Clinical Research

A comparative study on efficacy of Bharangyadi Avaleha and Vasa Avaleha in the management of Tamaka Shwasa with reference to childhood asthma

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Abstract

Ayurvedic concept is of the opinion that Tamaka Shwasa (Bronchial Asthma) is a Yapya Vyadhī. The etiopathogenesis, signs, and symptoms of Tamaka Shwasa may be correlated with Bronchial Asthma. Each child reacts differently to the factors that trigger asthma and treated symptomatically. Asthma is the most common chronic allergic disorder in childhood and third leading cause of hospitalization under the age of 15 years. As it is a Kapha-Vata predominant disorder, Ayurvedic medicine may help to decrease the recurrence, improve immunity, and check symptoms naturally. With this aim, a clinical study was undertaken on two groups for duration of 6 weeks. The drugs Bharangyadi Avaleha and Vasa Avaleha were given orally, separately in both the groups. All the patients were kept under strict dietary control during the treatment. The observation on effect of therapy was encouraging and showed less recurrence.

Key words: Bharangyadi Avaleha, childhood asthma, Tamaka Shwasa, Vasa Avaleha

Introduction

Shwasa word indicates both physiological and pathological state of respiration. Tamaka Shwasa is one of the five types of disease Shwasa. Tamaka Shwasa is a disease mainly of Pranavaha Srotasa.[1] The signs, symptoms, and etiopathogenesis of Bronchial Asthma explained in modern diagnosis have lot of similarities with the disease entity Tamaka Shwasa. Both Ayurveda and modern medical Science agree regarding the Nidana of the disease as host factors (Nija Hetus – Doshadushti and Ama) and Environmental factors (Agantuja Hetus – Raja, Dhuma, Pragvata, etc). It can be easily correlated with the allergic condition. Nidana Parivarjanam hence plays a key role in the management strategy in both sciences.[2]

Asthma is the most common chronic disease of childhood, and yet many parents know little about it. In children aged 5 to 14 years, the rate of death from asthma almost doubled between 1980 and 1993. Among children aged 0 to 4 years in 1993, blacks were six times more likely to die from asthma than whites.[3]

Aims and objectives

1. To study conceptually the etiopathogenesis of childhood asthma vis-à-vis Tamaka Shwasa occurring in children contemplating both Ayurved and Modern points of view.
2. To assess clinically, the efficacy of Yogas, i.e., Bharangyadi Avaleha (BA) and Vasa Avaleha (VA) in the management of Tamaka Shwasa with special reference to childhood asthma.

Materials and Methods

Patients attending the OPD of Kaumarabhritya, Institute for Post Graduate Teaching and Research in Ayurveda, Jamnagar, having the complaint of Tamaka Shwasa as well as Asthmatic children from pediatric department G.G. Hospital.

Selection of patients

Inclusion criteria

- Age group between 2 and 10 years.
- Classical symptoms of Tamaka Shwasa with emphasis to symptoms of childhood asthma like wheezing, shortness of
breath, tightness in chest, and cough.

**Exclusion criteria**

- Severe cases of Asthma with complications like suspected infection, large airway lesions, heart diseases, etc.
- Cardiac complaints, other chronic debilitating diseases like Tuberculosis, Acquired Immune Deficiency Syndrome etc., other systemic and endocrine complaints associated with any degree of Asthma.

**Diagnosis criteria**

It had been based on the specially prepared proforma, including all clinical signs and symptoms of the disease, in which detailed history had been taken.

**Preparation of the drugs**

*Bharangyadi Avaleha* as described in Sahastra Yogam, Shwas roga Chikitsa (Kshaya Prakarana)\(^{(4)}\) was selected. The list of the herbs is as mentioned in Table 1. In other group, *Vasa avaleha*\(^{(6)}\) as mentioned in Bhaisajyagran Rattanvali in Kasa Roga Chikitsa (16/179-181) was selected. The ingredients are enlisted in Table 2 in equal quantity for preparation of avaleha.

