



**EXPLORING THE AYURVEDIC APPROACH TO BRONCHIAL ASTHMA:
TRADITIONAL WISDOM AND MODERN INSIGHTS**

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ABSTRACT

Respiratory disorders are significant public health burden worldwide. Bronchial asthma is one of the commonest respiratory disorders. The WHO estimates that 300 million people currently are suffering from bronchial asthma. In India prevalence of asthma has been found to be 15-20 million people. Prevalence of asthma is more in urban areas than rural areas due to smoke, pollution and environmental factors. Management of Bronchial asthma as per contemporary treatment modalities include use of bronchodilators, corticosteroid, anticholinergics and several other drugs having long term side effects and dose dependency. Tamaka Shwasa which is described in Ayurveda as a disease entity through its sign & symptoms, pathogenesis, prognosis and treatment can be correlated with Bronchial asthma in modern parlance. So, the present conceptual study helps to understand the disease of the modern era by the Ayurvedic perspective and contributes in the integrative approach in the management of Tamaka Shwasa or bronchial asthma.

KEYWORDS: Bronchial Asthma, Nidana, Pathogenesis, Tamaka Shwasa, Ayurveda.

INTRODUCTION

Respiratory diseases contribute significantly to global morbidity and premature mortality.^[1] Among these, asthma stands out as one of the most prevalent chronic non-communicable diseases, affecting a vast population worldwide.^[2] In Ayurveda, five types of Shwasa Roga (Respiratory disorders) are described, with Tamaka Shwasa being a distinct and independently categorized disease. This condition has its own specific etiology, pathophysiology, and management.^[3] Shwasa Roga is considered a Yapya Vyadhi, meaning it is a condition that can be managed but not cured completely.^[4] Tamaka Shwasa is closely related to bronchial asthma, a disorder of the Pranavah Srotasa (Respiratory system), where the Prana Vayu (Vital air) is vitiated, leading to an upward movement of air (Pratilom Gati) due to obstruction by cough.^[5] Clinically, bronchial asthma is marked by difficulty in breathing, cough, wheezing, and chest tightness.^[6] These paroxysmal attacks can persist for days to months, leading to disrupted sleep and impaired daily functioning.

Globally, asthma affects both sexes equally in adults, though the male-to-female ratio in children is 2:1.^[7] Various intrinsic and extrinsic factors contribute to the onset of asthma, including genetic predisposition, environmental triggers, medications, infections, smoking, anxiety, and psychological stress.^[8] In India, asthma has become a significant public health concern, ranking among the leading causes of morbidity and mortality.^[9] Although its prevalence in India is comparable to other Asian countries, there has been a notable increase in incidence over time.^[10] This disease is particularly prevalent among children and the elderly, with rates in children aged six to seven years ranging from 4% to 32%.^[11] According to the World Health Organization, 100-150 million people globally suffer from bronchial asthma, with approximately one-tenth of these being in India, and the prevalence continues to rise globally.^[12]

Despite advancements in modern medicine, such as the development of antibiotics, corticosteroids, and bronchodilators^[13] the disease remains a challenge. Patients with weakened immune systems, due to

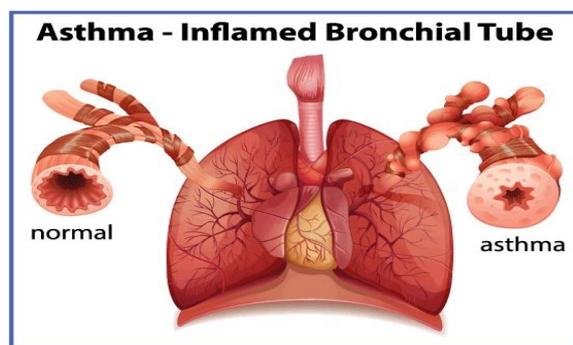
recurrent infections, malnutrition, drug toxicity, chronic illness, and stress, are particularly vulnerable to further infections and disease exacerbations, which adversely affect their quality of life.^[14] Given the striking similarities between Tamaka Shwasa and bronchial asthma, these conditions can be viewed as analogous. This review aims to provide an Ayurvedic perspective on bronchial asthma and explores an integrative approach to its treatment.^[15]

AIM AND OBJECTIVES

1. To understand bronchial asthma in terms of Ayurveda.
2. To review causative factors, pathogenesis and treatment modalities of Tamaka Shwasa.

Ayurvedic disease review

The disease is called Asathama as attack of the disease precipitate during night and during the state of attack Dyspnoea becomes so severe that patient feels entering into the darkness.



