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“A LITERARY REVIEW ON TAMAKASHWASA”

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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. TamakaShwasa 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 TamakaShwasa or bronchial asthma.

Keywords: TamakaShwasa or bronchial asthma, asthma, Management.

INTRODUCTION

Respiratory disease is responsible for a major burden of morbidity and untimely death.[1] Asthma is one of the most common chronic non communicable diseases currently affecting a large mass of people with almost worldwide distribution.[2] Ayurveda has described five types of ShwasaRoga and TamakaShwasa is one amongst them. TamakaShwasa is a “Swatantra” Vyadhi i.e., independent disease entity and having its own etiology, patho-physiology and management. ShwasaRoga has been considered as a YasyaVyadhi (palliative).[3] It is well co-related with bronchial asthma which results due to derangement of PranavahSrotasa (respiratory system) in which Prana Vayu is vitiated that is unable to perform its normal physiologic function due to obstruction through cough and moves in upward direction (PratilomGati).[4] Bronchial asthma is characterized by difficulty in breathing, cough, wheezing and chest tightness.[5] Paroxysm attacks can last for days to months which results in sleepless night, thus disturbing the normal life style of the person. Worldwide, equally affecting both sexes in adult but in children male female ratio is 2:1.[6] The varieties of indigenous and exogenous factors are responsible for the incidence of

this disease.[7] Out of these genetic susceptibilities, environmental factors, drugs, infection, smoking, anxiety & psychological factors are major cause of concern.[8] In Indian context asthma is now a serious public health problem and it is seen as one of the leading cause of morbidity and mortality in India.[9] Although the prevalence of asthma in India is seen to be somewhat similar to other Asian countries, the incidence in the country has increased significantly.[10] There has been an increase in the prevalence and similar trend is observed in India. This disease is more predominant in children and aged population.[11] At the age of six to seven years, the prevalence ranges from 4-32%. As stated by W.H.O., 100-150 million of global population is suffering from bronchial asthma; out of which 1/10th are Indians and the prevalence of asthma is increasing everywhere.[12] Lots of advances have been achieved through modern medicine in combating this disease i.e., advanced antibiotics, corticosteroids, bronchodilator, etc.[13] All these fight the disease and offer relief but patient with weak immune status due to recurrent infection, malnutrition, drug toxicity, chronicity of disease and stress disorder etc.,[14] become prone to further infection and exacerbations of disease, hampering their

life quality.[15] Thus, due to these similarities, TamakaShwasa and bronchial asthma can be taken as a similar disease condition. The present review helps to understand bronchial asthma through an Ayurvedic perspective and helps in an integrative approach in the treatment.

Aim and Objectives

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

Ayurvedic Disease Review

The disease is called Tamaka 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 TamakaShwasa: Charaka has mentioned two-allied condition of TamakaShwasa 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]

PratamakaShwasa: When Patients suffering from TamakaShwasa gets afflicted with fever and fainting, the condition is called as PratamakaShwasa. It is suggestive of involvement of Pittadosha in PratamakaShwasa. 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 TamakaShwasa but in PratamakaShwasa, the patient gets relief by administering cooling agents due to Pitta Dosha involvement.

SantamakaShwasa: When the patients of PratamakaShwasa feels submerged in darkness, the condition is called as SantamakaShwasa. Though Chakrapani has mentioned these two as synonyms of each other Charaka refers them as two different ailments representing two different conditions of TamakaShwasa, these two conditions differ from each other according to intensity of attack.[18]

Nidana (Causative Factors/Risk Factor)

The table below shows comparison between five treatises regarding presence of various risk factors.

Table 1: Showing Hetu of Shwasa / TamakaShwasa

Factors	C.S.[19]	S.S.[20]
	A.H.[21]	A.S.[22]
	M.N.[23]	

