WORLD JOURNAL OF PHARMACEUTICAL RESEARCH
SJIF Impact Factor 8.084
Volume 12, Issue 7, 1389-1410. Review Article ISSN 2277– 7105

HISTORICAL REVIEW OF TAMAKA SHWASA – A REVIEW ARTICLE

Dr. Shubham Badhan[1]*, Dr. Dushyant Sharma[2] and Dr. Navneet[3]

[1,2]MD Kayachikitsa and [3]MD Ras Sastra

Assistant Professor Dronacharya Ayurvedic Educational Institute & Hospital, Khushalipur- Uttar Pradesh.

Article Received on
21 March 2023,

Revised on 11 April 2023,
Accepted on 01 May 2023

DOI: 10.20959/wjpr20237-28467

***Corresponding Author**
Dr. Shubham Badhan
MD Kayachikitsa, Assistant Professor Dronacharya Ayurvedic Educational Institute & Hospital, Khushalipur- Uttar Pradesh.

ABSTRACT

Any research must include history since it provides important knowledge about previous events that may be used to shape the future by focusing on the here and now. Even better, it gives us a foundation and a notion for how to advance our knowledge and accomplish something. The previous history is important to the current research in the same way that past acts have relevance in the emergence of the disease Tamaka Shwasa.

KEYWORDS- *longevity, Tamak swasa, Purana, Kala.*

INTRODUCTION

Ayurveda, the science of longevity is considered as Upaveda of Athrvaveda, one among Chaturvedas orated by Lord Brahma, who has explained the health sciences in eight branches. The reference of Shwasa (Tamaka Shwasa) is available from Vedic period to modern era. The historical reviews of Tamaka Shwasa from various literatures are described below in chronological order.

1. Vedas 2. Puranas 3. Samhitas 4. Sangrahas 5. Adhunika Kala

1. Vedas

In Vedic literature, Atherveda contains ample of references pertaining to Shwasa. Importance of Prana has been described. In Rigveda the word Prana is used for Vayu.[1] Ayu is because of Prana.[2] In Yajurveda there is a clear-cut reference of respiration as Vatam prahena nasike.[3] In fourth Sukta of fifth Kanada of Atharvaveda there is a clear-cut description of Shwasaroga chikitsa is used here for the treatment of deranged Prana and Vyana. Indirectly

Soma is also indicated for the treatment of Shwasaroga by mentioning Kustha as a friend of Soma. The normal rate of respiration is mentioned as 21,600 in 24 hrs i.e. 15/Min. in Satpatha Brahmana.[4] Sayan Bhasya also has many words like Pra, Puraha, Nih which are related to respiration. Paniniya sutra has a description regarding the importance of normal breathing.

Upanisad

Upanishadas are the only first ancient text, which mention the word Shwasa. In Amanaskopnisada the word Shwasa is mentioned for respiration[5] and its derangement leads to death.[6]

In **Brihadranyak Upanisad**, Prana is called as Ayasya as well as Angirasa who controls the whole body. When prana leaves body or any organ that part gets dried.[7]

Chhanhdugyopanisad - There is a separate Chapter on Prana. In this Upanisad Prana has been called as Angira because Prana nourishes all the parts of body.[8]

Yogacudamaya Upanisad contains the three diseases of Pranavaha srotas namely Hikka, Shwasa, and Kasa which have been described as the result of deranged Vaya.

2. Puranas

Garuda Purana, a renowned sacred treatise, has described and documented about the disease. Garuda Purana and Agni Purana are very significant from Ayurvedic point of view. The Garuda Purana, is divided in three Samhitas viz, Agastya Samhita, Brihaspati Samhita and Dhanwantri Samhita. It is in Dhanwantri Samhita, the diagnosis and treatment has been explained. More scientific description of Shwasa is found as Dhanwatri has been quoted stating; 'Now I shall expose the Nidana of Shwasa'.

3. Samhitas

This is the golden period of Ayurveda and the two great works viz. Charak Samhita and Sushruta Samhita were produced in this period. There were lots of improvements and additions seen Ayurveda during the period of Samhitas. We can get elaborate description regarding Nidana, Poorvaroopa, Samprapti, Lakshana, Upadrava and Chikitsa of the disease Shwasa in Samhitas.

