0.05
L	35.75	36.87	3.13	10.78	2.69	0.42	>0.05
N	56.37	56.37	0.00	12.09	3.02	0.00	>0.05
E	06.50	5.44	16.31	6.00	1.50	0.71	>0.05
TLC	8525.00	8481.25	0.51	2400.82	600.21	0.07	>0.05

**Table 23: Effect of Bharangyadi Arishta on Haematocrit values of 14 patients of Shwasa**

Parameter	Mean score		% of relief	SD (±)	SE (±)	t	P
	BT	AT					
Hb%	13.12	13.55	3.28	0.85	0.23	1.89	>0.05
ESR	17.57	15.78	10.18	6.71	1.79	1.07	>0.05
L	38.64	39.04	1.11	9.83	2.63	0.16	>0.05
N	55.14	53.86	2.33	11.09	2.96	0.43	>0.05
E	5.14	6.64	29.18	9.76	2.61	0.54	>0.05
TLC	7978.57	8664.28	8.59	1461.75	390.67	1.75	>0.05

**Table 24: Overall effect of therapies on 30 patients of Shwasa**

Status	Bharangiguda Avaleha		Bharangyadi Arishta	
	No. of patients	%	No. of patients	%
Complete Remission	1	06.25	0	00.00
Markedly Improved	7	43.75	1	07.14
Moderately Improved	8	50.00	8	57.15
Mildly Improved	0	00.00	5	35.71
No Improvement	0	00.00	0	00.00

## DISCUSSION

### Clinical Study

Present study was planned to evaluate compared efficacy of Bharangiguda Avaleha and Bharangyadi Arishta on Shwasa Roga. The clinical trial was carried out in 30 patients suffering from Shwasa who presented with classical signs and symptoms of Shwasa.

The patients were selected randomly in relation to age, sex religion etc. Selected patients were divided into group A and B respectively treated by Bharangiguda Avaleha and Bharangyadi Arishta. Group-A contained total 16 patients and in Group-B, total 14 patients were treated. (Table 3) The results were analysed on the basis of improvement in the clinical features and investigative parameters were also considered as supporting criteria for assessment.

### Koshtha in relation to Shwasa

Krura Koshtha was found in maximum number of patients i.e. 56.67%. This may be due to vitiation of Vata. (Table 4)

### Bowel habit and Shwasa

Majority of patients in the present study (66.67%) were having regular bowel habits followed by 23.33% were having constipation, which suggests that bowel habit has no relation with Swasa. (Table 5)

### Addiction and Shwasa

The habit for tea / coffee was found in 100% patients, smoking in 33.33% and snuffing in 10%. Smoking acts as both Utpadaka and Vyanjaka nidana of Shwasa by affecting the Pranavahasrotas. (Table 6)

### Chronicity in relation to Shwasa

In this present study maximum patients were reported with chronic history of Shwasa in

50% with chronicity of disease was more than 4 years while 26.67% patients were having 3-4 year chronicity. This suggests the Yasya nature of the disease. Moreover, patients come to Ayurvedic physician only after taking treatment from allopathic doctor, without getting much relief from them. They turn towards Ayurveda. (Table 7)

### Family history in relation the Shwasa

A positive family history of Shwasa was in 53.33% of the patients. This is parallel with the view that Asthma occurs in families due to atopic nature. (Table 8)

### Incidence of Nidana of Shwasa

Aharaja Nidana – In 76.67% of the patients, excessive usage of Shitambu was reported. Dadhi Ahara was reported in 73.33% of patients. Madhura, Guru, Snigdha Ahara was found in 26.67% of patients. In 60% of patients Samasana Ahara was reported. This confirms the fact that Shita and Madhura Ahara aggravate Kapha Dosha, which is the prime cause of the disease – Shwasa. (Table 9)

Viharaja Nidana – Excessive exposure to Dhuma in 60%, Raja in 56.67%, and Pragvata in 50% of patients may act as allergic factors. In 43.33%, Divaswapna was reported, which is the cause of Kapha Prakopa. In 36.67% of the patients, Vega Vidharana and Bharkarshita each and in 33.33% Ativyayama and Shitapadartha each are supposed to responsible for Vata Prakropa. (Table 9)

Nidanarthakara Bhava – Among the 30 patients, 40% of the patients had Pinasa. 33.33% had Daurbalya and 23.33% had Kasa and Vibandha each. (Table 9)

Aggravating Factors –Meghambu was found as main aggravating factor in 76.67%, Durdina was observed in 60% of patients and also Shitavata and Shita Padarthasevan was observed each in 53.33% of patients. (Table 9)



## Shwasa in relation to Srotodushti Lakshanas

Pranavaha, Annavaha and Udakavaha srotas are mainly involved in the Samprapti of Shwasa.