Vata Parakopaka Ahara

Rukshana (dry food)	+	+	-	Masha (vinga radiates)	+	-
-	+			-	-	-
Vishamashana (irregular eating habits)				Pistanna (food prepared using very fine flours)	+	-
+	+	-	-	+	-	-
Adhyashana (frequent eating)	-		+	Shaluka (rhizome of lotus)	+	-
-	-	-		-	-	-
Anasana (very long gap between two meals)	-	+	-	Guru Dravyas (food that is very heavy to digest)	+	+
-		-	-	+	-	+
Dvandvatiyoga (mutually contraindicating foods)				JalajaMamsa (meat of aquatic animals)	+	-
Sheetashana (cold foods)	-		+	AanoopaMamsa (meat of marshy animals)	+	-
-	-	+		+	-	-
Visha (food poisoning)		+	+	Dahi (curd)	+	-
-	-	+		-	-	-
Sheetapana (cold drinks)	-		+	Amakshir (un-boiled milk)	+	-
-	-	+		-	-	-
Pitta PrakopakaAhara				Utkleda (food that generates more waste products)	+	+
TilaTaila (sesame oil)	+	-	-	+	+	-
-	-			+		
Vidahi (food causing burning sensation)	+	+	-	Vishtambhi (food that generates constipation)	+	+
+		-	-	+	-	-
Katu (spicy food)	-		-	+		
+	-			VataPrakopakaVihara		
Ushna (hot food)	-	-	-	Rajas (dust,pollens)	+	+
+	-			+	+	+
Amla (sour)	-	-	+	Dhuma (smoke)	+	+
-				+	+	+
Lavana (salt)	-	-	+	+	+	
-				Vata (cold breeze)	+	+
KaphaPrakopakaAhara				+	+	
Nishpava (dolichos lablab)	+	-		SheetaSthana (cold places)	+	+
-	-	-		-	-	+

SheetaAmbu (cold water)	+	+			↓
	+	+	+		Sanchayavastha: Sanchaya of Vata occurs in PranavahaSrotas and that of Kapha in Uras
Ativyayam (excessive exercise)	+				
	+	-	-	+	
Gramya Dharma (excessive sexual intercourses)	+	-	-	-	↓
	+				Prakopavastha: SheetaKaala and Durdina etc. will provoke the SanchitaDoshas. As a result the VataDosha in PranavahaSrotas and Kapha in Uras tries to move to other places
Apatarpana (excessive emaciating)	-	+	-	+	
ShuddhiAtiyoga (excessive purification)	+	+	-	-	+
	+				↓
Kanth / UrahPratighata (injury to throat / chest)	+	-	-	-	+
Bharakarshita (emaciation due to lifting heavy weights)	-	+			
	-	+			↓
Adhwahata (excessive walking)	+	-	-	+	
	+	-	-	+	
Karnmahata (excessive work)	+				
	-	-	+		
Veganirodha (suppression of natural urges)	-	-	+	-	-
Abhighata (injury)	-				
	+	-			↓
Marmabhighata (injury to vital structures)	+	-	-	-	+
	+	-	-	-	+
Samprapti [Etio-pathology/mechanism of disease development]					
Illustration 1: Showing the schematic representation of Samprati.					
NidanaSevana: Raja, Dhuma, Prag-Vatasevana, Marmaghata, Vata-KaphaPrakopakaAharaVihara etc.					↓
					Bhedavastha: in the absence of proper treatment there will be permanent changes

in the Srotas resulting in complications (DeerghakaalaAnubhandhatwa).

Poorvarupa [Predisposing signs and symptoms]

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 diseases, which are noted in table below:

Table 2: Showing the Purvarupa of TamakaSwasa.

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)	-	+	-	-
Bhaktadwesa (Aversion to take food)	-	+	-	-
VadanasyaVairasya (Abnormal taste in mouth)	-	+	-	-
ParshwaShoola (Pain in the sides of the chest)	+	+	+	+
PeedanamHridaayasya (Tightness of the chest)	+	+	+	+
PranasyaVilomata (Sinusitis or Rhinitis)	+	-	+	+
ShankhaNistoda (Temporal headache)	-	-	+	+

Table 3: Showing the Rupa of TamakaShwasa

Symptoms	C.S.[28]	S.S.[29]	A.S.[30]	A.H.[31]
Peenas (Running nose, sneezing, stuffiness of the nose)	+	+	+	+
Shwasa (Dyspnoea)	+	+	+	+
TivravegaShwas (Rapid breathing)	+	+	+	+
AmuchyamaneTuBhrisham (Severe breathlessness if sputum is not expectorated out)	+	+	+	+
VimokshanteSukham (Slight relief in breathlessness on spiting out the sputum)	+	+	+	+
Anidra (Breathlessness disturbs sleep)	+	+	+	+
SayanahShwasPeeditaha (discomfort worsens on lying)	+	+	+	+
AseenoLabhateSoukhyam (Feels easy to breath in sitting position)	+	+	+	+
PratamyatiAti Vega (Deterioration of consciousness)	+	-	+	+
Kasa (Cough)	+	+	+	+
PramohamKasamanashcha (Frequent deterioration of consciousness during paroxysm of cough)	+	-	+	+