Charaka Samhita

It appears to be the first text in which detailed description of Shwasa Roga is available. The 17th chapter of Chikitsa Sthana which is supposed to be revised by Dradabala, explain the details of Nidana and Chikitsa of Shwasa and Hikka Roga, Charka has narrated the Nidana Purvarupa, Rupa, Upshaya, Anupashaya Samprapti and Chikitsa of Shwasa Roga. Shwasa Roga is caused, due to the vitiation of kapha and vata; but it originates from the pittasthana.[9]

Susruta Samhita

In Susruta samhita detailed description of Shwasa roga is available in 51st chapter of uttartantra Pancha Nidana and Chikitsa is discussed of detail but there is no mention of Pitta stana as the origin of Shwasa Roga.[10]

Bhela Samhita

There is no description of Shwasa rogas is available, But the word Shwasa is mentioned as a symptom and complication of some disorders.

Harita Samhita

In this Samhita 1st chapter Ausadhi Parijnandhidhana of third Sthana, Shwasa is mentioned to be caused after Gulma (Vataja), which is also the result of Udararoga in the roga sankara process. By this evident that Shwasa has its Origin from Mahasrotas.[11]

Kashypa Samhita

Chikitsa of Shwasa roga along with Kasa is mentioned in 10th chapter of khila Sthana without other details (Antarvatni Adhyaya).[12]

4. Sangrahas

It is considered as an important period in view of richness of literature produced during this era. Detailed and clear explanations about the diseases were given by Acharyas of Sangrahakala, which made understanding Ayurveda more systematic and popular. They have cleared regarding understanding the health and diseases, in easy and systematic way. Keeping the Samhitas as a base they have cleared the doubts. In this period Acharyas have added many thoughts in their treatises.

Astanga Sangraha

In this Samhita Shwasa is explained in two Separate chapters for Nidana and Chikitsa in respective Sthanas. Here it is mentioned that Shwasa occurs by increased cough.[13-14]

Amasaya is mentioned as originating seat of Shwasa roga, Katuki (Picrorhiza korrua) is used with Tejovatyadi ghrita for the treatment of Shwasa roga.

Astanga Hridaya

In this text Shwasa roga is described in detail in 4th chapter of Nidana as well as 4th chapter of chikitsa sthana, Amasaya is considered to be the seat of origin of Shwasa Roga. [15]

Madhya Kala

Madhya kala may be considered as most active phase, while in lot of interactions take place and texts pertaining to different subjects like nidana, chikitsa and the like created. During this period exchange of Knowledge had taken place between Indian Systems of Medicine and other systems of medicine prevalent in the different parts of the world.

Madhava Nidana

Acharya Madhava had complied almost diseases with direct references of Charaka, Susruta and Vagbhata. Shwasa has been described in 12th chapter entitled Hikka Shwasa Nidanam, but no reference of pitta sthana involvement in the samprapti of Shwasa Roga.[16]

Kalyanakaraka

Ugradityacharya prescribed most common and easily preferable recipes for Shwasa roga. He prescribes the root of Talapotak, an unidentified drug, which controls the Shwasa very quickly.

Indu

Sasilekha is the only commentary of Astanga Sangraha written by Indu. He clearly mentioned the karana and amasaya pravriti of Shwasa.[17-18]

Chikitsa Kalika

In this text, Tistacharya describes Shwasa roga after pandu roga, pandu is thought to be nidanarthaka roga of Shwasa.

Chakrapanidatta

Chakrapani Datta has written a famous commentary Ayurveda Dipika on Charaka samhita. He has tried to clarify the Pittasthana Samudbhava of Shwasa roga. He considered Amashaya for Pittasthana which is supposed to exist between the Hridaya and Nabhi.

Chakradatta

The Shwasa Chikitsa has been explained in the 12th Chapter along with Hikka Chikitsa. There is no mention of Pittasthna in this text.[19]

Madhukoshavyakhya on Madhava Nidana

This commentary of Madhava Nidana is written by Vijaya Rakshita and Shrikantha dutta. In Madhava Nidana, there is no reference of pittasthana but Vijayarakshita has quoted the charaka's reference of pittasthana in 12th chapter. Only Nidana Panchaka of Shwasa roga is described in details.[20]

Arundatta

Sarvanagasundra, a famous commentary of Ashtanga Hridaya written by Arunadatta, Kasa is mentioned as main nidana of Shwasa roga.[21] He commented on 'Amashaya samudbhavam' means amashaya samudbhave janma, yasya tam amashaya samudbhavam.[22]

Sodhala

Sodhala in 12th chapter of his book 'Gada Nigraha' discussed nidana and chikitsa of Shwasa roga. There is no mention of pittasthana.[23]

Vangasena

Vangasena has given a separate chapter on Shwasa roga named as Shwasa Rogadhikara. He had almost quoted Charaka's verses.

