



A STUDY OF NIDANAS (AETIOLOGICAL FACTORS) OF TAMAKA SHWASA i.e. BRONCHIAL ASTHMA WITH AN ANALYTICAL VIEW

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ABSTRACT

In general meaning, difficulty in breathing or shortness in breathing is termed as 'Shwasa'. As per *Ayurveda* *Shwasa Roga* is mainly caused by vitiated *Vata Dosha* and *Kapha Dosha*. *Maha-Urdhva-Chhinna-Tamaka* and *Kshudra* are the types of *Shwasa Roga*. *Shwasakashtata* (Breathlessness), *Ativege Kasate* (Cough), *Pinasa* (Running nose), *Ghurghurukam* (Wheezing), *Shayane Shwasa Pidita* (Worsen in supine position), *Asino Labhate Saukhyam* (Relaxing in sitting position), *Ushnabhinanditam* are the symptoms of *Tamaka Shwasa*. *Raja-Dhuma* (Pollens, Smoke/fumes), *Megha-Ambu-Shita-Pragvata* (Seasonal changes) are triggering factors of the *Tamaka Shwasa*. In this condition, patient becomes incapable to do his routine work. Incidences of Bronchial Asthma have been raised in recent decades due to increased industrialization and pollution and this miserable condition can be compared with *Tamaka Shwasa* described in *Ayurveda*. In current review article an effort has been made to explain the aetiological factors (*Nidana*) of *Shwasa Roga* described in Ayurvedic classical texts with applied and modern perspective.

Keywords: *Tamaka Shwasa, Nidana.*

INTRODUCTION

Tamaka Shwasa is one of the five types of disease of *Shwasa Roga* described in Ayu. Texts. The signs, symptoms and etiopathogenesis of Bronchial Asthma explained in modern science have a lot of similarities with the disease entity *Tamaka Shwasa*. The main features of Bronchial Asthma are breathlessness, chest tightness, wheezing and cough. Bronchial Asthma is a major global health problem, which can affect the population irrespective of age, sex, economic status, etc. It is very common at all ages but predominantly in early life. The prevalence of Bronchial Asthma is increasing alarmingly nowadays due to excessive pollution, overcrowding, occupational conditions, stress and poor hygiene etc. Both *Ayurveda* and modern medical Science agree regarding the *Nidana* of the disease as host factors (*Nija Hetus-Dosha Dushti* and *Ama*) and Environmental factors (*Agantuj Hetus – Raja, Dhuma, Pragvata*, etc.). It can be easily correlated with allergic condition. *Nidana Parivarjanam* plays a key role in the management strategy in both sciences.

Nidana Panchaka

To know the science of disease in totality, 5 types of examination: *Nidana, Poorvarupa, Rupa, Samprapti*

and *Upashaya- Anupashaya* are applied. It is unique methodology for diagnosis call “*Nidana Panchaka*”.¹

Nidana

The Etiological or causative factors of the disease has been described by *Acharya Charka*².

A factor which is capable of manifesting the development of disease either quickly or after a certain period of time is called *Hetus*³.

Importance of Nidana

According to *Sushruta Acharya*, to avoid causative factors is the first line of treatment in any diseases. A well-known quote “Prevention is better than cure” has been originated from Ayurveda science⁴.

According to *Acharya Charaka* a single etiological factor may produce a single disease, or many factors together may produce single disease and vice-versa⁵

• **Nidana (aetiological factors) of Tamaka Shwasa**^{6,7}

In *Tamaka Shwasa*, either one or more etiological factors in combination can cause manifestation of disease. In *Ayurvedic* texts, *Nidanas* of *Tamaka Shwasa* are not described separately, but the *Nidana* of *Shwasa Roga* in general are described.

