

CASE REPORT

A CASE STUDY ON THE MANAGEMENT OF *TAMAKA SHWASA* IN CHILDREN WITH POLYHERBAL FORMULATION

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Summary:

Asthma is a non-communicable chronic lung disease, characterized by airway inflammation, airway obstruction mainly due to muscle spasm, associated with edema and stagnation of the mucus, Airway hyper-reactivity to aerobiological and irritants, airway remodeling in uncontrolled asthma. Ayurveda texts have described five types of *Shwasa Roga* and among them five, *Tamaka Shwasa* (Bronchial Asthma) is one which is a “*Swatantra Vyadhi* (independent disease) having its own etiological factor, patho-physiology and management. It is mentioned as *Yapya Vyadhi* (palliative disease) in Charaka Samhita, while Sushruta considered it as *Krichchra Sadhya Vyadhi* (difficult to cure disease). *Tamaka Shwasa* is basically a disorder of *Praanavaha Srotasa* while other *Srotasa* are also vitiated. The present effort is intended to study the efficacy of such formulations in reducing the sign and symptoms of childhood asthma. A case of 12 year old male patient who presented features of *Tamaka Shwasa* was treated by internal Ayurvedic Medicine; *Shwasahara Dashemani Churna* showed marked improvement in cardinal feature such as breathlessness, cough, awakening in night etc. and some hematological Parameters, discussed here. After 8 weeks of Follow up no episodes of above complaints have been reported.

Key Words – Bronchial Asthma. *Shwasahara Dashemani Churna*. *Tamaka Shwasa*

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INTRODUCTION

Bronchial Asthma is a disease characterized by an increased responsiveness of the airways to various stimuli. It manifests by widespread narrowing of the airways causing paroxysmal dyspnea, wheezing or cough [1]. Childhood Bronchial Asthma has multifactor causation. Geographical location, environmental, racial as well as factors related to behaviors and life-styles are associated with the disease [2][3][4].

Asthma prevalence rates in states of India like Karnataka, Gujarat, Haryana, Uttar Pradesh and Madhya Pradesh are above the national level [5]. This disease is more predominant in children population of 6-16 years. At the age of six to seven years, The prevalence ranges from 4-32%. It is the leading cause of hospitalization for children and one of the most important chronic conditions causing elementary school absenteeism [6][7]. *Tamaka Shwasa* (Bronchial Asthma) is basically a disorder of *Pranavaha Srotasa* while other *Srotasa* are also vitiated. In this condition *Vayu* gets vitiated from its normalcy due to obstruction made by *Kapha*. This vitiation leads to severe episodes of breathlessness [8]. The *Tamaka Shwasa* entity in modern medical science to this disorder is Bronchial Asthma. The drug combination selected in this study is having properties to remove the obstruction made by *Kapha* in the *Pranavaha Srotasa* and related system and normalize the

functioning of *Vayu*. By virtue of *Rasayana* (rejuvenation) properties of drugs, they regularize the *Dhatwagni* and promote the normal condition of the child.

Case Presentation

A 12 years old male patient from Jamnagar came in OPD of Kaumarbhritya department IPGT & RA, GAU, Jamnagar. Child was pre-diagnosed for Bronchial Asthma, studying in 6th Standard and belonging to middle class family having complaints of cough & cold for 5 to 7 days, breathlessness since 2 years. He has difficulty in breathing due to the coughing and night awakening; Patient has history of recurrent common cold for 3 Years. Breathlessness is found since the age of 10 years. Past history of recurrent URTI due to seasonal changes, cold weather or in winter season. Father was also having asthmatic symptoms.

On examination

Appearance was normal with Ht.-135 Cms., Wt.-34 kg., BMI -18.9 Kg/m², Vitals was stable with Temp.-98.4⁰F, P.R.-80/ mint. Also, Physical and mental disposition were normal. Respiratory System: - Respiration Rate – 22/min., Nasal Polyp/Nasal mucosa atrophy – Absent, the Inspiration was shallow and expiration was prolonged, chest was found congested, Air entry bilaterally equal, generalized wheezing sound was found.

X-ray chest shows no any structural abnormality.

