**Abstract**

The alarming rise in the prevalence of bronchial asthma can be accounted to factors such as atmospheric pollution, rapid environmental changes, adaptation of newer dietetic preparations and tremendous psychological stress. There are about 334 million patients suffering with bronchial asthma that is affecting almost all age groups of patients across the world. In India around 15-20 million people were affected with bronchial asthma. In Ayurveda, the success of treatment completely depends upon four factors, termed as Chikitsa Chatushpada among which drug is second important factor after physician. The revalidation of ancient Ayurvedic or traditional compound preparations which can optimize the functions of respiratory tract by reversing the inflammatory responses and provide strength to the system is important. Hence pharmacodynamic of Shatayadi Churna in the management of Tamaka Shwasa was studied. Shatayadi Churna indicate the dominance of Katu, Tikta Rasa, Laghu, Tikshna Guna, Usna Virya, Katu and Madhur Vipaka and Kaptha Vatahamsaka Karma these drugs act on Pranavaha Srotas thereby pacifying the doshas and hence pacify the symptoms in Tamaka Shwasa.

**Keywords:** bronchial asthma, tamaka shwasa, shatyadi churna

**Introduction**

Science is exploring ways to control and cure the diseases with the help of advancements in technology but the challenge is still persisting because of springing up of newer diseases, and also the relapse of old ones in a modified and worsened form. From the foregoing, it is clear that human race gets inevitably exposed to atmospheric pollution and thus with the passing of decade and increasing of urbanization and industrialization the incidence of Tamaka Shwasa will keep on increasing. Modern medicine were believed to give immediate relief to the patient of Tamaka Shwasa but this relief is transient and symptomatic and patient continues to get the recurrent attacks of disease with further complications.

In global scenario there are about 334 million patients suffering with bronchial asthma that is affecting almost all age groups of patients across the world [1]. In India it is to be estimated around 15-20 million people were affected with bronchial asthma. Hence the prevalence of asthma is believed to be increasing with time and additional 100 million people would be expected to develop asthma by the year 2025 [2, 3].

Tamaka Shwasa Vyadhi is related with the derangement of the Pranavaha Srotas. On the basis of the clinical features Bronchial Asthma can be correlated with Tamaka Shwasa in Ayurveda. There are striking similarities in the description of mechanism of Asthma and its pathogenesis between modern and Ayurveda concepts. Asthma is described as a disorder of airways characterized by airway inflammation due to hyper responsiveness of airway. There is constriction of bronchial muscles causing broncho-constriction and mucous plug formation causing airway obstruction leading to airflow limitation & presentation of Asthma occurs. Ayurveda explains this as pratiloma gati [4] of Vayu in Vata Pradhana Samprapti mainly due to Sankochana Karma (bronchoconstriction) of vitiated Vata and subsequently obstruction of Pranavaha Srotas by Udiutra Kapha which loses its natural attributes and becomes condensed in the Srotas in Kaptha Pradhana Samprapti mainly due to Srotorodha Karma (obstruction) of Vitiated Kaptha Tamaka Shwasa is Pittasthana Samudhabhava and Kaphavatata dosha Vyadhi [5].

The fundamental treatment method of samsodhana, samsamana and nidana parivarjana mentioned in Ayurvedic classics, if administered judiciously, the desired results can be achieved. The revalidation of ancient Ayurvedic or traditional compound preparations which can optimize the functions of respiratory tract by reversing the inflammatory responses and provide strength to the system is important.
In Ayurveda, the success of treatment completely depends upon four factors, termed as Chikitsa Chatushpada among which drug is second important factor after physician [6]. Thus selection of a proper drug in the management of disease is very important. In the modern ages WHO also stresses importance of drug and defines it as a substance or product that is used or intended to be used, to modify or explore physiological system or pathological status for the benefit of the recipient. Ayurveda, believes that the drug or diet articles that reverses or break the Samprapti is ideal for the particular disease. The drug can be used singly or in combination to achieve the prescribed objective. It is often the total effect of all the ingredients in case of a formulation rather than the action of individual drugs that plays a vital role in therapeutics. Drug combinations are envisaged to serve synergistic action, combined action, toxicity, neutralizing action and specific action.