KanthGurghurak (rattling)	+	-	-	-
Kanthodhwamsa (Soreness of the throat)	+	-	-	-
Utshoonaksa (Oedema around the eyes)	+	-	+	+
Vishushkasya (Dryness of mouth)	-	+	+	+
LalatSweda (Sweating on the forehead)	+	+	+	+
MeghaihiAbhivardhate (Cloudy weather worsens the attack)	+	-	+	+
SheetaAmbu (Cold water)	+	+	-	-
Pragvata (breeze)	+	-	+	+
Shleshmala (Kaphakara)	+	+	-	-
Ushnabhinandate (Likes hot things)	-	+	+	+
Aruchi (Anorexia)	-	+	+	+
Trishna (Excessive thirst)	-	+	+	+
Vepathu (Tremors)	-	-	+	+
Vamathu (Expectoration)	-	-	+	+

Rupa
[Presentingsymptoms/clinicalmanifestation]-

Rupa means signs and symptoms of the disease. It appears in the 4th Kriyakala i.e., Vyaktavastha in which signs and symptoms of a disease are completely manifested. All the symptoms of TamakaShwasa described in Ayurvedic texts have been shown in the table below:

Chikitsa Sutra (Principle of Treatment)-

In the classical texts of Ayurveda, the approach of treatment has been made in the following way.

1. Nidana Parivarajan: In all the four types of patients for the treatment, NidanaParivarjan or avoidance of all types of precipitating or predisposing factors are to be strictly followed. If the precipitating or predisposing factors are not avoided, the Doshas involved in the pathogenesis will further be aggravated and the prognosis will be worse.

2. Samsodhana: Charaka emphasized that strong build patient with the dominance of Kapha and Vata should be treated with Samsodhana therapy, i.e., Vamana and Virecana as per necessities. (S.Ci.17/89). The author of Yogaratnakar has mentioned that except SnehaBasti, all other methods of SodhanaChikitsa should be adopted in TamakaSwasa (Y.R.Swa.Ci.1). Samsodhana Karma should be performed in following steps.

a. Snehana: Taila mixed with Lavana should be gently massaged on the chest to

loose the tenacious sputum in the channels.
(S.Ci.17/71)

b. Swedana: Swedana by Nadi, Prastara and Sankara method should be performed by these processes the Kapha which has become inspissated in the patient's body, gets dissolved in the body Srotas, the body Srotas become softened and as a result, the movement of Vata is restored to normal condition. (S.Ci.17/71-72)

c. Vamana: To eliminate or expectorate the deranged Kapha, Vamana should be given with proper method with drugs not antagonist to vata. After proper Swedana, SnigdhaOdana (rice), with soup of fish or pigflesh and the supernatant of curds may be given to the patients for the Utklesana of Kapha. There after Vamana should be performed with the help of Madanaphala. Pippali mixed with Saindhava and Madhu. Thus, the vitiated and stagnant Kapha has been expelled from the system, the patient attains ease and body channels (srotas) are purified, the Vata moves through the srotas, unimpeded (C.S.Ci.17/74-76)

d. Dhumapana: After Vamana, to eliminate the hidden pathogenic substances i.e., the Doshas which are in the Linavastha (not completely purified), the physician should endeavour to remove it by DhumaChikitsa (inhalation therapy) (C.S.Ci.17/77).

e. Virechana: as defined by Charaka, is a process in which waste products (Dosa,

Mala) are eliminated through lower channels (Adhobhaga) i.e., anus (C.S.Ka.1/4). Though all Virechana drugs are Panchabhautika in constitution, Jala and PrithviMahabhuta dominant in their constitution (C.S.Ka.1/5). An ideal Virechana preparation, according to Charaka must have five properties. These Gunas are Vyavayi, Vikasi, Suksma, Ushna and Tikshna (C.S.Ka.1/5).