Though both the drugs are of known efficacy, the patient’s age group due to their bad palatability did not accept the forms of the medicines, kwatha, etc. Taking the aspect of palatability and acceptability into effective consideration, the medicines were planned to be administered in *Avalaha* form. To make the *Avalaha* form of above mentioned *Kashaya*, *siddhant* told by Sharangdhar\(a\) had been followed.

Posology: Dose of Avalaha in classics is not clearly mentioned for child. So, the dose was fixed according to Young’s Formula keeping in the mind the adult dose of Avalaha as 1 Pala (48 g). The dose is shown in Table 3.

**Criteria of assessment**

1. Clinical features as Tamaka Shwasa will objectively assess periodically.
2. Improvement in frequency, intensity, and duration of symptoms had been considered.
3. Hematological investigations.
4. Absolute eosinophil count.

**Effect of therapy**

The clinical efficacy of the drug was analyzed statistically on all the symptoms mentioned in the assessment criteria. Initially, the variation and significance of effect seen within the 18 patients were calculated by paired t test. The difference of individual score SD was calculated with Standard Error in Mean (SEM). These data are shown as Mean ± SEM. Then, to more specifically quantify the percentage of improvement in each patient, this was also calculated using the formula (BT − AT) × 100/BT.\(^{[8]}\)

| Effect of therapy is evaluated as |  
|----------------------------------|---|
| No improvement | - 0-25% |
| Mild improvement | - >25-50% |
| Moderate improvement | - >50-75% |
| Markedly improvement | - >75-<100% |
| Complete remission | - 100% |

**Observations and Results**

The general demographic data is shown in Table 4. The effect of therapy on various parameters is presented in Table 5-8.

**Effect on Roga Bala**

As the sample was small in both the groups, percentage-wise data are more reliable than the statistical data.

In both the groups, symptoms related to *Shwasasaktata* were reduced but was statistically more highly significant in VA than BA, although trial drug decreases the Vega Tivrata and Vega Avadhii, between the treatment not whenever attacks come and not in emergency condition. So, the trial drug plays an effective role.

But, during the treatment, two patients reported increase in the complaints with emergency modern medicine in control group VA.

In *Kasa* and its associate symptoms, VA showed slight better result than BA. Actually, *Kasa, Kaphanisthvan, Urahshool*, Shirograha, and symptoms are interrelated and cannot be assessed separately, but these all four symptoms make a complex feature which shows the different picture of *Tamaka Shwasa*, and symptoms of *Shwasasaktata* is also related with this.

In *Kapha nishthivan*, both the groups showed significant results.

In *Parshvashula* and *Shirograha*, BA showed better result, but wheezing was decreased in VA, which may be due to decreased *Kaphanisthvan* and the mucous inside. In Peak expiratory flow rate BA showed better result.

**Effect on Agni Bala**

*Abhyavaharan Shakti:* In the group BA, *Abhyavarana Shakti* was improved by 76%, which was statistically highly significant.
Jaranashakti: In the group BA, Jarana Shakti was improved by 86.67%, which was statistically highly significant.

By the treatment of BA, all the parameters of Agni Bala showed improvement except Ruchi, which may be due to the ingredients of BA containing Pippali, Shunthi, Maricha, Dhanyaka, and Guduchi, which have more specific action on Agni.

Effect on Chetasa Bala
Chetasa balas are very much related to the counseling of the patients during the treatment. Sleep improvement (Nidralabho-yathakalam) may be due to release attack of asthma in both the groups.

Effect on other hematocrit values
Hematocrit values: In the BA Group, there was no statistically significant change in hematocrit values, only lymphocyte count was reduced by 19.23%, Hb% was improved by 1.51%, eosinophil count was reduced by 24.19%, and Erythrocyte sedimentation rate was reduced by 47.95%.

Effect on absolute eosinophil count
In both the groups, there were no statistically significant changes in hematocrit values in comparison with VA (27.27%); BA showed better results to decrease absolute eosinophil count (AEC) (39.69%).

