CLINICAL EVALUATION OF SHATYADI CHURNA AND VIRECHANA KARMA IN THE MANAGEMENT OF TAMAKA SHWASA W.S.R TO BRONCHIAL ASTHMA

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ABSTRACT

In any other Traditional system of Medicine, the research in Ayurveda has to begin with a search of what our ancient seers had conceptualized about various diseases, and a research on how those concepts can be rationalized in the light of latest advancement of medical knowledge and diagnostic techniques. Research should be a process that converts data into information, information into knowledge and knowledge into wisdom. Acharya Charaka says “there are many diseases that are life threatening but Tamaka shwasa & Hikka are the quickest of them all”. Again, Acharya Charaka states that “there will always be Hikka & Shwasa in death bed irrespective of the cause i.e disease3. Such is the severity of the Shwasa roga emphasized in Ayurveda text books.

Tamaka Shwasa is one of the important type of shwasa roga and can be compared to ‘Bronchial Asthma’ due to its similarities in its causes, pathophysiology, clinical signs & symptoms such as Shwaskricchata, Peenasa, Kasa, Kapha Nishthivanam, Ghurghurukam, Urashoola, Asinolabhate soukhyam, Shwasa vega etc. In Ayurveda Tamaka shwasa (Bronchial Asthma) can be effectively treated both by shamshamana & samshodhana chikitsa. Our main aim is to develop cost effective, free from adverse effects, easily available & use of minimum number of drugs, so as to increase the elasticity of lung tissue & develop natural immunity of the body. Ayurvedic treatment not only cure cure the root cause of the disease but also prevents the disease to reoccur in future by boosting immunity against infections & treating any allergic reactions.
KEYWORDS: Tamaka Shwasa, Bronchial Asthma, Shatyadi Churna, Virechana Karma.

INTRODUCTION
The human quest for health and longevity paved the way for the birth of Science of life, which is the science of medicines as well; to keep the health of the healthy and restore the health for the unhealthy. With the explosion of the knowledge in the 21st century a new concept of multi factorial causation of a disease has arisen due to changing pattern of life styles, living standards, demographic factors, urbanization, over growth of industrialization & auto mobilization.

All of the above increase causative factors of Pranvaha Srotasa like dust, allergens, pollutant toxic gases, vehicle smoke, cigarette smoking and stress. This all the causative factor responsible for the disease of Pranvaha Srotasa like Pratishaya, Tamak Shwasha, Kasa & Hikka in remarkable number now a days. In Ayurveda respiration is stated as “Shwasocchvasa-Kriya”. Any disturbance or pathology in this process leads to Shwasa roga. W.H.O recognises asthma as a disease of major public health importance.

- Some associations & programmes on Asthma
  - International study of Asthma & Allergies in childhood (ISAAC)
  - Global initiative for Asthma (GINA)
  - Allergic Rhinitis & its impact on Asthma (ARIA)

Between 100-150 million people around the globe suffers from Asthma & this number is rising worldwide. Deaths from this condition have reached 180,000 anually.[1]

The term ‘Shwasa’ denotes ‘life’. According to Acharya Charaka the process by which jeewana vyapara i.e maintenance of life or vayu vyapara i.e respiration, is carried out is know as Shwasa & any obstruction in this process is called “Shwasa Roga”.[2]

Generally in Ayurveda classics, Prana Vayu and Udana Vayu are described in the context of respiration.[3] The sthana and karma (location and functions) of Udana vayu corresponds with respiration in many ways. It was Acharya Sharngadhara, who first tried to define the process of Shwasa kriya and its physiological aspects.[4]
It is clear that when "Prana Vayu" is not performing its normal physiological functions (vitiating) and becomes defiles (Viguna) hindered by Kapha and moves in contrary direction i.e. upward, then it results in Shwasas Roga.\textsuperscript{[5]}

The current management of Tamaka shwasa (Bronchial Asthma) by modern medicines is not very effective, as there are many adverse effects of medicines used i.e corticosteroids, short-actin $\beta_2$ agonist etc.

**MATERIALS AND METHOD**

The material utilized for the study will be of two types:

1) **Literary:** It was compiled from the text-books of Ayurvedic and modern medical classics & latest research papers published in its context.

2) **Clinical:** It was done on 30 Patients of Tamaka Shwasa. They were treated on the principle of Ayurveda & evaluation of Virechana karma & Shatyadi churna in terms of pre & post relief in signs & symptoms clinically, pathologically & radiological with follow up.

**Source of data**

This study is carried on 30 Patients in a single group study of Tamaka Shwasa. The patient who fulfilled the clinical diagnostic criteria of Tamaka Shwasa (Bronchial Asthma) were randomly selected, irrespective of their age, sex, religion, occupation etc. from the O.P.D & I.P.D of JAMMU INSTITUTE OF AYURVEDA AND RESEARCH HOSPITAL. Also special camps were conducted for the study. Study was carried out on the patients fulfilling the criteria of Tamaka Shwasa.