These aetiology factors can be divided as *Aharaja, Viharaja* & other disease. This has been presented as below:

• **Aharaja Nidana**

Table 1: *Vishishta Gunapradhana Ahara*

| Gunapradhana Ahara | Ch. S. ⁸ | Su. S. ⁹ | A.S. ¹⁰ | A.H ¹¹ | M.N. ¹² |
|--|----------------------------|----------------------------|---------------------------|--------------------------|---------------------------|
| <i>Ati Ruksha</i> (Excessive rough) | + | | | | |
| <i>Ati Katu</i> (Excessive pungent taste) | | | | + | |
| <i>Ati Amla</i> (Excessive sour taste) | | | + | + | |
| <i>Gurubhojana</i> [food which heavy either <i>Gunataha</i> (qualitatively) or <i>Pa-kataha</i> (heavy for digestion)] | + | + | | | + |
| <i>Abhishyandi Anna</i> (one which increase secretion) | + | + | | | + |
| <i>Shita Padarth</i> (Cold things) | + | + | + | + | + |
| <i>Ati- Himambu</i> (Cold water) | | | | + | |
| <i>Vishtambhi</i> (Food that causes constipation) | + | + | | | + |
| <i>Vidahi</i> (Substance that causes burning sensation like <i>Maricha</i> (paper)) | + | + | + | + | + |

Table 2: Vishishta Kalpnapradhana Ahara¹³

| Kalpnapradhana Ahara | Ch. S. | Su. S. | A.S. | A.H | M.N. |
|---|--------|--------|------|-----|------|
| Pishta Bhojana (Food prepared from flour) | + | | | | |

Table 3: Vishishta Dravyapradhana Ahara¹⁴

| Dravyapradhana Ahara | Ch. S. |
|---|--------|
| Tila Taila (Sesamum oil) | + |
| Masha (Black gram) | + |
| Pinyaka (Residual part left after extraction of Sneha from seeds) | + |
| Nispava (Flat pea) | + |
| Jalaja Mamsa (Meat of aquatic animals) | + |
| Anoopa Mamsa (Meat of animals inhabiting in marshy land) | + |
| Ama Kshira (Intake of unboiled milk) | + |
| Shaluka (Root or stalk of lotus) | + |
| Dadhi (Curd) | + |

Table 4: Aharavidhi Vyatikrama¹⁵

| Aharavidhi Vyatikrama | Ch. S. | Su. S. | A.S. | A.H | M.N. |
|--|--------|--------|------|-----|------|
| Vishamashana (Intake of irregular quantity and at irregular intervals) | + | + | | | |
| Upavasa (Fast) | + | + | + | + | + |
| Adhyashana (eating before digestion of previous meal) | | + | | | |

• Dietary factors, *Vidahi* means irritant food. The food that causes sour eructations, belching, irritation in the stomach, excess thirst, burning in the epigastric region, delayed digestion and provoke *Pitta Dosha* in *Annavaha Srotasa* is called **Vidahi**. Coffee, Spicy tomato sauce etc. such foods are heavy for digestion and cause inflammation (*Sotha*) than *Sanga* to *Pranavaha Srotasa*, hence difficulty in breathing occurs.

• The food which has slimy property, heavy for digestion, may increase moisture (*Kleda*) in *Dhatu*, *Mala*, and *Srotasas* and cause blockage in the blood vessels (*Srotasa*). Such foods are called **Abhishyandi**. They increase *Kapha* in *Pranavaha Srotasa* and causes difficulty in breathing. *Nispava* is *Vata Vardhaka/* (Vitiated *Vata*) due to *Ruksha* (Dry), *Kshaya* (Astringent properties). *Nispava*, *Masha*, *Pinyaka*, *Tilataila* – (*Kapha Karanataya Kaphajanaka Hetu*). These food articles increase the *Kapha Dosha* present in *Pranavaha Srotasa* and block the channels of bronchi and causes dyspnoea.

Guru food increases the *Kapha Dosha* situated in *Pranavaha Srotasa* and cause *Sanga* (blockage).

• *Chanakaadi Ruksha Ahara* - Dry food causes *Vata Prakopa*. *Vata Prakopa* is responsible for bronchoconstriction.

• *Shita Ashana Sthana Ambu Sevana* Consumption of cold food and drink, exposure to cold atmosphere provokes *Kapha Dosha* in *Pranavaha Srotasa* hence dyspnoea occurs in *Tamaka Shwasa*. Cold drinks and Irregular food precipitate Bronchial Asthma and over intake of food and excessive fasting aggravates the symptoms of Asthma.