Personal History-

Appetite – Average; Sleep –Disturbed; Bowel – 1 - 2 time per day hard stool passing; Urine – 5- 6 times per day

Birth History-

Full Term Normal Delivery at Hospital, Cried soon after birth, Birth weight- 2.8kg, No H/O- NICU Admission

Immunization History: BCG mark present over left deltoid region and other vaccines were given on time.

Growth and Development- Gross motor, fine motor, language, personal developments were proper with age.

MATERIAL & METHODS:

Drug:- *Shwasahara Dashemani Churna* 8 gm in 3 divided doses orally with *Madhu* (honey) (dose calculated according to Sharangadhara Samhita for 8 weeks, Follow up period 8 weeks. Patient was advice not to consume any food or drink at least for 30 minutes after medicine.

Table- 1 *Shwasahara Dashemani Churna*^[9]

Sr.No.	Drug name	Botanical name	Part to be used	Ratio
1	<i>Shati</i>	<i>Hedychium spicatum</i> .Ham ex smith	<i>Shushka Kanda</i> (Dried Stem)	1 part
2	<i>Pushkaramoola</i>	<i>Inula racemosa</i> . Hook. F	<i>Shushka Moola</i> (Dried Root)	1 part
3	<i>Amlavetasa</i>	<i>Rheum emodi</i> . Wall	<i>Shushka Patra, Bija</i> (Dried Leaves and Seeds)	1 part
4	<i>Ela</i>	<i>Elettaria cardamomum</i> Maton	<i>Shushka Phala</i> (Dried Fruit)	1 part
5	<i>Hingu</i>	<i>Ferula narthex</i> Boiss	<i>Shushka Nirayasa</i> (Dried Resin)	1 part
6	<i>Agaru</i>	<i>Acquilaria agallocha</i> Roxb.	<i>Shushka Kashtha</i>	1 part

			(Dried Stem)	
7	<i>Surasa</i>	<i>Ocimum sanctum</i> Linn.	<i>Shushka Panchanga</i> (Dried Whole Plant)	1 part
8	<i>Tamalaki</i>	<i>Phyllanthus fraternus</i> L.	<i>Shushka Panchanga</i> (Dried Whole Plant)	1 part
9	<i>Jivanti</i>	<i>Leptadenia reticulate</i> W & R	<i>Shushka Panchanga</i> (Dried Whole Plant)	1 part
10	<i>Chanda</i>	<i>Angelica archangeica</i> Linn.	<i>Shushka Moola</i> (Dried Root)	1 part

- *Chanda* not available in present era, so their substitutes were be used as given below^[10]

Main Drug	Substitute	Botanical name of substitute drug	Part to be used	Ratio
<i>Chanda</i>	<i>Shati</i>	<i>Hedychium spicatum</i> . Ham ex smith	<i>Shushka Kanda</i> (Dried Stem)	1 part

Subjective Criteria of assessment ^[11] -

1. ***Rogabala*** (Cough, wheezing, trouble breathing and activity limitation etc.)
2. ***Agnibala*** (*Abhyavaharana Shakti, Jarana Shakti, Kshudha* etc.)
3. ***Dehabala*** (*BalaVridhhi, Svaravarna yoga* etc.)
4. ***Satvabala*** (*Nidralabho Yathakalam* etc).

Rogabala

1. *Shwasakashtata* (breathlessness)

1 - Not troubled by breathlessness except on strenuous exercise

2 - Short of breath when hurrying or walking up a slight hill

3 - Walks slower than contemporaries on level ground because of breathlessness or have to stop for breath when walking at own pace

4 - Stops for breath after walking about 100 meters or after a few minutes on level ground

5 - Too breathless to leave the house or breathless when dressing or undressing

2. Frequency of *Shwasa Vega*

0 - No attack during one month

1 - Frequency of attack once in a month

2 - Frequency of attack once in two weeks

3 - Frequency of attack once in a week

4 - Frequency of attack twice in a week

5 - Frequency of attack once or more than once in a day

3. Ghurghurakam (wheezing)

- 0 - No wheezing
- 1 - Wheezing during attack
- 2 - Very often wheezing
- 3 - Always wheezing found