**INCLUSION CRITERIA**

- Patients presenting with classical features of Tamaka Shwasa
- Patients aged between 18 – 60 years, irrespective of gender
- Patients with history of Tamaka Shwasa less than 5 years
- PEFR > 80 Lt/min.

**EXCLUSION CRITERIA**

- Patient with age less than 18 years and more than 60 years
- PEFR < 80 Lt/min are excluded
- Asthma due to other Systemic disorders
- Asthma due to other Respiratory disorders
Asthma in pregnancy
Occupational asthma
Emergency condition of the patient, who requires oxygen inhalation Anatomical defects in airway
The information collected on the basis of observation made during the treatment are analyzed on a statistical criteria in terms of mean score (X), standard deviation (S.D), Standard error (S.E.), Paired T Test, was carried at the level of 0.05, 0.01, 0.001, of P level thus the obtained results were interpreted as:

P> 0.05: Unimproved
P< 0.05: Improved
P< 0.01: Significantly improved
P< 0.001: Highly significantly improved

RESULTS
EFFECTS OF THERAPY

TABLE NO. 34: EFFECT OF THERAPY ON TIVRA SHWASA

<table>
<thead>
<tr>
<th>Mean</th>
<th>Mean diff.</th>
<th>% Relief</th>
<th>S.D ±</th>
<th>S.E ±</th>
<th>‘t’ Value</th>
<th>‘p’ Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>B.T</td>
<td>A.T</td>
<td></td>
<td></td>
<td></td>
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<td></td>
</tr>
<tr>
<td>1.766</td>
<td>0.800</td>
<td>0.966</td>
<td>54.69</td>
<td>0.491</td>
<td>0.089</td>
<td>3.407</td>
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</tbody>
</table>

TABLE NO. 35: EFFECT OF THERAPY ON KASA

<table>
<thead>
<tr>
<th>Mean</th>
<th>Mean diff.</th>
<th>% Relief</th>
<th>S.D ±</th>
<th>S.E ±</th>
<th>‘t’ Value</th>
<th>‘p’ Value</th>
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<tbody>
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<td>B.T</td>
<td>A.T</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1.233</td>
<td>0.533</td>
<td>0.700</td>
<td>56.77</td>
<td>0.794</td>
<td>0.144</td>
<td>4.828</td>
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TABLE NO. 36: EFFECT OF THERAPY ON PINASA

<table>
<thead>
<tr>
<th>Mean</th>
<th>Mean diff.</th>
<th>% Relief</th>
<th>S.D ±</th>
<th>S.E ±</th>
<th>‘t’ Value</th>
<th>‘p’ Value</th>
</tr>
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<tbody>
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<tr>
<td>1.060</td>
<td>0.530</td>
<td>0.530</td>
<td>50.00</td>
<td>0.574</td>
<td>0.105</td>
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TABLE NO. 37: EFFECT OF THERAPY ON GHURGHURAKAM

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<tr>
<th>Mean</th>
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<th>S.D ±</th>
<th>S.E ±</th>
<th>‘t’ Value</th>
<th>‘p’ Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>B.T</td>
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<td></td>
<td></td>
<td></td>
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<td></td>
</tr>
<tr>
<td>1.166</td>
<td>0.833</td>
<td>0.333</td>
<td>28.56</td>
<td>0.479</td>
<td>0.087</td>
<td>3.807</td>
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TABLE NO. 39: EFFECT OF THERAPY ON KAPHASTHEEVANAM

<table>
<thead>
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<th>Mean</th>
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<th>% Relief</th>
<th>S.D ±</th>
<th>S.E ±</th>
<th>‘t’ Value</th>
<th>‘p’ Value</th>
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<tbody>
<tr>
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<td>A.T</td>
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<td></td>
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<td></td>
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<tr>
<td>0.766</td>
<td>0.433</td>
<td>0.333</td>
<td>43.47</td>
<td>0.491</td>
<td>0.089</td>
<td>4.082</td>
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TABLE NO. 42: EFFECT OF THERAPY ON SHYANE SHWASA PIDITA

<table>
<thead>
<tr>
<th></th>
<th>Mean</th>
<th>Mean</th>
<th>% Relief</th>
<th>S.D ±</th>
<th>S.E ±</th>
<th>'t' Value</th>
<th>'p' Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>B.T</td>
<td>0.533</td>
<td>A.T</td>
<td>0.433</td>
<td>0.100</td>
<td>18.76</td>
<td>0.305</td>
<td>0.055</td>
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TABLE NO. 44: EFFECT OF THERAPY ON ASINO LABHATE SAUKHYAMA