• *Shita Gunayukta Aushadha Aharadi*, some drugs and food which posses' cold potency may induce *Tamaka Shwasa*.

• There are some drugs (*Aushadhi*) like aspirin, beta adrenergic antagonist etc. can induce acute episodes of Asthma induced.

• “*Jalaja Mamsa, Anoopa Mamsa, Dadhi, Ama Kshira*” are included in *Kapha Prakopaka Ahara* takes long time to digest, and cause heaviness in body.

• *Ama Kshira* particularly is “*Abhishyandi*” (Heavy to digest and weaken digestive fire) *Agnimandyakara Ahara*.

All these factors cause collectively two actions. (1) Increase in *Kapha* and *Sanga* (Blockage) of *Pra-navaha Srotasa*; (2) Vitiating of *Vata* directly or indirectly (due to *Sanga*). While explaining treatment of *Tamaka Shwasa*,

Acharya Charaka has given the importance to *Sro-tomarga Vishodhana* (removing blockages and purify the channels) as an important measure to pacify *Vata* and *Kapha* both.

• **Viharaja Nidana**

Table 5: Vega Vidharana

| Vega | Ch. S. | Su. S. | A.S. | A.H | M.N. |
|----------------------------|---------------|--------|-------------|-------------|----------|
| Kasa (Cough) | | | A.S.Su 5/17 | A.H.Su 4/13 | |
| Chhardi/ Vamana (Vomiting) | | | A.S.Su 5/21 | A.H.Su 4/17 | |
| Udgara (eructations) | Ch.S. Su 7/18 | | | | M. N. 27 |

Table 6: Others¹⁶

| | Ch. S. | Su. S. | A.S. | A.H | M.N. |
|---|--------|--------|------|-----|------|
| Raja (Pollen, Dust) | + | + | + | + | + |
| Dhuma (Smoke) | + | + | + | + | + |
| Vata (Wind) | + | + | + | + | + |
| Shitasthana Sevana | + | + | | | + |
| Vyayama (Exercise) | + | + | | | + |
| Gramyadhrama Sevana (Sexual indulgence) | + | + | | | + |
| Bharavahana (Heavy weightlifting) | | + | | | + |

• **Manasa Bhava¹⁷**

विषादो रोगवर्धनाम | - च. सु. 25/40

Like fear, grief, terror, Anger, envy, eagerness, tension, depression etc.

According to modern science, mainly two types of asthma are present i.e., extrinsic and intrinsic. Extrinsic (allergic) which is common in childhood and allergic in origin (*Rajasa, Dhuma* etc.).

• Inhalation of dust cause vitiating of *Vata*, hence it causes *Shwasa*. This refers to *Tamaka Shwasa* (bronchial asthma). Modern views on bronchial asthma reveals, that inhalation of house dust, pollen, mites, animal dandruff, fungal spores, feather etc., are known to decompose into smaller allergenic particles and penetrate into lower respiratory tract, histamine is released. This provokes bronchial constriction and inflammatory reaction in bronchial wall, hence dyspnoea occurs.

• Inhalation of fumes is one of the important causes of *Shwasa Roga* this refers to *Tamaka Shwasa* (bronchial asthma). The inhalation of acrid fumes,

cigarette smoke, strong perfumes, vapor can provoke or worsen the attacks of bronchial asthma.

• Exposure to cold weather and cold wind (air-conditioned room) causes precipitation of bronchial asthma. (*Sheeta Ambu, Shita-Sthana Sevana, Shitapadartha Sevana* etc.)

• Physical exercise (*Ativyayama*) is one of the causes of *Shwasa Roga*. Modern observation reveals that physical exercise is one of the most common precipitating factors of acute asthma. Running produces comparatively more severe attack of asthma than walking. It is called as exercise induced asthma Any physical exertion like lifting heavy weights can trigger the asthmatic attack.

Walking longer distance (*Adhvagamana*) causes *Shwasa Roga*.

Combination of all factors like *Ati-Vyayama, Adhvagamana, Atishrama* etc. trigger Bronchial Asthma.

• Suppression of natural urges (*Vegadharana*) causes *Shwasa* due to *Vata Prakopa* Even constipation may exacerbate bronchial asthma.