Overall effect of therapy
In BA group, highest number of patients (63.64%) got markedly improvement, 18.18% was observed with moderate improvement, and 18.18% of patients were observed with complete remission. In VA group, highest number of patients (71.43%) was markedly improved and 28.57% were observed with complete remission.

Discussion
Disease review
Since the Tamaka Shwasa is a Vata-Kapha-dominated disease, its incidence should be witnessed more either during the Balyaavastha, which is the normal time of Kapha dominance, or the Vriddhavastha, which is the normal time of Vata dominance.[7]

This increased risk remained in boys aged 5 to 14 years, who were 1.3 times more likely to die from asthma than girls in that age group. By the ten years, the risk seems to even out between girls and boys.[8]

Clinical review
Age: In the present study, maximum number of patients (57.69%) were in the age group of 2 to 6 years, followed by 42.31% in >6 to 10 years age group.[9]

In the classical literature, ordinarily, we do not find a mention of the relation between Tamaka Shwasa and age. Sex: Maximum number of patients (73.08%) were male. No relation between the gender and Tamaka Shwasa has been established by the ancient writers. Similarly, during the modern era also, no such relation has been established.

Male to female ratio was 2:1. Male children tend to suffer more, since they have smaller air ways for a given lung size, which is independently inherited in addition to the fact that boys have a higher incidence of respiratory infections during childhood.[9]
Table 5: Effect of therapy on cardinal features in *Tamaka Shwasa* (b. asthma) in group-A

| Symptoms                | n  | Mean | %     | SD  | SE  | t    | P     |
|-------------------------|----|------|-------|-----|-----|------|-------|
| Shwasakashtata          | 11 | 3.1  | 0.36  | 88.24 | 0.77 | 0.24 | 11.50 | <0.001|
| Shwasa Vega             | 11 | 2.91 | 0.37  | 87.5  | 1.29 | 0.39 | 6.53  | <0.001|
| Vega Tivrata            | 11 | 1.82 | 0.27  | 85    | 0.82 | 0.25 | 6.25  | <0.001|
| Vega Avadhi             | 11 | 2.55 | 0.18  | 92.86 | 0.81 | 0.24 | 9.67  | <0.001|
| Asinolabhate Saukhyam   |    | 1.86 | 0.00  | 100   | 0.69 | 0.26 | 7.12  | <0.001|
| Kasa                    | 11 | 3.09 | 0.90  | 70.59 | 0.87 | 0.26 | 8.28  | <0.05  |
| Kaphanishtivan          | 3  | 1.67 | 0.00  | 100   | 0.57 | 0.33 | 5     | <0.001|
| Wheezing                | 8  | 2.38 | 0.25  | 89.47 | 0.83 | 0.30 | 7.20  | <0.001|
| Pinasa                  | 11 | 2.78 | 0.78  | 73.33 | 0.63 | 0.19 | 10.49 | <0.001|
| Urahbashool             | 6  | 1.67 | 0.00  | 100   | 0.40 | 0.17 | 7     | <0.001|
| Shirograha              | 5  | 1.6  | 0.00  | 100   | 0.89 | 0.4  | 4     | <0.05  |
| Kanthodhvansana         | 4  | 1.75 | 0.00  | 100   | 0.96 | 0.48 | 3.66  | <0.05  |
| Nidra labho             | 11 | 1.82 | 0.18  | 90    | 0.50 | 0.15 | 10.76 | <0.001|
| Abhyavarana Shakti      | 10 | 2.5  | 0.6   | 76.00 | 0.73 | 0.23 | 8.14  | <0.001|
| Jarana Shakti           | 9  | 1.67 | 0.22  | 86.67 | 0.73 | 0.24 | 5.96  | <0.001|
| Aruchi                  | 8  | 1.13 | 0.00  | 100   | 0.70 | 0.5  | 3     | <0.001|

Highly significant (<0.001), significant (<0.05)