Pranavaha sroto dushti lakshanas – The Lakshanas reported were Sashabda Shwasa in 76.67% of patients, Arisrushta Shwasa in 53.33%, Sashula Shwasa in 46.67%, Atibaddha Shwasa in 36.67% and Kupitam Alpalpam Shwasa in 33.33% of patients. These symptoms were produced due to the obstruction of Vatagati by Kapha in the Pranavaha Srotas. (Table 10)

Annavaaha Sroto Dushti Lakshanas – The symptoms reported were Annabhilasha in 66.67% of patients, Arochaka in 40% and Avipaka in 23.33% of patients. This may be due to the Amashayottha nature of the disease. (Table 11)

Udakavaha Sroto dushti Lakshanas – The Lakshanas reported were Osthoshosha and Kanthashosha each in 40% of patients. Talushosha was in 26.67% and Jihvashosha in 20% patients. Which suggest the involvement of Udakavaha Srotas in the pathogenesis of Shwasa. (Table 12)

## Cardinal symptoms in relation to Shwasa

The cardinal symptoms reported were Shwasakashtata and Kasa each in 100%, Kaphastheevan in 93.33%, Ghurghurakam in 80%, Pinasa in 76.67%, Urahshula 63.33%, Parshvashula in 46.67%, Bhrama in 40% of patients. This suggests that the patients selected in the present study had Shwasa as Roga and not as a symptom. (Table 13)

## Associated symptoms in relation to Shwasa

The associated symptoms reported were Ushnabhinandati and Asino Labhate Saukhyama, each in 96.67% of patients,

Lalata Sveda and Shlesham Vimokshante Muhurtam Sukhama, each in 93.33%, Kanthodvamsha in 86.67%, Krichchhrabhashitam in 53.33%, Vishushkasyata in 46.67%, and Uchchhritaksha in 43.33%. The obtained data confirms that the selected disease was Shwasa Roga and was not a symptom. (Table 14)

## Effect of therapies

### Cardinal symptoms

The effect of Bharangiguda Avaleha and Bharangyadi Arishta on the cardinal symptoms of 30 patients of Shwasa Roga were tabulated in Table 15 & 17.

### Shwasakashtata

Statistically highly significant ( $P < 0.001$ ) result was obtained in both the groups. In the Group-A i.e. treated by Bharangiguda Avaleha the relief in Shwasakashtata was 77.45% (Table 15), but in Group-B i.e. treated by Bharangyadi Arishta, the relief was 46.04%. (Table 17) Thus better relief was obtained in Shwasakashtata in the (Bharangiguda Avaleha) Group-A compared to Group-B (Bharangyadi Arishta).

### Kasa

In the Group-A relief in Kasa was 78.35 % (Table 15), while the same symptom was relieved by 46.72% in Group-B. (Table 17) Both the results were statistically highly significant ( $P < 0.001$ ). Thus the relief obtained in Kasa in Group-A is better than Group-B.

### Pinasa

In the Group-A, the relief in Pinasa was 88.10% (Table 15), also it was statistically highly significant ( $P < 0.001$ ), while in Group-B the relief was 46.93%, but it was statistically insignificant ( $P > 0.05$ ). (Table 17)

Thus better relief was obtained in Pinasa in the Group-A when compared to the Group-B.

#### Urahshula

In the Group-A, Urahshula was reduced by 100%, (Table 15) which was statistically highly significant ( $P < 0.001$ ). In the Group-B, the relief in Urahshula was 77.08%, (Table 17) which was statistically highly significant ( $P < 0.001$ ). It implies that better relief was obtained in the Group-A on Urahshula than the Group-B.