Aghataja (Traumatic/ Injury)¹⁸

Table 7: Aghataja (Traumatic/ Injury)

| | Ch. S. | Su. S. | A.S. | A.H | M.N. |
|------------------------|--------|--------|------|-----|------|
| Marmaghata | + | + | + | | + |
| Kantha-Urah Pratighata | + | | | | |
| Karmahata | + | + | | | + |

Marmopaghata means injury or serious disturbances in function of vital organs by external or internal factors. The internal factor such as vitiation of *Dosha*,

Malasanchaya etc. and external factors like toxins, trauma etc. cause injury (pathological lesion) to the *Srotasa* causing *Shwasa*.

Improper Panchakarma Upachara/Purifying procedures (Iatrogenic)

Table 8: Improper Panchakarma Upachara¹⁹

| | Ch. S. | Su. S. | A.S. | A.H | M.N. |
|--|--------|--------|------|-----|------|
| Ati- Apatarana (Emaciating measures) | + | | | | |
| Shuddhi Atiyoga (Excessive indulgence in Panchakarma procedures) | + | + | + | + | + |
| Abhishyandi Upachara | + | | | | |

Nidanarthakara Roga (manifestation or contraindication of other diseases)^{20,21,22,23}

Table 9: Nidanarthakara Roga

| Nidanarthakara Roga | Ch. S. ²⁴ | Su. S. ²⁵ | A.S. ²⁶ | A.H. ²⁷ |
|--|----------------------|----------------------|--------------------|--------------------|
| Jwara (Fever) | + | | + | + |
| Pratishyaya (Running nose/ Rhinitis) | + | | | |
| Kasa (Cough) | | | + | + |
| Kshata | + | | | |
| Kshaya | + | + | | |
| Pandu (Anaemia) | + | | + | + |
| Anaha | + | | | |
| Atisara / Amatisara (Diarrhoea) | + | | + | + |
| Visuchika (Cholera) | + | | | |
| Alasaka | + | | | |
| Udavarta | + | | | |
| Aamapradosha/Ama | + | + | | |
| Chhardi / Vamathu (Vomiting) | + | | + | + |
| Raktapitta (Haemorrhagic bleeding disorders) | + | | | |
| Daurbalya (Severe weakness) | + | | | |
| Apatarpana | + | | | |
| Visha (Toxins) | + | | + | + |

Jwara (Fever) Due to hypo-functioning of *Agni* (Digestive fire) food which is) not properly digested result in formation of immature *Rasa* (poorly digested chyle) as *Ama*. *Ama* is unable nourish *Dhatu*. Increased *Doshas* reach the *Amashaya*; they combine with *Rasa Dhatu* and circulate all over the body, produced fever.

Pratishyaya (Rhinitis/ Running Nose)- *Pratishyaya* (Rhinitis or Running nose) is a condition which the

sinuses are blocked (*Sanga*) due *Kapha Vata Prakopa* and become Inflamed (*Shotha*).

Kasa (Cough)

कासाद् उपेक्षया श्वासो भवति | - *Dalhana*

कास वृद्ध्या भवेत् श्वासः |²⁸

Chronic bronchitis may turn in to Bronchial Asthma if not treated properly and timely.

Kshaya- Kshata²⁹

when *Dhatu*s are not nourished properly, it leads to *Ojokshaya* (low immunity) and ultimately infection by pathogenic microorganisms thus causing further *Kshaya* and *Dosha Prakopa*.

Pandu (Anaemia)

Pandu is associated with a reduced amount of red blood cell (*Raktadhatu Kshaya*) in the blood stream i.e *Rasa* and *Rakta Dhatu*s which are involved in transporting oxygen from the lungs to the body cells. Due to *Dhatukshaya*, there is less binding and transport of oxygen. Without enough blood cells, tissues do not receive adequate oxygen, this cause the breathlessness.

Anaha

In this condition causative factors causes the *Vayu Prakopa* and *Srotosanga* (due to *Mala Sanchaya*).