3. Samsamana: The scope of Samsamana therapy in this disease is more wide and practical, which is applicable in all cases in all stages. For the patient who is not eligible for Samsodhana Karma (Durbala), Samsamana therapy should be adopted. Samsamana therapy in this case includes Deepana, Pacana, KaphaVatasamaka drugs and regimen along with drugs that purify PranavahaSrotas. Children and old subjects are also managed with Samsamana.

Brimhana and RasayanaChikitsa-

Recurrent attacks of the illness in a long run tend to debilitate the patient due to depletion of the Dhatu. This Dhatukshaya further adds to the pathogenesis and prevents from employment of energetic treatment during the attack of TamakShwas. Therefore, it is mandatory to maintain the physical strength of the patient by employing Brihana treatment. Further the illness runs a chronic course

with persistent nature. This nature of the illness may be best aborted by the administration of RasayanaChikitsa. In this way the Brihana and RasayanaChikitsa are said to be beneficial in patients suffering from TamakShwas. In short, sequential administration of LavanaTaila Abhyang, Swedan, diet ‘Snigdha’ enough to control ‘Rukshana’ and balanced enough not to aggravate Kapha. SadyaVaman (emergency emesis), Dhoomapana followed by Shaman Chikitsa is the treatment to relieve the attack of TamakShwasa. Virechan followed by VyadhiharaRasayana and BrihanaChikitsa is the ideal line of treatment in between the attacks. These procedures are very much efficacious in remitting the symptoms as well as preventing subsequent attacks of TamakShwas. Formulations those could act on controlling VataKapha and at the same time boost tissue and organ strength, control remodeling and increase immunity against risk factors are selected to treat TamakShwasa.

Modern Disease Review-

Asthma is a disease of airways that is characterized by increased responsiveness of the tracheobronchial tree to a variety of stimuli resulting in widespread spasmodic narrowing of the air passages which may be relieved spontaneously or by therapy. Asthma is an episodic disease manifested

clinically by paroxysms of dyspnoea, cough and wheezing. However, a severe and unremitting form of the disease termed status asthmaticus may prove fatal.[32]

Prevalence[33]-

Asthma is very common; it is estimated that 5 to 10 percent of the population worldwide is affected. Similar figures have been reported from other countries. Bronchial asthma occurs at all ages but predominantly in early life. About one-half of cases develop before age 10, and another third occur before age 40. In childhood, there is 2:1 male/female preponderance, but the sex ratio equalizes by age 30.

Etiopathogenesis and Types[34]

Based on the stimuli initiating bronchial asthma, two broad etiologic types are traditionally described: extrinsic (allergic, atopic) and intrinsic (idiosyncratic, non-atopic) asthma. A third type is a mixed pattern in which the features do not fit clearly into either of the two main types.

1. Extrinsic (Atopic, Allergic) Asthma

This is the most common type of asthma. It usually begins in childhood or in early adult life. Most patients of this type of asthma have personal and/or family history of preceding allergic diseases such as rhinitis, urticaria or infantileeczema. Hypersensitivity to various extrinsic antigenic substances or allergens is usually

present in these cases. Most of these allergens cause illeffects by inhalation e.g. house dust, pollens, animal danders, moulds etc. occupational asthma stimulated by fumes, gases, organic and chemical dusts is a variant of extrinsic asthma. There is increased level of IgE in the serum and positive skin test with the specific offending inhaled antigen representing an IgE-mediated type 1 hypersensitivity reaction which includes an ‘acute immediate response’ and a ‘late phase reaction’.

□ Acute immediate response is initiated by IgE - sensitised mast cells on the mucosal surface. Mast cells on degranulation release mediators like histamine, leukotrienes, prostaglandins, platelet activating factor and chemotactic factors for eosinophils and neutrophils. The net effects of these mediators are bronchoconstriction, oedema, mucus hypersecretion and accumulation of eosinophils and neutrophils.

□ Late phase reaction follows the acute immediate response and is responsible for the prolonged manifestations of asthma. It is caused by excessive mobilization of blood leucocytes that include basophils besides eosinophils and neutrophils. These result in further release of mediators which accentuate the above-mentioned effects. In addition,

inflammatory injury is caused by neutrophils and by major basic protein (MBP) of eosinophils.