4. Kasa(cough)

- 0 - No Kasa
- 1 - Kasavega sometimes but not troublesome
- 2 - Troublesome Kasa, but does not disturbing the sleep
- 3 - Very troublesome Kasa, does not even allowing to sleep at night

Agnibala (digestive power)

1. Abhyavaharana Shakti (food intake capacity)

- 1 = Not at all having food
- 2 = Having food in less quantity once in a day
- 3 = Having food in less quantity twice a day
- 4 = Having food in moderate quantity twice a day
- 5 = Having food in normal quantity twice a day
- 6 = Having food in good quantity twice/ thrice

2. Jarana Shakti:

Scoring according to Jeerna Ahara Laxana present after 6-8 hrs After having food; Utsaha, Laghuta, Udgarashuddhi, Kshuttrishna Pravritti, Yathochita malotsarga

- 1 = Absence of any symptom
- 2 = Presence of one symptom
- 3 = Presence of any two symptoms
- 4 = Presence of any three symptoms
- 5 = Presence of any four symptoms
- 6 = Presence of five symptoms

Dehabala (physical strength)

1. Balavridhhi:

- 1 = Can't do any type of work

- 2 = Ability to work affected
- 3 = Feeling weakness without affected work
- 4 = Slight weakness
- 5 = No weakness

2. Swara Varna Yoga: (texture luster and voice)

- 1 = Looks gloomy
- 2 = Lethargic and tired
- 3 = Patient looks cheerful

Satvabala (mental strength)

1. Nidra Labho Yathakalam (status of sleep):

- 1 = No sleep in day or night
- 2 = Disturbed sleep in night and tries to compensate in day
- 3 = Sleeps with disturbed intervals and remains unsatisfied
- 4 = Sleep gets disturbed in early morning
- 5 = Sound sleep

WHO – QOL Parameters^[12]

- 1. General Assessment
- 2. Physical Assessment
- 3. Psychological Assessment
- 4. Social Assessment
- 5. Environmental Assessment

Objective Criteria of assessment^[13] -

- 1. Positive changes in blood picture, including AEC
- 2. QOL (Quality of Life) parameters for Asthma patients
- 3. ACQ (Asthma Control Questionnaire) for short term control
- 4. ACT (Asthma Control Test) for intermediate control
- 5. GINA (Global initiative for asthma)

RESULTS:

Table- 2 Effect of therapy on Subjective Parameters:

Parameter	Before Treatment	After Treatment
Breathlessness	Grade 3	Grade 1
Paroxysm of breathlessness	Grade 3	Grade 1
Cough	Grade 3	Grade 0
Wheezing	Grade 2	Grade 1
Awakening in night	Grade 2	Grade 0
Breath holding time	18 sec	30 sec

1. Cough- No *Kasa* (cough)
2. Breathlessness- Not troubled by breathlessness except on strenuous exercise.
3. Awakening in night- No night symptoms.
4. No coughing in early morning and late night.
5. Showed better improvement in all parameters like *Dehabala* (physical strength), *Satvabala* (mental strength), *Abhyavaharana Shakti* (food intake capacity), *Jarana Shakti* (digestive power), *Nidra Labho Yathakalam* (status of sleep) and WHO –QOL parameters.
6. Appetite increased.
7. Body wt. increased for 1.5 kg.

Table- 3 Effect of therapy on Objective Parameters:

Parameter	Before Treatment	After Treatment	% Improvement
AEC count	1210	210	82.64
ESR	10	04	60
ACQ	14	06	57.14
GINA	3	1	66.66
ACT	08	17	52.94

On Investigations (Haematological, Spirometry, Peak Expiratory Flow Meter)

1. Peak expiratory flow rate has increased from 210 to 320 L/min.
2. Level of AEC was reduced from 1210 cell/microL to 210 cells/microL
3. ESR was reduced from 10 mm/hr to 04 mm/hr.