Table 6: Effect of therapy on hematological parameters in 11 patients of *Tamaka Shwasa* (b. asthma) in group-A

| Hematological parameters | n  | Mean | %     | SD  | SE  | t    | P     |
|--------------------------|----|------|-------|-----|-----|------|-------|
| Hemoglobin (gm %)        | 11 | 10.87| 10.70 | 1.50| 0.50| 0.15 | 10.76 | <0.01 |
| Total leucocyte count (/cmm) | 11 | 5975.84| 7166.24| −19.92| 2721.36| −1.45 | <0.1  |
| Neutrophil               | 11 | 49.56| 56.90 | −14.86| 11.10| 3.347| −2.19 | <0.01 |
| Lymphocyte               | 11 | 43.54| 34.90 | 19.83| 12.26| 3.69 | 2.34  | <0.01 |
| Eosinophil               | 11 | 4.64 | 5.27  | −13.72| 3.85 | 1.16 | −0.55 | <0.1  |
| Monocytes                | 11 | 2.72 | 2.90  | −6.67| 0.75 | 0.23 | −0.80 | <0.1  |
| Erythrocyte sedimentation rate | 11 | 17.81| 9.27  | 47.95| 10.62| 3.20 | 2.67  | <0.1  |
| Absolute eosinophil count | 11 | 422.72| 531.81| −25  | 504.39| 152.07| −0.71 | <0.01 |

Table 7: Effect of therapy on cardinal features in *Tamaka Shwasa* (b. asthma) in group-B

| Symptoms                | n  | Mean | %     | SD  | SE  | t    | P     |
|-------------------------|----|------|-------|-----|-----|------|-------|
| Shwasakashtata          | 7  | 2.71 | 0.14  | 94.74| 1.39| 0.53 | 4.87  | <0.01 |
| Shwasa Vega             | 7  | 2.29 | 0.29  | 87.5 | 0.58| 0.22 | 9.17  | <0.001|
| Vega Tivrata            | 7  | 2.00 | 0.00  | 100  | 1.15| 0.44 | 4.58  | <0.01 |
| Vega Avadhi             | 7  | 2.14 | 0.14  | 93.33| 0.58| 0.22 | 9.17  | <0.001|
| Asinolabhate Saukhyam   | 06 | 1.83 | 0.17  | 90.91| 0.82| 0.33 | 5     | <0.01 |
| Kasa                    | 07 | 2.14 | 0.43  | 80   | 0.76| 0.29 | 6     | <0.001|
| Kaphanishtivan          | 05 | 1.6  | 0.00  | 100  | 0.55| 0.24 | 6.53  | <0.01 |
| Wheezing                | 07 | 2.29 | 0.00  | 100  | 0.76| 0.29 | 8     | <0.001|
| Pinasa                  | 07 | 2.26 | 0.14  | 93.75| 1.07| 0.40 | 5.30  | <0.01 |
| Urahbashool             | 06 | 1.17 | 0.0  | 100  | 0.41| 0.17 | 7     | <0.001|
| Shirograha              | 03 | 1    | 0.33  | 66.67| 0.58| 0.33 | 2     | <0.1  |
| Kanthodhvansana         | 05 | 1.2  | 0.00  | 100  | 0.45| 0.2  | 6     | <0.01 |
| Nidra labho             | 07 | 1.71 | 0.00  | 100  | 0.49| 0.18 | 9.2   | <0.001|
| Abhyavarana Shakti      | 07 | 2.14 | 0.14  | 93.33| 0.58| 0.22 | 9.17  | <0.001|
| Jarana Shakti           | 6  | 1.5  | 0.17  | 88.89| 0.81| 0.33 | 4     | <0.001|
| Aruchi                  | 5  | 1.6  | 0.00  | 100  | 0.55| 0.24 | 6.53  | <0.001|

Highly significant (<0.001), significant (<0.05)
Past History: Peenasa results due to chronic Pratishthaya which causes the Khavaigunya in Pranavahasrotas. It is the manifestation of allergic reaction, which further develops into Asthma.