<table>
<thead>
<tr>
<th></th>
<th>Mean</th>
<th>Mean</th>
<th>% Relief</th>
<th>S.D ±</th>
<th>S.E ±</th>
<th>'t' Value</th>
<th>'p' Value</th>
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</thead>
<tbody>
<tr>
<td>B.T</td>
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<td>0.367</td>
<td>40.77</td>
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<td>0.101</td>
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TABLE NO. 46: EFFECT OF THERAPY ON SHITAKALE VRIDDHI

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<thead>
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<th></th>
<th>Mean</th>
<th>Mean</th>
<th>% Relief</th>
<th>S.D ±</th>
<th>S.E ±</th>
<th>'t' Value</th>
<th>'p' Value</th>
</tr>
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<tr>
<td>B.T</td>
<td>1.400</td>
<td>A.T</td>
<td>0.300</td>
<td>1.100</td>
<td>78.57</td>
<td>0.994</td>
<td>0.181</td>
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TABLE NO. 47: EFFECT OF THERAPY ON PEAK EXPIRATORY FLOW RATE (PEFR)

<table>
<thead>
<tr>
<th></th>
<th>Mean</th>
<th>Mean</th>
<th>% Relief</th>
<th>S.D ±</th>
<th>S.E ±</th>
<th>'t' Value</th>
<th>'p' Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>B.T</td>
<td>333.433</td>
<td>A.T</td>
<td>422.566</td>
<td>-89.133</td>
<td>26.73</td>
<td>45.491</td>
<td>8.305</td>
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</table>

EFFECTS OF THERAPIES

32. Effect of therapy on Tivra Shwasa: There was improvement in Tivra Shwasa which was reported to be 54.69%. The relief is statistically highly significant (p<.001).

Tamka shwasa is said to be pitta samudbhava vyadhi and Vata-Kapha pradhan. Virechana karma removes Pitta & Kapha which in turn helps in Vata anulomana, by this effect patient feels relief in their symptom. Whereas Shatayadi churna contains drugs mainly having ushna virya, 9 out of 14 & katu vipaka, 10 out of 14. Ushna virya alleviates both Kapha & vata, whereas katu vipaka alleviates Kapha dosha. In addition 10 out of 14 drugs having Vatakaphahara properties that helps in alleviating above symptom.

33. Effect on Kasa: The symptomatic relief in kasa is 56.77% with treatment. The improvement is statistically significant (p<.001).

This is due to Kasa- Shwasahara properties of the drugs i.e 10 drugs out of 14 having this properties. 11, 9 & 5 out of 14 drugs having Katu, Tikta, Kashaya properties respectively, in addition 10 out of 14 drugs having Ushna virya & katu Viapaka each, due to these properties Sroto Rodha of Pranavaha Srotas is cleared i.e alleviates Kapha.
34. Effect on Pinasa: 50% relief was exhibited by the patients in symptom. The result is statistically highly significant (p<.001).

The main predominant doshas in pinasa is Vata & Kapha. These are alleviated by vata-kapha Shamaka properties of drugs (10 out of 14 drugs).

35. Effect on Ghurghurakam: There was 28.56% symptomatic relief reported in present study. The observed results in this group is highly significant (p<.001).

Ghurghurakam is due to Avarodha in Pranavaha srotas that in turn is due to vitiated Kapha dosha & pratiloma Vata dosha which is then relieved by Vata-kapha shaman & Vatanulomana properties of drugs comprising Shatyadi Churna.

37. Effect on Kaphastheevananam: There was 43.47% relief in symptom. This was statistically highly significant (P<.001).

Lekhna property helps in removing tenacious & sticky sputum from the respiratory tract. Asthmatic patient suffers from excessive production of sputum in the respiratory tract due to which the lumen gets narrower and causes breathlessness. So, after expectoration patients feels some relief.

40. Effect on Shyane shwasa pidita: In present study, 18.76% cases reported symptomatic relief which is statistically significant (p<.05).

In Shyane Shwasa Pidita patients feels discomfort while lying i.e in lying posture. This is due to the fact that when the disease progresses heart is also involved, because there are secretions in alveoli & lungs, due to this congestion there is back pressure on heart known as Cor-pulmonale. The Mula of Pranavaha srotasa is Hridya (Heart) & Mahasrotasa, So when Hridya is involved & the disease become 1 year old is said to be Yapya & can lead to Right Ventricular Failure. Also according to modern science while in lying posture Diaphragm is placed slightly upward due to which total lung capacity is decreased & patient prone to Tamaka Shwasa or suffering from the disease feels discomfort.

Drugs in Shatyadi Churna are having Hridya, Sanjanasthapaka Karma & also having Rasayana Karma. Due to these properties Rasa Dhatu is improved which is concerned with
Hridya. Also due to Hridya Karma, it gives strength to Heart muscles & improved its tone & decrease further complications.