#### Parshvashula

In the Group-A, the relief in Parshvashula was 100%, (Table 15) which was statistically highly significant ( $P < 0.001$ ). In the Group-B, Parshvashula was reduced by 71.42%, (Table 17) which was statistically highly significant ( $P < 0.001$ ). Thus the Group-A has provided better relief than the Group-B on Parshvashula.

#### Ghurghurakam

The relief in Ghurghurakam in the Group-A was 72.46% (Table 15), but in Group-B it was 45%. (Table 17) Both of these were statistically highly significant ( $P < 0.001$ ). This indicates that the better relief obtained in Ghurghurakam in Group-A than in the Group-B is quite obvious.

#### Bhrama

In the Group-A the relief in Bhrama was 80% (Table 315, also it was statistically significant ( $P < 0.05$ ), while in Group-B the relief was 78.12% (Table 17), but it was statistically insignificant ( $P > 0.05$ ).

#### Kaphastheevan

The relief in Kaphastheevan was 92.78%, in the Group-A (Table 15), which was statistically highly significant ( $P < 0.001$ ).

Kaphastheevan was reduced by 43.75% in the Group-B (Table 17), which was also statistically highly significant ( $P < 0.001$ ). Thus the Group-A proved to be more effective on Kaphastheevan than the Group-B.

#### Associated symptoms

The effect of therapies on the associated symptoms was as follows (Table 16 & 18):

##### Krichchhrabhashitam

In the Group-A, Krichchhrabhashitam was received by 88.89% (Table 16), which was statistically highly significant ( $P < 0.001$ ). In Group-B, Krichchhrabhashitam was reduced upto 84.79% (Table 18), which was statistically highly significant ( $P < 0.001$ ). Thus the Group-A proved to be effective in Krichchhrabhashitam than Group-B.

##### Kanthodhvamsa

In the Group-A the relief in Kanthodhvamsa was 93.45% (Table 16) but in Group-B, it was 74.03% (Table 18). Both of these were statistically highly significant ( $P < 0.001$ ). The better relief was obtained in Kanthodhvamsa in Group-A than in the Group-B.

##### Lalata Sveda

Lalata Sveda was relieved upto 78.90% (Table 16), in the Group-A, which was statistically highly significant ( $P < 0.001$ ). In Group-B, Lalata Sveda was reduced upto 67.81% (Table 18), which was statistically highly significant ( $P < 0.001$ ). Thus the Group-A was found to be more effective in Lalata Sveda as compared to Group-B.

##### Uchchhritaksha

In the Group-A the relief in Uchchhritaksha was 83.62% (Table 16); but in the Group-B it was 64.37% (Table 18). Both of these were statistically significant ( $P < 0.01$ ).

The better relief was obtained in Uchchhritaksha in Group-A than the Group-B.

#### Vishushkasyata

In the Group-A the Vishushkasyata was reduced by 83.50% (Table 16), which was statistically highly significant ( $P < 0.001$ ). The relief in Vishushkasyata was upto 70% in Group-B (Table 18), which was statistically highly significant ( $P < 0.001$ ). It is obvious that Vishushkasyata was reduced to greater extent in the Group-A than the Group-B.

#### Ushnabhinandati

In the Group-A, the Ushnabhinandati was relieved by 42.78% (Table 16), which was statistically highly significant ( $P < 0.001$ ). The relief in Ushnabhinandati was upto 43% in Group-B (Table 18), which was statistically highly significant ( $P < 0.001$ ). Thus better relief was obtained in Ushnabhinandati in the Group-B when compared to the Group-A.

#### Asino Labhate Saukhyama (A. L. S.)

The Asino Labhate Saukhyam was relieved upto 40.18% in the Group-A (Table 40), which was highly significant ( $P < 0.001$ ). In Group-B, the relief in A.L.S. was 35.29% (Table 18), which was also statistically highly significant ( $P < 0.001$ ). Thus better relief was obtained in A.L.S. in the Group-A than Group-B.