Aims and objective
1. To study the pharmacodynamic properties of Shatayadi Churna.
2. To analyze the role of Shatayadi Churna in the management of Tamaka Shwasas

Discussion
Selection of drug
In order to achieve maximum effect, a drug is expected to have a good symptomatic relief action, an antagonistic approach towards aetiopathogenesis, minimum side effects and good compliance [7]. According to modern system those drugs which are commonly used in Bronchial Asthma includes, bronchodilator, anti-histaminic, anti-allergic, mast cell stabilizers, immune-modulator, antioxidant, anti-inflammatory, expectorant, anti-tussive, mucolytic, adaptogenic properties. While studying the aetiopathogenesis of Tamak Shwasas the drugs which were having Kaphavataghna, Ushna and Vatanulomana properties are very beneficial to treat this disease. Hence Shatayadi Churna [8] mentioned in Charak Chikitsa in context of Hikka – Shwasas was selected for the analytical studies. The drugs administered with anupana of honey/lashnodaka to enhance its pharmacological activity. Each contents of Shatayadi Churna were taken in equal part and fine powder was made. It was then mixed with 8 parts of sugar. All the ingredients of the drugs are easily available, easy to administer and have no side effects.

Probable mode of action of the drugs
As per the description available in Ayurvedic texts, therapeutic effect of a drug depends on certain pharmacodynamic properties of its particular content. These pharmacodynamic properties are- Rasa, Guna, Virya, Vipaka and Prabhava. According to Ayurvedic Pharmacodynamic, drug do some part of work through Rasa, some part through Virya, some through Vipaka and remaining some part through Prabhava.

Pharmacodynamics of Shatayadi churna

From the above table it is clear that:-

<table>
<thead>
<tr>
<th>S. No</th>
<th>Drug</th>
<th>B.N</th>
<th>Rasa</th>
<th>Guna</th>
<th>Virya</th>
<th>Vipaka</th>
<th>Doshagnata</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>ShatY</td>
<td>Hedychium spicatum</td>
<td>Katu, Tikta, Kashaya</td>
<td>Laghu, Tikshna</td>
<td>Ushna</td>
<td>Katu</td>
<td>Kapha vatashamaka</td>
</tr>
<tr>
<td>2</td>
<td>Choraka</td>
<td>Angelica glauca</td>
<td>Katu, Tikta</td>
<td>Laghu, Tikshna</td>
<td>Ushna</td>
<td>Katu</td>
<td>Kapha vatashamaka</td>
</tr>
<tr>
<td>3</td>
<td>Jivanti</td>
<td>Leptadenia reticulata</td>
<td>Madhur</td>
<td>Laghu, Snigdha</td>
<td>Sheeta</td>
<td>Madhur</td>
<td>Vata pittashamaka</td>
</tr>
<tr>
<td>4</td>
<td>Twak</td>
<td>Cinnamomum zeylanicum</td>
<td>Katu, Madhur</td>
<td>Laghu, Raksha, Tikshna</td>
<td>Ushna</td>
<td>Madhur</td>
<td>Kapha vatashamaka</td>
</tr>
<tr>
<td>5</td>
<td>Mustak</td>
<td>Cypres rotundus</td>
<td>Tikta, Katu, Kashaya</td>
<td>Laghu, Raksha, Tikshna</td>
<td>Sheeta</td>
<td>Katu</td>
<td>Kapha vatashamaka</td>
</tr>
<tr>
<td>6</td>
<td>Pashkarmoola</td>
<td>Inula racemosa</td>
<td>Tikta, Katu</td>
<td>Laghu, Tikshna</td>
<td>Ushna</td>
<td>Katu</td>
<td>Kapha vatashamaka</td>
</tr>
<tr>
<td>7</td>
<td>Tulsi</td>
<td>Ocimum sanctum</td>
<td>Katu, Tikta</td>
<td>Laghu, Raksha</td>
<td>Ushna</td>
<td>Katu</td>
<td>Kapha vatashamaka</td>
</tr>
<tr>
<td>8</td>
<td>Bhumyamalaki</td>
<td>Phylanthus uiriti</td>
<td>Tikta, Kashaya Madhur</td>
<td>Laghu, Raksha</td>
<td>Sheeta</td>
<td>Madhur</td>
<td>Kapha pittashamaka</td>
</tr>
<tr>
<td>9</td>
<td>Ela</td>
<td>Elettaria cardamomun</td>
<td>Katu, Madhur</td>
<td>Laghu, Raksha</td>
<td>Sheeta</td>
<td>Madhur</td>
<td>Kapha vataghna</td>
</tr>
<tr>
<td>10</td>
<td>Pippali</td>
<td>Piper longum</td>
<td>Katu</td>
<td>Laghu, Tikshna, Snigdha</td>
<td>Anushnasheeta</td>
<td>Madhur</td>
<td>Kapha vatagha</td>
</tr>
<tr>
<td>11</td>
<td>Agaru</td>
<td>Aquilaria agallocha</td>
<td>Katu, Tikta</td>
<td>Laghu, Tikshna</td>
<td>Ushna</td>
<td>Katu</td>
<td>Vata kaphahara</td>
</tr>
<tr>
<td>12</td>
<td>Shunthi</td>
<td>Zingiber officinale</td>
<td>Katu</td>
<td>Laghu, Snigdha</td>
<td>Ushna</td>
<td>Madhur</td>
<td>Vata kaphahara</td>
</tr>
</tbody>
</table>