Family history: Role of hereditary factor in Asthma has been elicited by various studies recently. Absence of Nrf2 gene has been found to increase the number of inflammatory cells within the airways, causing the airway lining to swell, which induces asthma in mice. Interestingly, in the present study, except for a minor percentage of 19.23%, majority of the patients had a positive family history, either from the maternal or paternal side.[10]

Education status: Majority of the patients were school going. Of them, a large percentage of 50% were primary students. This discussion may also be taken as a fulfillment of the modern concepts of data presentation in the biostatics in the medicine. The areas to be considered in patient education for asthma include the following:

1. Explaining the disease process, and recognition of early attacks.[11]
2. Explaining the medication, techniques, and side effects.
3. Social impact of the disease at home, school, and sports.

Prakriti-wise analysis of the patients in the study shows a predominance of Vata-Pitta Prakriti scoring up to 42.31%. KaphaVata Prakriti was 38.46%.

Majority is dominant in Raja, Guna, i.e., 42.31%. Manasa Prakriti is difficult to be elicited in children. All children are sensitive and have comparatively low tolerance. Still, based on behavior, activity, out spookiness, cooperation in treatment, relative tolerance, and with respect to age, this classification is done.

Proper Prakriti analysis is difficult in children because of “Surva Dhatu Asampoornata.”[7] Still, an attempt has been made to analyze the Prakriti on the basis of current behavior, physical features, and other physical characters.

Nidan: A large majority of patients in the present study (80.77%) were consuming refrigerated food, which are Sheeta and Ruksha, regularly. 57.69% of patients were using Shleshmala Aahara. Chocolates, Takra, and Dadhi were consumed by 30.77% on regular basis. 26.92% were taking fruits regularly.

Sheeta, Vidhahi, and Vishthambhi Aahara. Abhishayandi Aahara can create the Srotorodha and vitiate the normal path of Vata. It is having Guru Property which is heavy for digestion and hampers the function of Agni. All other Aharaja Nidana mainly acts as Utpadaka as well as Preraka Hetu.

Among most commonly seen Vihara Vata, Sheeta Vata leads in majority (80.77%). Exposure to dust was seen in 30.77% patients very regularly, and 19.23% were exposed to Dhuma. Divasaapta was regularly seen in 61.54% of patients. Sheeta sthana caused Shwasa Vega in 73.08% patients. These factors act as predisposing factors. Raja and Dhuma contain number of allergens which adds to chronic airway inflammation in airways.

Nidana is highly important in Shwasa Roga. Primary prevention strategy in Asthma focuses on avoidance of etiological factors. Among the classical Nidana listed and also on the basis of attributes of commonly used food articles, a list of 6 Ahara Dravyas was considered in the present study for evaluation.

Allergens of various types and chemical nature may act as exciting causes and produce asthma labeled as allergic asthma. The most important in this group are foods, inhalants, bacteria, emotions, and immunology. Others factors like fatigue, exhaustion, change of climate, dietic indiscretions and exercise, weekend asthma, asthma occurring at night due to low output of adrenaline, etc., are well recognized and may play a part in the causation of disease.[3]

Dominancy of Rasa in diet: In this study, maximum patients, i.e., 61.54%, were taking Madhura Rasa Pradhama Aahara.

The observation in the present study reveals that 42.31% of the patients were of Vashamashana habit, with good variation depending on the liking of food and variation in appetite.

Most of the patients were having affinity to some specific food article or a specific taste, and quantity of food intake in children generally depends on their likes and dislikes.

Dietary restrictions: The patients were strictly advised to follow the restrictions regarding food, food habits, and life style. To the extent possible, they were instructed to avoid the probable causative factors of the disease and causes for Agnimandya.