#### Shleshma Vimokshante Muhurtam Sukham (S.V.M.S.)

In the Group-A the relief in S.V.M.S. was 56.11 % (Table 40), but in Group-B it was 40.82%. (Table 18) Both of these were statistically highly significant ( $P < 0.001$ ). The better relief was obtained in S.V.M.S. in Group-A than the Group-B.

#### Total effect of therapies on the cardinal symptoms

The total cardinal symptoms were relieved upto 84.18% in the Group-A, which was statistically highly significant ( $P < 0.001$ ).

The relief in the total cardinal symptoms was upto 54.59% in the Group-B, which was statistically highly significant ( $P < 0.001$ ). Thus better relief was provided in the Group-A than the Group-B. (Table 19)

#### Total effect of therapies on the associated symptoms

In Group-A, the total associated symptoms were relieved upto 69.72%, which was highly significant ( $P < 0.001$ ). The relief obtained in the Group-B in the total associated symptoms was upto 59.97%, which was statistically highly significant ( $P < 0.001$ ). Thus better relief was provided in the Group-A on the total associated features than the Group-B. (Table 20)

#### Effect of therapies on Crepitation / Rhonchi

In the Group-A, relief of crepitation and rhonchi were 84.79% and 73.52 % respectively, which were statistically highly significant ( $P < 0.001$ ). In the Group-B, crepitation was reduced by 55.55% and rhonchi were relieved upto 42.92%, which were statistically significant and highly significant respectively.

It is evident that the Group-A was more effective in reducing crepitation / rhonchi than the Group-B. (Table 21)

#### Effect of Therapies on Haematocrit values

Effect of Bharangiguda Avaleha (Group-A) was having negligible effect on the values of Hb%, Lymphocyte, Neutrophil, Eosinophil and TLC but the level of ESR was decreased by 39.65%, which was statistically significant ( $P < 0.05$ ). (Table 22)

Bharangyadi Arishta (Group-B) was having negligible effect on the values of Hb%, ESR, Lymphocyte, Neutrophils, Eosinophil and TLC, which were statistically insignificant ( $P > 0.05$ ). (Table 23)

## Overall Effect of the Therapies on the 30 patients of Shwasa

From the observation of this table with Bharangiguda Avaleha and Bharangyadi Arishta treated group, it is evident that complete remission was observed in 6.25% and 0.00% patients, marked improvement was observed in 43.75% and 7.14%, moderate improvement was observed in 50% and 57.15%, and mild improvement was found in 0.00% and 35.71% respectively. (Table 24)

In terms of overall effect of the therapy, 43.75% patients improved markedly in the group treated with Bharangiguda Avaleha, which is much higher than the 7.14% in the group treated with Bharangyadi Arishta, which implies that clinical success rate of Bharangiguda Avaleha is comparatively better than that of Bharangyadi Arishta.

## Modern Review

Antihistamine, antibiotic action of the Bharangi might be responsible for reducing the local congestion and checking the infectious microorganisms. This action of Bharangi might be complemented and synergised by the compound Dashamula whose action extends upto the higher centers pacifying in nature apart from the local action - antibiotic and reducing the swelling / congestion due to diuretic activity.

Thus both the drugs, like this might act synergetically in the compound form to clear off the local congestion, infectious organism if any, suppress the cell mediated immunity, which may contribute to the therapeutic efficacy of the test drug in asthma and pacify the higher centers of respiration, thus effectively controlling the breathlessness.<sup>[15][16][17][18][19][20]</sup>

## CONCLUSION

Both the formulations had shown statistically highly significant results on cardinal symptoms such as Shwasakashtata, Kasa, Pinasa, Urahshula, Parshvashula etc. of Shwasa Roga, but by inference from all observation of clinical data it reveals that Bharangiguda Avaleha has more significant effect in treating the disease Shwasa as compared to Bharangyadi Arishta. Also, statistically highly significant results on associated symptoms such as Krichchhrabhashitam, Kanthodhvamsa, Lalata Sveda etc. of Shwasa Roga, were seen in groups treated with both formulations but comparatively Bharangiguda Avaleha displayed better results. Overall effect of therapy reveals that, Bharangiguda Avaleha has got comparatively better therapeutic effect than Bharangyadi Arishta and here can be successfully employed in treating the patients of Shwasa Roga.

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