Types of tamaka shwasa

Charaka has mentioned two allied condition of Tamaka Shwasa known as two types or further complication of disease proper i.e., Pratamaka and Santamaka. Sushruta and Vagbhata have only mentioned the name as Pratamaka, which includes clinical manifestation of Santamaka.^[16]

Pratamaka shwasa

When Patients suffering from Tamaka Shwasa gets afflicted with fever and fainting, the condition is called as Pratamaka Shwasa. It is suggestive of involvement of Pittadosha in Pratamaka Shwasa. It is aggravated by Udavarta, Dust, Indigestion, Humidity (Kleda), suppression of natural urges, Tamoguna, Darkness and gets alleviated instantaneously by cooling regimens.^[17]

As a matter of fact, cooling regimen is one of the causative factors of Tamaka Shwasa but in Pratamaka Shwasa, the patient gets relief by administering cooling agents due to Pitta Dosha involvement.

Santamaka shwasa

When the patients of Pratamaka Shwasa feels submerged in darkness, the condition is called as Santamaka Shwasa.

Though Chakrapani has mentioned these two as synonyms of each other Charaka refers them as two different ailments representing two different conditions of Tamaka Shwasa, these two conditions differ from each other according to intensity of attack.^[18]

Nidana (Etiology) of bronchial asthma^[19,20,21,22,23]

Ayurveda perspective

In Ayurveda, bronchial asthma is closely related to **Tamaka Shwasa**, which is primarily considered a disorder of the respiratory system (Pranavaha Srotas) caused by the vitiation of Vata and Kapha doshas. The etiological factors (Nidana) contributing to Tamaka Shwasa include:

1. **Ahara (Dietary factors)**
 - Intake of Kapha-aggravating foods such as heavy, oily, cold, and stale foods.
 - Excessive consumption of dairy products, which increase Kapha.
 - Overeating or irregular eating habits.
2. **Vihara (Lifestyle factors)**
 - Exposure to cold, damp environments.
 - Excessive physical exertion or lack of exercise.
 - Inhalation of dust, smoke, or allergens.
 - Erratic sleep patterns, especially staying awake at night (Ratri Jagarana).
3. **Manasika (Psychological factors)**
 - Stress, anxiety, and other mental disturbances leading to Vata imbalance.
 - Suppression of natural urges (e.g., suppressing sneezing or coughing).
4. **Agantuja (External factors)**
 - Sudden exposure to allergens like dust, pollen, and fumes.
 - Seasonal variations, particularly during cold and damp weather.
 - Respiratory infections, leading to aggravated Kapha and Vata.
5. **Other factors**
 - Genetic predisposition to Vata and Kapha Prakriti.
 - Previous respiratory conditions or chronic illnesses.

Modern science perspective

From a modern medical standpoint, the etiological factors of bronchial asthma include a combination of genetic and environmental factors, which contribute to the hyper-responsiveness of the airways:

1. **Genetic factors**
 - Family history of asthma, allergies, or atopic diseases.
 - Genetic predisposition affecting immune system responses (e.g., overproduction of IgE).
2. **Environmental factors**
 - **Allergens:** Inhalation of airborne allergens like pollen, dust mites, mold spores, and pet dander.

- **Occupational hazards:** Exposure to chemicals, fumes, and dust in the workplace.
 - **Pollution:** Air pollution, including tobacco smoke, vehicular emissions, and industrial pollutants.
 - **Infections:** Viral respiratory infections, particularly in early childhood, can trigger asthma or exacerbate existing conditions.
 - **Weather conditions:** Cold air, humidity, and sudden changes in weather can provoke asthma symptoms.
3. **Lifestyle factors**
- Sedentary lifestyle leading to poor lung function.
 - Obesity, which increases the risk of asthma and its severity.
 - Dietary factors such as low intake of antioxidants and omega-3 fatty acids.
4. **Psychological factors**
- Stress, anxiety, and emotional disturbances can trigger or worsen asthma symptoms.

5. **Drug-Induced factors**

- Use of certain medications such as beta-blockers, aspirin, and non-steroidal anti-inflammatory drugs (NSAIDs) can trigger asthma in sensitive individuals.

6. **Other Contributing factors**

- Exercise-induced asthma, triggered by physical exertion.
- Hormonal changes, particularly in women during menstruation, pregnancy, or menopause.
- Gastroesophageal reflux disease (GERD), which can exacerbate asthma symptoms by irritating the airways.