41. Effect on Asino Labhate Saukhyam: Statistically there was 40.77% relief in symptoms which is highly significant (p<.001).

Due to Pitta Sthana Dusti, there is Aam Rasotpatti & this causes excess secretion of Malbhut Dusta Kapha of Rasa Dhatu in Pranvaha Srotas. When Vayu Dosha gets obstructed by above Dusta Kapha, on lying the Vayu get entrapped and unable to escape and secondly there is decreased space for the movement of Prana Vayu and the symptoms were produced.

When patient is in sitting position the diaphragm is placed slightly down due to gravity so the lung space is increased & patient feels relief.

Drugs in Shatyadi Churna having Dipana-Pachana Karma which is helpful in Pachana of Dhushta Kapha i.e Aam Rasa. Also lekhana karma removes the malibhuta kapha from pranavaha srotasa. Ushna virya & Katu vipaka both helps in alleviation of Kapha Dosha & Vata Anulomana and thus reliefs the symptom.

42. Effect on Shitakale vriddhi: There was 78.57% relief in the symptom as observed on patients. The relief is statistically highly significant (p<.001).

In Shitakala or Shita Ritu i.e Hemanta-Shishira, there is predominance of Shita guna which is tulya to kapha & Vata dosha i.e both having Shita Property. Due to tulya kala it vitiated Kapha-Vata Dosha which in turn precipitates or trigger episode of Tamaka Shwasa. There is also Sanchaya of Kapha dosha in Shishira Ritu which causes Congestion in Pranavaha Srotasa (Respiratory tract).

Modern science says that in cold weather air is very cool & dry, this in turn when inhaled does not get properly warmed up to the body temperature and thus causes respiratory muscle to spasm by vagus nerve stimulation.

Most of the drugs in Shatyadi Churna are having Ushna Guna, Ushna Virya, Katu Vipaka & Vata-Kapha shamaka Property. So, due to these above said properties Shatyadi Churna helps in relieving the symptoms caused by Shita Kala or Shita Guna.
43. Effect on PEFR: In present study, there was 26.73% relief in symptom which is statistically highly significant (p<.001).

The mini peak flow meter is used to measure PEFR (Peak Expiratory Flow Rate). This mini peak flow meter is used in Asthma for confirming the diagnosis, disease control, control of treatment & its effects, monitor progress of disease as a bed side monitor in all Asthmatic patients. It is also helpful in assessing patient’s objective parameters. PEFR is a cheap, reliable, & easily available method for assessing lung functions.

This can be due to the fact that 26.66% of cases were addicted to smoke (Dhuma) & 40% cases reported Raja/Dhuma as Anupshaya. WHO, air pollution reports says that smoking causes impairment in PEFR. Also patients working in cotton mills etc are more prone to airway obstruction & their PEFR will be impaired. House wife’s on the other hand are exposed to kitchen smoke, house dust etc due to this their PEFR values are very low. Also due to Atopic Asthma (In Atopic Patients) there is increased immune response, in turn causes excessive mucous production which causes obstruction in airways and thus impaired PEFR values.

*Shatyadi Churna* has *Hridya karma* as *Moola* of *Pranavaha Srotasa* are *Hridya & Maha Srotasa*, So due to *hridya*, *Lekhna*, *Balya*, *Rasayana*, *Dipana-Pachana*, *Bhedana karma & Katu-Tikta Rasa*, *Ushna virya*, *Katu Vipaka*, *Vata-Kapha Shamaka* property it improves lung functions, expel out *Dushita Kapha*, *Dhushita Aam Pachana* is done, improves tone of heart muscles, improves immunity and thus improvement in PEFR values were reported.

**CONCLUSION**

- Tamaka Shwasa is a Vata-Kapha dominant & also it is *Pittasthana Samudbhava Vyadhi* of *Pranavaha Srotasa*.
- It is said to be curable when less chronic “*sadhya navothita….*** & said to be *Yapya Vyadhi* when chronic. So it should be treated as early as possible for better results.
- It closely correlated with Bronchial Asthma in modern science as almost all the signs & symptoms were same as of Tamaka Shwasa.
- As Tamaka Shwasa is a Vata-Kapha dominant disease, so *Vata-Kapha Shamaka* treatment should be given. *Shatyadi Churna* fulfills the above criteria.
- Overall effect is that in 33.33% i.e 1 out of 30 pateints cases complete remission is seen , 26.66% cases shown marked improvement, 53.33% cases shown moderate improvement,
16.66% cases reported mild improvement & 0.00% cases were having no change in their symptoms.

➢ It can be said that by giving Sadyo/Avasthika Virechana the effects of Shatyadi Churna were maximized.

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