Rasaratna Samucchaya

Shwasa roga is described in 13th chapter. In the samprati of Shwasa roga, amashaya is considered to be the seat of origin and annavaha, udakavaha, ashruvaha srotas is also considered to be involved in the pathology of Shwasa, but pranavaha srotas has not been mentioned.[24]

Sharangadhara Samhita

Five types of Shwasa are mentioned without any description in the 7th chapter of Prathama Khand. In Madhyama Khanda nearly 46 kalpas are mentioned in different chapters.[25]

Bhavaprakash

Bhavamishra discussed the Shwasa roga in the 14th Chapter of Madhyama Khanda under the heading - Atha Shwasa Rogadhikara. He had mostly quoted all verses from Charaka and Sushruta samhita.[26]

Tantrasara Sangraha

In 15th patala, Shwasa roga is described with its treatment. In this text tantra and mantra are mentioned for the treatment of Shwasa.[27]

Yogaratnakara

First part of Yoga Ratnakara describes Shwasa nidana. Shwasa is considered as maha vyadhi. Different types of alliance of vitiated doshas during samprapti leads to five types of Shwasa. In chapter fourth Shwasa is described alongwith nidana and cikitsa.[28]

Bhaisajya Ratnavali

Govinda dasa describes Shwasa in 16th Chapter of his book with different therapeutic formulations.[29]

Previous Works done on Tamaka Shwasa[30]

SHWASAN KRIYA

A proper knowledge of Pranavaha srotas is essential to understand respiratory system function thoroughly. The organs which are related to Shwasa Kriya are as Nasa (nose), Kantha Nadi, Apa Stahmbha (Bronchi), Phupphusa (Lungs), Pranavaha Dhamani.

NASA

Nasa is made up of the Nasathi (Nasal Bone) at the top and Tarunasthi (cartilage) below; intercepted by another Tarunasthi from inside (Nasal septum) thus making two nasa margas (Nasal passages).

These two passages take on reach the gala (Throat) at the hind portion of the Asya (mouth). Charak has mentioned nasa as a seat of Pranavayu.

The description of different parts of Nasa is available.

Agranasika: - It is also called as Nasikagara, Nasagra. It indicates the tip of the nose.

Nasaputa: - These are two in number, formed from Nasarandra which is divided by Nasa Vansa is also called as Nasasthi Danda.

The diameter of each Nasaputa (Ayama) is 11/2 Angula

The length of Nasaputa is two Angula and Total Nose cavity. Nasa Guha is four Angula. (S.Su. 35/14).

KANTHA

This is a part Heart to Nasa. Includes Pharynx (Grasanika) and Larynx (Swarayantra) and Throat. Any obstruction to wind pipe hare is a cause for not crying of the foetus (Garbha).

KANTHA NADI

Dalhana used the word Nalaka (Traychakante Galanla Kasthini) for this. It contains bones (Kanthanadya chatwari, Su. Su. 5/26). It is also known as a Swasanalika (Trachea) is a tube 4 ½ inches long make up of rings of Tarunasthi (cartilage) placed over the other. Its upper and contains a prominent portion known as Krikatika cartilages which can be seen clearly in adult makes (Adams apple) in the center of the neck below the lower Jaw. The diameter of Swasanalika at this place is 1" – $1^{1}/_{4}$". The Swasnalika (Kanthanadi) gradually narrows down and at the lad of the 5th Vertebra divides into Nalika Sakhas (Bronchi) each one entering into the Phu Phusa of the corresponding side.

APASTAMBHA

These are two Uromarmas and they are tube like structure. Any injury to these causes Vatapurna Kusthata, death because of kasa and swasa Roga. These Apasthambha are also called as vatavaha nadi, swasana and hridaya nadiya. These Apastambha may be considered as bronchi.

PHUPPHUSA

Phopphusa is one of the Kostangas. These are two in number, one or each side of the Uroguha (Chest Cavity) occupying nearly 75% of the space inside. The Uras (Chest) is formed by the Parsukasthis (Ribs), Upaparshukasthi (Cartilages), Urasthi (Sternum) and Prustauamsa (Vertebral Column) together making up a cylindrical cage for the protection of the organs inside.