Representation of samprati

1. **Poorvarupa (Predisposing Signs and Symptoms)**^[24,25,26,27]

- When the vitiated Doshas begin to localize, affecting a particular organ or system, certain prodromal symptoms are observed before the full-fledged manifestation of the disease.
- The table below summarizes the Purvarupa of Tamaka Swasa:

Symptoms	C.S. ^[24]	S.S. ^[25]	A.H. ^[26]	M.N. ^[27]
Anaha (Distension of the abdomen)	+	+	+	+
Adhmana (Fullness of the abdomen)	-	-	-	+
Arati (Restlessness)	-	+	-	-
Bhaktadweshya (Aversion to food)	-	+	-	-
Vadanasya Vairasya (Abnormal taste in mouth)	-	+	-	-
Parshwa Shoola (Pain in the sides of the chest)	+	+	+	+
Peedanam Hridayasya (Tightness of the chest)	+	+	+	+
Pranasya Vilomata (Sinusitis/Rhinitis)	+	-	+	+
Shankha Nistoda (Temporal headache)	-	-	+	+

2. **Rupa (Presenting Symptoms/Clinical manifestation)**^[28,29,30,31]

- Rupa refers to the signs and symptoms of the disease that appear in the 4th Kriyakala, i.e., Vyaktavastha, where the symptoms are fully manifested.

- The table below lists the symptoms of Tamaka Shwasa:

Symptoms	C.S. ^[28]	S.S. ^[29]	A.S. ^[30]	A.H. ^[31]
Peenas (Running nose, sneezing, stuffiness)	+	+	+	+
Shwasa (Dyspnoea)	+	+	+	+
Tivravega Shwas (Rapid breathing)	+	+	+	+
Amuchyamane Tu Bhrisham (Severe breathlessness if sputum is not expectorated)	+	+	+	+
Vimokshante Sukham (Relief on spitting sputum)	+	+	+	+
Anidra (Disturbed sleep due to breathlessness)	+	-	-	-
Sayanah Shwas Peeditaha (Worsened discomfort on lying)	+	+	+	+
Aseeno Labhate Soukhyam (Ease in sitting position)	+	+	+	+
Pratamyati Ati Vega (Deterioration of consciousness)	+	-	+	+
Kasa (Cough)	+	+	+	+
Pramoham Kasamanashcha (Frequent deterioration of consciousness during cough)	+	-	+	+
Kanth Gurgurak (Rattling)	+	-	-	-
Kanthodhwamsa (Soreness of the throat)	+	-	-	-
Utshoonaksa (Oedema around the eyes)	+	-	+	+

Vishushkasya (Dryness of mouth)	+	-	+	+
Lalat Sweda (Sweating on the forehead)	+	+	+	+
Meghaihi Abhivardhate (Worsening in cloudy weather)	+	-	+	+
Sheeta Ambu (Cold water)	+	-	+	+
Pragvata (Breeze)	+	-	+	+
Shleshmala (Kaphakara)	+	-	+	+
Ushnabhinandate (Likes hot things)	+	-	+	+
Aruchi (Anorexia)	-	+	+	+
Trishna (Excessive thirst)	-	+	+	+
Vepathu (Tremors)	-	-	+	+
Vamathu (Expectoration)	-	+	-	-

3. Cikitsa sutra (Principle of treatment)

- **Nidana parivarajan:** Avoidance of precipitating factors is crucial, as ignoring them can worsen the Doshas and the prognosis.
- **Samsodhana:** For patients with strong constitution and dominance of Kapha and Vata, Samsodhana therapy (Vamana and Virechana) is recommended. The steps include:
 - **Snehana:** Massaging Taila mixed with Lavana on the chest to loosen sputum.
 - **Swedana:** Using Nadi, Prastara, and Sankara methods to dissolve Kapha and soften the body channels.
 - **Vamana:** Administering Vamana to expel deranged Kapha after proper preparation with Snigdha Odana and other recommended substances.
 - **Dhumapana:** Inhalation therapy to eliminate remaining pathogenic substances after Vamana.
 - **Virechana:** Elimination of waste products through lower channels, following the properties outlined by Charaka.
- **Samsamana:** For patients not eligible for Samsodhana, Samsamana therapy with Deepana, Pacana, Kapha Vatasamaka drugs, and regimen is used. This includes Brimhana and Rasayana Chikitsa for maintaining strength and preventing recurrent attacks.
 - Sequential administration of Lavana Taila Abhyanga, Swedana, diet management, Sadya Vaman, Dhoomapana, followed by Shaman Chikitsa, and Virechan with Vyadhihara Rasayana and Brihana Chikitsa is recommended to relieve and prevent attacks of Tamak Shwasa.