Atisara- Visuchika – Alasaka (Diarrhea/Cholera)

When the normal functioning of *Jatharagni* gets impaired due to any cause, it leads to indigestion of food and there is formation improper *Ahara Rasa Dhatu* and give rise to *Ama*. The effect of *Ama* can manifest in following ways. Movement of *Ama* towards *Guda* and *Srotorodha* lead *Atisara*. Moreover, if *Ama* moves to both sides simultaneously it may cause *Visuchika*. *Ama* has the property of *Guruta* and *Picchilata*, due to which it produces *Srotorodha* (stasis / blockage) in body channels leading to pathogenesis of number of diseases as per location and quantity of *Ama* in the body.

Udavarta: Constant intake of *Guru*, *Vidahi*, and *Vis-tambhi*, *Sheeta* and *Rukshadi Ahara-Vihara* causes *Agnimandya* and that leads to *Ama* formation, *Vata* vitiation and *Mala Sanchaya* (stasis of waste products) which thereby leads to obstruction and disruption in normal movements/ functions of *Vata* i.e *Udavarta*.

Chhardi / Vomiting: In the process, *Vata Vayu* is aggravated in *Mahasrotasa* and provokes the other *Doshas* and contaminants in the gut to move forcibly out of the body. The whole process causes excessive exertion and fatigue and breathlessness as a result.

Raktapitta (Haemorrhagic disorders): In hemorrhagic diseases/*Raktapitta*, there is excess / abnormal loss of blood. The condition causes less oxygen supply or hypoxia to tissues due to which breathlessness occurs.

Daurbalya: In *Daurbalya*, there is condition of malnourishment or *Dhatukshaya* in the body which causes vitiation of *Dosha* specially *Vata Prakopa* and breathlessness.

Apatarpana: *Apatarpana* means malnourishment also leads *Dhatukshaya* which cause symptom of breathlessness as explained earlier.

Visha (Toxins): Toxins (*Visha*) are responsible for *Tridosha Prakopa*, further it may lead to various pathological changes by release of various inflammatory mediators in body which are responsible for inflammation of tissues like bronchi, alveolietc' and vascular imbalance, leading to hypoxia and thus breathlessness.

Generally, nasal polyps, chronic bronchitis and altered immunological functioning are associated in these cases, which can be understood as *Nidanarthakara Vyadhi*.

DISCUSSION

Asthma is one of the most prevalent chronic health conditions among children and adults. It is really curse for human being as it is a chronic disorder requiring lifelong management. The prevalence of Bronchial Asthma is increasing alarmingly nowadays due to excessive pollution, overcrowding, occupational conditions, stress and poor hygiene etc. Both *Ayurveda* and modern medical Science agree regarding the *Nidana* of the disease as host factors (*Nija Hetus-Dosha Dushti* and *Ama*) and Environmental factors (*Agantuj Hetus – Raja, Dhuma, Pragvata*, etc.). It can be easily correlated with allergic condition. *Nidana Parivarjanam* plays a key role in the management strategy in both sciences.

In *Tamaka Shwasa*, one or more etiological factors can produce it. In *Ayurvedic* texts *Nidanas* of *Tamaka Shwasa* are not described separately, but the *Nidana* of *Shwasa Roga* in general are given. A detailed conceptual study how All factors are related to

pathogenesis of *Shwasa Roga* has been made in current article. An attempt is made through this article to differentiate *Nidanas* like dietary factors (*Aharaja Nidanas*) with specification of properties, quality etc. and lifestyle related factors (*Viharaja Nidanas*) like *Vega Vidharana* (suppression of urges, psychological /emotional factors, iatrogenic factors like improper Panchakarma or drugs/toxins etc. The role of other diseases like *Nidanarthakara Roga* is also explained.

CONCLUSION

Prevalence of Bronchial Asthma is increasing alarmingly due to excessive pollution, population, occupational hazards, anxiety etc. The various etiological factors described in aetiology of this disease, act either triggering/aggravating factors, risk factors in developing attacks of asthma mostly in atopic individuals. As *Nidana Parivarjana* has significant role in the management of *Tamaka Shwasa*; for which for which proper understanding and differentiation of *Nidanas* is necessary. Thus, in the current article attempt is made and explain same in detail.

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