4. Results showed improvement in AEC, ACQ, GINA and Spirometry showed improvement in FEV1 of 1%.

5. After 8 weeks of Follow up no episodes of above complaints have been reported.

DISCUSSION

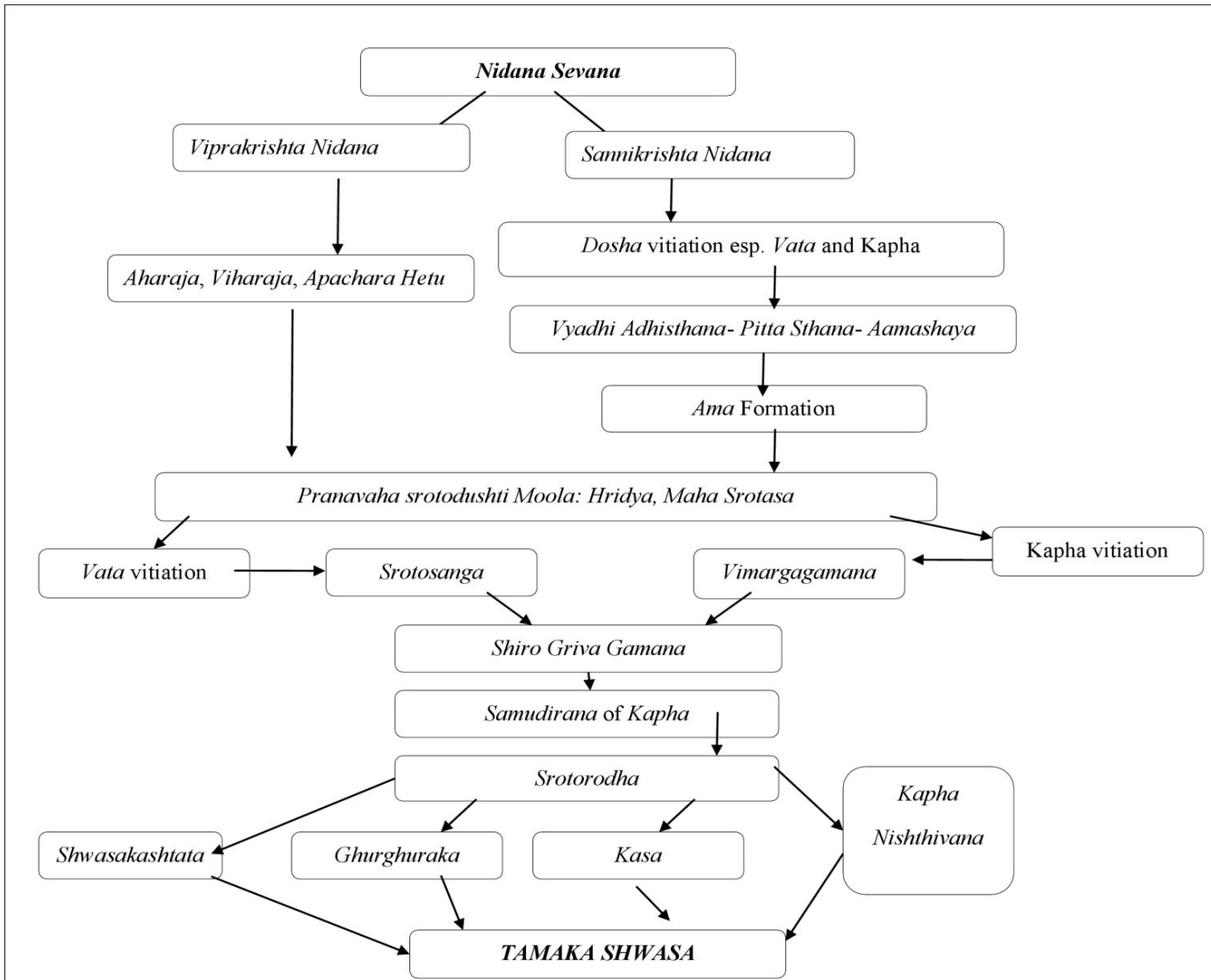


Fig. 1: Flow chart showing Samprapti of Tamaka Shwasa

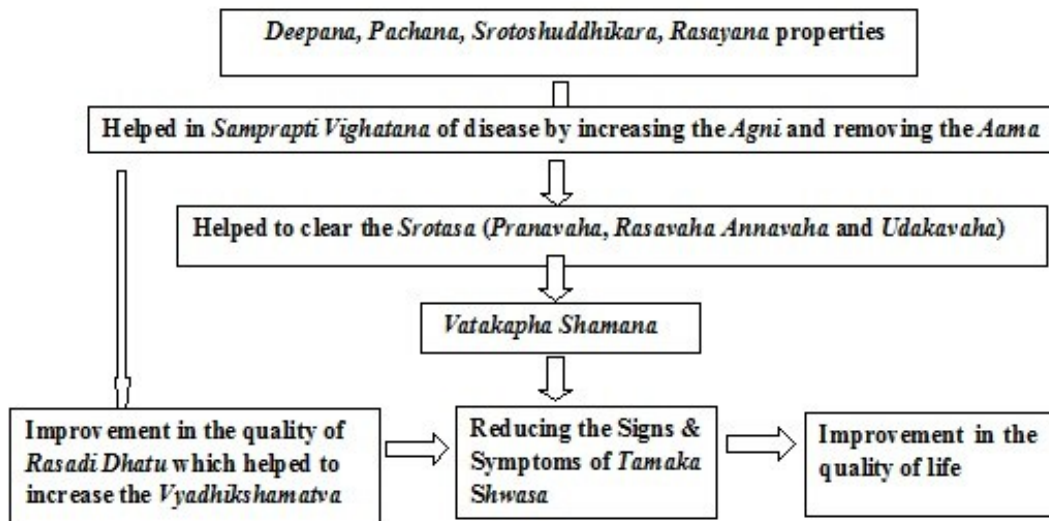


Fig. 2: Flow chart showing probable mode of action of *Shwasahara Dashemani Churna*

In the management of *Tamaka Shwasa* Acharya says, the main aim is to remove the obstruction made by *Kapha* and normalized the function of *Vayu*. Acharya charaka mention, there is a two type of *Chikitsa* in the management of *Tamaka Shwasa* i.e. *Shamana* and *Brahmana Chikitsa*. *Shwasahara Dashemani Churna* has the *Shamana* property because the most of drug use in combination have the *Rasa* (taste) as *Tikta* (Bitter) and *Katu* (pungent), *Virya* (potency)- *Ushna* (hot), *Vipaka*- *Katu* (pungent), *Guna* (qualities)- *Laghu* (light) *Ruksha* (dry) and *Snigdha* (unctuous). All the drugs used were having mainly *Kaphavata Shamaka*, *Deepana* (appetizer), *Pachana* (carminative), *Srotoshuddhikara* (body channel cleanser) and *Rasayana* (rejuvenation) properties which helped in *Samprapti Vighatana* of the disease