2. Intrinsic (Idiosyncratic, Non-Atopic) Asthma

This type of Asthma develops later in adult life with negative personal or family history of allergy, negative skin test and normal serum levels of IgE. Most of these patients develop typical symptom-complex after an upper respiratory tract infection by viruses. Associated nasal polypi and chronic bronchitis are commonly present. There are no recognizable allergens but about 10% of patients become hypersensitivity to drugs, most notably to small doses of aspirin (aspirin-sensitive asthma).

3. Mixed Type: Many patients do not clearly fit into either of the above two categories and have mixed features of both. Those patients who develop the disease late tend to be non-allergic. Either type of asthma can be precipitated by cold, exercise and emotional stress.

Discussion-

Description of Shwasa is available in Brihatrayee as well as Laghutrayee. Sushruta has mentioned TamakaShwasa as Kapha dominant disease. Out of five varieties, TamakaShwasa is having "Swatantra" nature. Kshudra Shwasa may present as a symptom in many conditions

& does not require any medication where as Maha, Urdhva & Chinna Shwasa were present at terminal stage. Literary Simulation of Tamaka Shwasa is coincided with the description of bronchial asthma as described in modern literature. Charaka has mentioned two allied conditions of TamakaShwasa i.e., Pratamaka & Santamaka. Sushruta & Vagbhata have only mentioned the name of Pratamaka which includes clinical manifestation of Santamaka. PratamakaShwasa shows involvement of Pitta Dosha in Pathogenesis. SantamakaShwasa is a severe condition of PratamakaShwasa, when patient feels that he is submerging in darkness. Chakrapani has commented Pratamaka & Santamaka are synonyms but differ from each other in intensity of attack, but Charaka explains them as two different ailments. Various Nidanas were mentioned in Samhita. Charaka has given list of Vata&KaphaprakopakaNidana separately. Various risk factors mentioned in modern science are of two types: those which act as predisposing factor and those which cause acute exacerbation of asthma. In the pathogenesis Charaka has explained PittasthanaSamudbhavaVyadhi where as Vagbhata explained as AamashayaSamudbhavaVyadhi. Chakrapani has quoted that Pittasthana is related with upper part of Aamashaya. But

no clear description regarding Pittasthana is available in Samhita. Whether all Pittasthana should be considered or it is confined to only Aamashaya remains controversial. Different opinion & research works are carried out in relation with this topic. Association of HCL of gastric juice seems to be controversial as Achlorhydria & Hyperchlorhydria both conditions are associated with asthma.

In the pathogenesis, vitiated Kapha and Pratiloma Vayu play an important role & inflammatory condition of airway results due to Saama Vayu (vitiated body humor) which causes Shotha (inflammation) & Srotorodha (obstruction). Hence patients of TamakaShwasa should be classified broadly under VataPradhana (chronic) & KaphaPradhana (acute) Samprapti (pathogenesis).

Aacharya has described various guideline principles for management. Among that Nidanaparivarjana plays major role. Various preventive measures are explained which helps in preventing asthma exacerbation as well as development of asthma. Treatment modality mainly includes Shodhana&Shamana therapy. Among Shodhana, Vamana&Virechana have been advised whereas AacharyaSushruta has contraindicated SnehaBasti. During Vegavastha local Snehana with SalavanaTaila&Swedana is

advised. Charaka has explained different Management principles according to stages of disease. In Shamana therapy drugs having Kaphahara, Vataghna, Ushna&Vatanulomana properties were described. Charaka has given importance to Brihana therapy rather than Shamana&Shodhana. Brihana therapy is just like Rasayana therapy. Management of Bronchial asthma as per contemporary treatment modalities include use of bronchodilators, corticosteroid, anticholinergics. So, the signs and symptoms of TamakaShwasa are similar to that of Bronchial Asthma as mentioned in the modern Medical Science.

CONCLUSION -

This conceptual study has enlightened various fields from historical review to the recent information about the disease of the modern era. Bronchial asthma is the common respiratory disease of the current scenario which needs preventive and therapeutic approach. Ayurveda through its harmless modalities may be considered as the best approach for bronchial asthma. Through the literature review, we get a clear idea of the disease and an attempt has been made to understand bronchial asthma according to Ayurvedic and as well as modern perspective.

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