These restrict almost Pathyacharama and Apathya Varjana. The role of other dietary substances including the yellow dye tartrazine, benzoate, and monosodium glutamate in exacerbating asthma is probably minimal; confirmation of their relevance requires double-blind challenge before making specific dietary restrictions.[10]

Agni wise: Present study revealed that 65.38% of patients had Mandagni and 23.08% had Vishamagni. Ama plays a key role in
the Samprapti of Tamaka Shwasa. The status of Agni has to be invariably assessed in all diseases for the understanding of the etiopathology as well as its management.

Jarana Sakti: It was found that 80.77% of the patients had Madhyama Jarana Shakti and remaining 11.54% patients possessed Avara Jarana Shakti.

Abhyavaharana Shakti was found to be less in all the patients due to the dominance of Manda and Vishama Agni.

Seasonal wise: Rainy season was the triggering factor in aggravation of the disease Tamaka Shwasa and was observed in 53.85% of patients; Tamaka Shwasa in the rainy season was observed in 53.85% patients, but in 100% patients, the aggravation was reported jointly during the winter and rainy season. Asthma is highly influenced by seasonal variations.

While discussing the time of aggravation of Tamaka Shwasa, the Ayurvedic scientists have pointed out that the Shwasa Roga and particularly the Tamaka Shwasa get aggravated during the rainy season and winter season.

Adverse weather conditions, such as cold temperatures, high humidity, and episodes of acute pollution brought on by weather conditions that promote the concentration of atmospheric pollutant and antigen, have been associated with Asthma exacerbations.

Chronicity wise: Chronicity-wise distribution of the patients into three groups as follows: 0 to 3 years was found in maximum patients (65.54%), >3 to 6 years was found in 26.92%, and >6 to 9 years was found in 7.69%. The diseases were definitely of a chronic duration and their curability was never expected. So, Krichhra-sadhyata or Yaprayata could have been expected.[15]

Intensity of attack: Maximum patients had increased intensity of attack in night and mid-night (53.85%); in 50% of the patients, it was found in the morning and after physical exercise. Increasing Shwasa is observed.

Frequency of attack was found daily in 26.92%, weekly in 34.62%, fortnightly in 30.77%, and monthly in 19.23%.

Area wise

Majority of patients (84.62%) were from urban area and 15.38% were residing in rural areas. Children in populations that migrate to urban from rural areas begin to experience a much higher prevalence of asthma when followed over a period than similar children who remain in the rural areas. The urbanized environmental increase exposure to new allergens.[11]

So, urbanization is one of the factors that increase Asthma prevalence. Jamnagar being an industrial city has a high prevalence of Asthma.

Srotodusti wise: It was interesting to observe the symptoms told in Prana Vaha that Sroto Dushhti were present in a very high number of patients as such. Alpalpa Shwasa and Sashabda Shwasa were symptoms found in all the patients showing 76.92% incidence. Ati badha was found in 11.54%, Abhikshina Shwasa was seen in 46.15% of patients, Sashabda Shwasa was seen in 76.92%, and Sushila Shwasa was seen in 76.92% of the patients who participated in the present clinical trial.

Chief complaint wise: Of the 26 patients of Tamaka Shwasa in the present clinical trial, all (100%) had Shwasa Krichhtata or shortness of breath and Kasa as chief complaints. Peenasa was reported in 76.92%, Raksha Kasam in 76.92%, Sakapha Shwasa in 19.23%, and Parshwa Shula was seen in 34.62%. Shwasakashtata is a Pratyatma Lakshana of Shwasa which is commonly associated with Kasa too, as it occurs mainly due to Srotorodha produced by Kapha in the path of Vata. So as to get the relief when patient tries to expel out the obstruction, that is why more and more cough reflex is produced; in some patients (Kapha Pradhana), it is easily expelled out, whereas in others (Vata Pradhana), patient has to make more efforts as in Vatic due to Sankoch in Pranavaha Srotos Nadi, usually without Kasa, or Kasa will be very troublesome and there will be no relief even after expulsion of sputum and due to excessive coughing, respiratory muscles get exhausted, so Parshwa Shula is observed. Pratishayam is a very common Nidana.