The Phupphusa are said to have developed from the Phena of Rakta of blood, during embryonic development. They are also made up of Mamsa Dhatu (Muscle tissue). The simile of fourth is significant art the internal structure of lungs is spongy, hollow and always contains a certain quantity of moisture and blood. The Phupphusa are divided into small portions called Khandikas (Lobes); The Right having there and the Left only two. The Sirsha

(Apeh) of the phupphus is just behind and beneath the Akshakasthi's (Clavicles). The lower borders which are at the level of eleventh rib at the bark, are arched inward to accommodate the yakrut (Liver) or right side and Pleeha (Spleen) on left side. The phupphus are covered externally by two layers of Avrankala (Plurae) in between which there is a small amount of lubrication, fluid; i.e., Avalambaka kapha. In between the two phupphusa are located Hridaya along with its mula dhamanis and Siras (Heart and their Vessels) the Annanalika (Esophagus) in the front (Mediastinum) at the back is filled with a pad of Medas (fat) and Lasika granthi (Lymph glands).

SHWASAN KRIYA

Description regarding physiology of respiration is available in Ayurvedic and Sanskrit Literature. In Yajurveda it is mentioned that air in the form of Prana and Apana enters the Naasika (*Yaj. 15/12).* Some times Udana has been mentioned in the place of Apana *PRA + ANA - going in UDA + ANA -going out.*

In Bhagavatgita, it is mentioned that Prana and Apana moves through Naasika (*Bha. 5/2).* Shridharacharya has interpreted Prana for expiratory air and Apana for inspiratory air.

In some Ayurvedic texts the word Prana has been used for inspiration & Udana for expiration. Acharya Sushruta has mentioned that *Udano naam Yasturdhamupaiti Pavanottamah. (Su.Ni.1/14).*

In current era the word Ucchvasa and Nishvasa are used for inspiration and expiration respectively.

In one mantra of Atharvaveda (Kand II) it is mentioned that some portion of air remains in body at the end of expiration as it cannot be expelled out. At the time of respiration, the sound produced is termed as *Hansa*. Respiration takes place during day and night without any interval. *(Atharvaveda Kand II).* Prana produces different sounds in the body. When it enters *Apastambha* it produces sound *PRA* when it enters the alveoli from *bronchioles* produces the sound *PURO*. The sound *NI* is produced when Prana returns from *alveoli* and at *Apastambha Shvasanali* & at *Swarayantra* the sound "*PASCAT"* is produced (*Miskra S.K. et. al.1958*).

Ayu is considered as a combination of Shaarira and Prana. Acharya Sushruta has stated that Baahya Prana survives internal Prana. Through process of respiration Baahya Prana enters the body. Acharya Sharngadhara has mentioned the process of respiration in detail. But uptill now no scholar has tried to elaborate this process. An attempt is made to illustrate this process with the help of modern physiology.

Nabhistha Prana Pavahah…

Nabhi is considered as Mulasthana of Sira. Meaning of the word Nabhi is Bandhana.

Acharya Sushruta described it as –

Sirabhihi Aavrittai Nabhi Chakranabhi eva Arakai (Su. Sha. 7/8)

It means that union of Sira takes place around this region. Formation of inferior vena cava takes place at the umbilical region. It is a major vein which drains deoxygenated (impure) blood from periphery which may be considered as Sirabandhana or Union of Sira at Nabhi. Prana pavana is related with functions of Prana Vayu. Inhalatation i.e. (Nishvasa is a function performed by Prana Vayu.) During inhalation movement of abdominal muscle can be visible easily. Acharya Sharangadhara may be described these movements in relation to Nabhi. During this process of Pranavayu i.e., inspiration, negative pressure is created in thoracic cage, movement of ribs takes place in upward and outward direction. Due to negative pressure created in thorax venous blood from inferior vena cava as well as superior vena cava drained in thorax and finally it opens into right auricle.

Sprishtwa Hritkamalantaram …

Aadhmalla while commenting on this opines that –

Hritkamalantaram iti Hritkamalasya Abhyantaram

It means that deoxygenated blood from vein reaches inside the right auricle through both the vena cava. *(Sha. Pu 5/48)*

Kanthat Bahirviniryati…

This deoxygenated blood travels from right atrium to right ventricle and during systole this blood is given out to pulmonary arteries which distributes blood around the alveoli through fine capillaries for oxygenation. This Deoxygenated blood is having higher concentration of CO_2 than alveolar air.