Rasa
1. Katu Rasa is present in 8 dravya (i.e 36.36%)
2. Tikta Rasa is present in 7 dravya (i.e 31.81%)
3. Madhur is present in 4 dravya (i.e 18.18%)
4. Kashaya is present in 3 dravya (i.e 13.63%)

Guna
1. Laghu guna is present in 12 dravya. (i.e 46.15%)
2. Tikshna guna is present in 6 dravya. (i.e 23.07%)
3. Raksha guna is present in 5 dravya. (i.e 19.23%)
4. Snigdha guna is present in 3 dravya (i.e 11.53)

Virya
1. Ushna Virya is present in 7 dravya.(58.33%)
2. Sheeta Virya is present in 4 dravya.(33.33%)
3. Anushnasheeta is present in 1 dravya.(8.33%)

Doshashamaka
1. Kaphavatashamaka Karma is present in 10 dravyas (83.33%)
2. Kaphapittashamaka Karma is present in 2 dravyas (16.66%)

In Shatayadi Churna most of the Dravya are having predominance of Laghu, Raksha and Tikshna Guna. All these Guna helps in increasing Dhutwagni, by enhancing the basal metabolic rate. These also help in digestion of undigested matter and their removal. Tikshna Guna due to predominance of Agni Mahabhuta acts on the channels immediately and remove the obstruction by pacifying the Kapha. Raksha Guna helps in absorption of excessive secretion and thereby helps in removing obstruction caused by thick mucus plug. Laghu and Raksha Guna are mainly Kaphahara.

The mode of Action of all drugs in Shatayadi Churna can be divided into following groups such as
1. Deepan-Pachana Drugs: Choraka, Bhumiamalaki, Tulsi, Pippali, Musta, Ela, Twak. (These drugs help at the level of Agni in Samprapti Vighatana.)
2. Srotoshodhaka Drugs: Shunthi, Jivanti, Tulsi, Ela, Twak.
Adhatoda vasica
M. Ayurvedic Medical College, Gadag, Karnataka

1. Amanashaka Drugs: (Rasagata Kaphanashaka):- Shunti, Pippali, Twak. (Ama is the one of the important milestone in the Samprapti of Tamaka Shwasa hence these drugs help in Samprapti Vighatana)


3. Dhatu Rupi Kapha Shamak: Madhu

4. Swasahara action: All most all the drugs of Shatayadi Churna are having Swasahara action.

A study done by Behera B. showed the relevance of Shvāsakuthāra rasa in the management of Tamak Shwasa. This study was carried out on the 44 patients of bronchial asthma. Shvāsakuthāra was administered in the dose of 1.5 gm per day in six divided doses with honey for a period of 45 days. The results of this study showed that Shvāsakuthāra rasa significantly reduces the frequency, duration and intensity of the attack. It also provided significant relief in intensity of the attack. It also provided significant relief in signs and symptoms and increased the PEFR. No adverse effect of the drug was noticed during the study [10].

Another study done by Prajapati P.K et al. showed the relevance of different forms of Vasa (Adhatoda vasica) in different dosage forms of Vasa like kwatha, availeha, sneha and sandhana have been used for the treatment of Shwasa roga [11].

Panda A.K et al. studied the efficacy of Padmapatradi yoga in the management of bronchial asthma. A study was carried out in 40 patients of either sex in between the age of 15-65 years to assure the clinical response of Padmapatradi yoga in bronchial asthma (Tamaka Shwasa) at P.G. department of Kayachikitsa, D.G.M. Ayurvedic Medical College, Gadaq, Karnataka. The sum total properties of Padmapatradi yoga is tikta katu rasa, laghu and tikha guna (light and penetrating properties), ushna virya (hot potency) and vatakaphasna (decrease vata and kapha dosa). Padmapatradi yoga is effective in increased peak expiratory flow rate, breath holding time, and reduces the absolute eosinophil count of studied cases and also found statistically highly significant at p<0.001 level. The drug is quite safe and acts as a bronchodilator, antihistaminic and anti-inflammatory [12].

Conclusion
Hence Shatayadi Churna indicate the dominance of Katu, Tikta Rasa, Laghu, Tikshna Guna, Ushna Virya, Katu and Madhur Vipaka and Kapha Vatashamaka Karma are present in maximum dravyas. These drugs act on Pranavaha Srotas thereby pacifying the doshas and thereby pacify the symptoms in Tamaka Shwasa. The contents of the drug are easily available and adverse effect of the drugs were also not reported.

References