by increasing the *Agni* (digestive fire) removing the *Aama* (toxins) which helped to open the *Srotasa* (micro channels) (*Pranavaha Srotasa*, *Annavaha Srotasa* and *Udakavaha Srotasa* etc.) *Rasayana* (rejuvenation) property of the drugs helped to increase *Vyadhikshamatva* (immunity) and provide *Bala* (strength) to the *Srotasa* it also helped in *Uttarotara Dhatu Vriddhi* leads to *Ojho* (immunomodulation) thus these drugs helped in improving the quality of life of the patients. Thus we can say that herbal combination of medicine which is used in the *Tamaka Shwasa* is very effective drugs without any adverse reaction. This combination has also Antitussive, Anti-Inflammatory, Antihistaminic, Mast cell stabilizer, Immunomodulator property^[14] due to this property *Shwasahara*

Dashemani Churna is an ideal drug for Management of *Tamaka Shwasa*.

Hematological Changes

The drug showed better effect on hematological changes in Neutrophils, Lymphocyte, Eosinophil, ESR and AEC. Eosinophil's count and AEC markedly decrease Comparison to other parameter.

CONCLUSION

After analysis of all data, it is concluded that *Shwasahara Dashemani Churna* is effective in treating this case study of *Tamaka Shwasa* (Bronchial Asthma) in Children and gives better relief to the patient. There were no adverse effects found during the Ayurvedic medication.

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