Both these are separated by alveolar diffusing membrane. According to law of diffusion, gaseous exchange takes place from area of higher concentration to area of lower concentration. Secondly partial pressure of CO_2 in blood is always greater than partial pressure of CO_2 in alveolar air. Hence net diffusion of CO_2 will occur towards gaseous phase in alveoli. From alveoli it is continuously expels to exterior by ventilation, which is mentioned as ***Kanthat Bahirviniryati*.**

Pitwa cha Ambara Piyusham Punah Ayati Vegatah…

Similarly due to same phenomenon of gaseous exchange, diffusion of O_2 takes place across alveolar membrane. Oxygen concentration in alveoli is greater than that of capillary O_2 hence it continuously gets diffused from alveoli to capillary and new air comes from outside to replace the CO_2 in alveoli. More rapidly the oxygen is absorbed through alveolar membrane lower becomes its concentration in alveoli; conversely more will be the flow of oxygen into alveoli through the atmosphere. Thus, process of oxygenation, i.e., From atmosphere to alveoli to capillary may be described as *Pitwa Cha Ambarapiyusham Puna Ayati Vegatah* and process of diffusion of CO_2 mainly deals with *Kanthat Bahir Viniryati.*

CO_2 diffuses more rapidly than O_2 through respiratory membrane. Average PCO_2 in pulmonary blood is not much different from PCO_2 in alveoli. Average difference is less than 1 mm of Hg. With the available techniques this difference cannot be measured. Diffusing capacity of CO_2 is 20 times that of oxygen. Diffusing capacity of CO_2 under resting condition is about 400-450 min/mm of Hg., During exercise it increases up to 1200-1300 ml/min/mm of Hg. Diffusing capacity of oxygen under resting condition is 21 ml/min/mm of Hg. During normal breathing mean oxygen pressure difference across the respiratory membrane is about 11 mm of Hg. Multiplication of this pressure with diffusing capacity (11 x 21) gives a total of about 280 ml of oxygen which diffuses through the respiratory membranes. Due to this large pressure difference when CO_2 is given out from capillary to alveoli, O_2 enters rapidly from alveoli into capillary which may be quoted as *Pitwa Cha Ambarapiyushama Punah Ayati Vegatah.*

Average Functional Residual Capacity of lungs at the end of normal expiration measures about 2300 ml/lit. Only 350 ml of new air brought into alveoli with each inspiration and same amount of alveolar air is given out. Volume of alveolar air replaced by new atmospheric air with each normal breath is only 1/7th of total hence multiple breaths is required to exchange most of the alveolar air. Respiration process prominently deals with alveolar air and not with atmospheric air.

Prinayanti Akhilam Deham…

After oxygenation through Pulmonary veins this oxygenated blood is transferred to left atrium & then to left ventricle. During systole this oxygenated blood is circulated all over the body through arterial system. Through circulation this O_2 is delivered to every minute

structures of body which is essential to carry out metabolic activities of every cell, lack of this oxygen result into cellular death.

Jivayan Cha Jatharanalam...

Respiration is also helpful in maintenance of Agni. To understand the role of respiration in maintenance of Agni, it is essential to understand role of Vayu in maintenance of Agni i.e., the process of metabolism. Acharya Sushruta has opined that among different types of Vayu Prana, Apana & Samana have prime importance for normal function of Agni. Agni is related with Parinaman of Aahara which is nothing but process of metabolism. This is governed by various digestive enzymes & hormones. Acharya Dalhana while commenting on this explained that Prana & Apana are mainly concerned with Dhmapana i.e., stimulation of Agni & Samana is concerned with Palana i.e., maintainance of Agni. This Samana vayu resides lateral to Agnisthana. When the status of these three Vayu is normal, Agni functions normally. For normal functioning of this Vayu there mentioned three basic requirements -

Vayu should have unobstructed free movement

It should be in its own natural habitat

It should be normal qualitatively as well as quantitatively.

While going through Samhita numbers of references are available which shows importance of these Vayu.

ROLE OF APANA VAYU

While describing pathogenesis of Sahaja Arsha Charaka has explained that when Apana Vayu gets vitiated due to Gudavali Avarodha, Apana leaves its own place & traverses in opposite direction. It involves sequentially vitiation of Samana, Vyana, Prana & Udana. Symptoms are also developed accordingly. Vitiation of Apana leads to obstruction in the natural Gati of Mutra, Purisha, Vayu & produces Sharkara, Ashmari etc. Further when Apana involves Samana Vayu symptoms produced are Kaasa, Shvasa, Tamaka, Trishna, Hrillasa, Chardi, Arochaka etc. Here vitiated Apana detoriate the functions of Agni which explains role of Apana in maintenance of Agni. Also, Kaasa, Shvasa and Tamaka occurs in relation with vitation of Samana.