Modern disease review

Asthma and Its ayurvedic correlation

Definition and Characteristics of asthma

Asthma is a chronic respiratory condition characterized by increased sensitivity of the airways (tracheobronchial tree) to various stimuli. This heightened responsiveness leads to episodes of bronchospasm, where the air

passages narrow, causing difficulty in breathing, coughing, and wheezing. These symptoms can occur spontaneously or may require therapeutic intervention. In severe cases, the condition may develop into **status asthmaticus**, a life-threatening situation where the asthma attack is unrelenting and can be fatal.

Prevalence of asthma

Asthma is a common global health issue, affecting approximately 5% to 10% of the world population. The disease can manifest at any age but is most prevalent in early life, with about half of all cases developing before the age of 10 and another third before the age of 40. During childhood, asthma is more common in males (2:1 ratio), but by the age of 30, the prevalence between males and females becomes equal.

Etiopathogenesis and Types of asthma

Asthma is broadly classified into three types based on the triggers and underlying causes:

1. Extrinsic (Atopic, Allergic) asthma

- This is the most common form of asthma, usually starting in childhood or early adulthood.
- Patients often have a personal or family history of other allergic conditions such as allergic rhinitis, urticaria, or eczema.
- This type of asthma is triggered by external allergens like dust, pollen, animal dander, and molds, often involving an IgE-mediated Type 1 hypersensitivity reaction.

○ Pathophysiology

- **Acute Immediate response:** Triggered by the degranulation of IgE-sensitized mast cells, releasing mediators like histamine and leukotrienes, leading to bronchoconstriction, mucus hypersecretion, and airway inflammation.
- **Late phase reaction:** Follows the acute response, characterized by the recruitment of additional immune cells (Eosinophils, neutrophils, basophils) that perpetuate inflammation and airway injury.



2. Intrinsic (Idiosyncratic, Non-Atopic) asthma

- This type typically develops later in life and is not associated with a personal or family history of allergies.
- Triggers often include viral infections, and some patients may develop hypersensitivity to drugs like aspirin.
- Unlike extrinsic asthma, there are no identifiable allergens, and serum IgE levels are normal.

3. Mixed type asthma

- Some patients exhibit characteristics of both extrinsic and intrinsic asthma.
- This type is common in patients who develop asthma later in life and may be triggered by factors such as cold, exercise, or emotional stress.

DISCUSSION

Ayurvedic perspective on asthma

In Ayurveda, the condition known as **Tamak Shwasa** is closely correlated with bronchial asthma as described in modern medicine. Tamak Shwasa is primarily a **Kapha-dominant** disease with "Swatantra" (independent) nature. It is one of the five types of Shwasa roga (Respiratory disorders), with Tamak Shwasa being chronic and severe.

1. Ayurvedic pathogenesis

- The vitiation of **Kapha** and **Pratiloma Vata** (Disordered movement of Vata) plays a central role in the disease's pathogenesis.
- The accumulation of **Saama Vayu** (Vitiated Vata) leads to inflammation (Shotha) and obstruction (Srotorodha) of the airways, akin to the inflammatory response seen in asthma.

2. Classification and Management

- Tamak Shwasa can be broadly classified based on the dominance of Vata or Kapha in the disease's pathogenesis.
- **Nidanaparivarjana** (Avoiding causative factors) is emphasized as a key preventive measure.
- **Shodhana** (Cleansing) therapies such as **Vamana** (Emesis) and **Virechana** (Purgation) are recommended for detoxification, while **Shamana** (palliative) therapies focus on balancing Vata and Kapha.

- **Brihana Chikitsa** (Nourishing therapy) and **Rasayana Chikitsa** (Rejuvenation therapy) are advised to strengthen the body and prevent future attacks.

3. Comparison with modern treatment

- Modern management of asthma includes bronchodilators, corticosteroids, and anticholinergics, which are analogous to Ayurvedic treatments that focus on relieving symptoms and preventing exacerbations.
- The signs and symptoms of Tamak Shwasa align closely with those of bronchial asthma, making the Ayurvedic approach relevant in managing this condition alongside contemporary medical practices.

CONCLUSION

This conceptual study has illuminated various aspects, from historical perspectives to contemporary insights, regarding bronchial asthma, a prevalent respiratory disease in the modern era that requires both preventive and therapeutic strategies. Ayurveda, with its natural and non-invasive treatment modalities, offers a promising approach to managing bronchial asthma. Through this literature review, a comprehensive understanding of the disease has been developed, bridging Ayurvedic wisdom with modern medical perspectives. This integrative approach may provide a more holistic solution to effectively manage and potentially mitigate the impact of bronchial asthma.

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