Associated symptoms during attack: In associated symptoms of Tamaka Shwasa, 50% found relief after Kasten sleshma nirharam and Vamana. Kshavathu was seen in 46.15%, 34.62% was figured in prevalence of symptoms of Shiro Greeva Parigra.

Upashaya: Ushnopachara was reported as a relieving factor in as many as 42.31% patients. And, 57.69% patients reported that they get relief in sitting posture (Ashino labhate Saukkhyam).

Anupashaya: Anupasaya with cold drinks which caused the vitiation of Vata and Kapha without Sanchezaya due to extreme Sheeta Guna. Three patients were reported with touch of cold water as an Anupshaya. A large majority had cold drinks and refrigerated food as aggravating factor, figuring up to 80.77%.

Sheeta Vata (relatively less percentage due to less habit of early rising and that is why no morning breeze exposure) was reported in 80.77%, Raja in 30.77%, 19.23% was found reported Dhama (relatively less than Raja as it include only outdoor pollution containing various allergens and indoor smoke is nowadays less as all the house wives are using gas in well-ventilated kitchen), Meghambu in 53.85%, Dadhi was Anupshaya in 30.77% of patients. 57.69% was found Shleshmala Ahara, i.e., milk products and sweet.

Drug review

Mode of action

The drug BA consists of many ingredients which excellently balance each other in Rasa-Panchaka and enhance the Vatakaphahara, Deepana, Pachana, and Vatanulomana properties, which are the main Doshas in the pathogenesis. The main factor in this disease as in many other diseases is Ama, and the Deepana-Pachana properties of the drug will digest the Ama by kindling the Jatharagni as well as Rasagni and Bhutagni. Furthermore, the Sothaharatwa Karma of most of the contents will neutralize the Srotorodha in Pranavaha Srotos due to Sotha created by Sama Vata.

The main logics behind the actions are as follows:

The Dosha-Prashamana effect (Bharungi, Pippali, Sunthi, Maricha, Haridru, Kasmanda) acts on the main Doshas which contribute to the Samprapti, viz. Vata and Kapha and Guduchi and Dhanyaka Tridoshashara properties are present[14] Deepana-Pachana Karma (Pippali, Maricha, Guduchi, Shunthi, Dhanyaka) digest Ama. Vatanulomana property (Pippali, Sunthi) maintains the normal flow of Vata. Shwasa, Kasa,
Shothahara Prabhava (Bharangi, Vasa, Shunthi, Kasmarda, Pippali, Maricha, Dhanyaka) act on the symptoms. The pharmacological studies already reported on the individual drugs also favor its effect in disease bronchial asthma as given below:

Antiallergic[15]—Haridra, Bharangi, Guduchi; anti-inflammatory—Haridra, Guduchi, Maricha, Kasmarda, Pippali, Shunthi; antispasmodic—Vasa, Dhanyaka; Antitussive—Vasa, Shunthi; bronchodilator—Vasa, Pippali; expectorant—Vasa; immunomodulator—Pippali, Guduchi. VA has Madhura Rasa dominancy along with Tikta, Katu, and Kashaya Rasa. Sheet Veerya and Katu Vipaka contribute to the pharmacodynamics of VA. Contemplation of the ancient classics reveals no such specific property of Avaleha regarding the pharmacokinetics, except its site of action starts from mouth. Avaleha may work as Rasayana for the Pranavaha Srotas and also shows Kapha Vatahara effect.

Antispasmodic—Vasa; expectorant—Vasa; immunomodulator—Pippali; anti-tissue—Vasa; bronchodilator—Vasa, Pippali—Anti-inflammatory.

Conclusion

Bharangyadi Avaleha and Vasa Avaleha both showed approximately equal effect on Roga Bala.

Combination of Bharangyadi Avaleha is very good having all the properties required to break the Sampapti of Tamaka Shwasa; however, the results are statistically not so encouraging, which may be due to the use of same formulation in both types of patients (having Vata Pradhana Sampapti and having Kapha Pradhana Sampapti).

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