ROLE OF SAMANA VAYU

In Avarana chapter, Acharya Charaka has mentioned two conditions of Samana Vayu-

(i) Pittavrita Samana and (ii) Kaphavrita Samana

In Pittavrita Samana symptoms are Atisweda, Trishna, Daha, Aruchi and Agnimandya. While in Kaphavrita Samana Asweda, Lomaharsha, Coldness of extremities are observed. Agnimandya is mentioned in both these conditions. It occurs due to hampered function of Samana vayu. Acharya Chakrapani has opined that though in this condition Pitta dominates Samana, Mandagni occurs due to dysfunction of Samana vayu which is stimulating factor for Agni. It explains importance of Samana vayu rather than Pitta.

ROLE OF PRANA - *Anna praveshkruta (A.H.Su.12)*

To maintain the normal status of Agni, Aahara should be consumed at proper time (*Kalbhojanam Arogyakaranam*) Intake of food is function of Prana vayu. In deteriorated condition of prana vayu consumption of food get reduced. So, in this condition due to lack of proper quantity of food, Agni get hampered.

As Charaka says - ***Nabhojanena Kayagni dipyate (Cha chi 15/41)***

Food is essential for normal function of Agni in sufficient quantity, which is under control of Prana Vayu. From above discussion it can be concluded that any disturbance in functions of Prana, Samana & Apana leads to vitiation of Agni. Apana Vayu is mainly concerned with excretory system of body while Samana vayu is concerned with metabolism & Prana mainly concerned with respiration.

According to modern science there is specific relationship is present in functional systems of respiration, metabolism and excretion. Metabolism mainly includes anabolic & catabolic process which is carried out in our body. It is well known that all enzymes & hormones in the body are secreted at proper pH only. Pepsin acts only in acidic medium; its maximum activity occurs at pH-3. Pancreatic enzymes act only in alkaline medium, release of hormone secretion occurs at pH less than 4.5. Maintenance of this pH is due to hydrogen and bicarbonate ions. Any abnormality in their concentration results into metabolic acidosis/alkalosis resulting in various abnormities. These are mainly concerned with functions of Samana Vayu. Respiratory & Excretory these two buffer systems are present in body to maintain pH. If metabolic acidosis occurs due to depletion of bicarbonates ions, ultimately increases H ion concentration is present. This is balanced by increased ventilation which gives out CO_2 in large quantity. If metabolic alkalosis occurs opposite phenomenon takes place which compensate this ionic imbalance, thus maintenance of proper pH is essential for normal function of hormones & enzymes. In the same way by active reabsorption of bicarbonate in renal tubule as well as excretion of this bicarbonate ion

through stool (excretory system) also helps in maintaining this proper pH. It is under control of Apana vayu.

TAMAK SWASA - (Bronchial Asthma)

Ayurveda considers Tamaka Swasa is a yapya disease. Tamaka swasa is not so serious as Maha, Urdhva and Chinna but it is a very troublesome disease and long lasting with frequent episodes (attacks) difficult to bring under control unless quick and prompt treatment is not provided. Both vata and kapha have been considered to be the chief Doshas involved in the pathogenesis of Tamak Swasa. Among the five types of Sareera-vayu, Prana Vayu is deranging during this disease.

Aacharya Charaka has mentioned Santamka and Pratamaka are two types of Tamaka Swasa based on their clinical signs and symptoms. Tamaka Swasa can be categorized into Kaphapradhan and Vatapradhan based on Doshaja predomince in Rogotpatti and Lakshnas.[19] Clinically we can observe these two types of patients. There is other literature also available to support this; Kaphaja and Vataja type.

Santamaka Swasa

Santamaka swasa is aggravated at night and the patient feels relief with cold which is causing Tamak Swasa. It is known as Santamaka Swasa because the patient feels as if he is drowning in the darkness usually the attacks precipitate early in the morning.[20] Sitopachara is fruitful because of the presence of pitta dosa in this disease. According to Jejjat, manasika dosha takes a major part in the growth of this disease. Psychological factors have a role in precipitating an attack and it is referred as a psychological diathesis. One of the symptoms of santamaka i.e.- Majjataha.

Pratamaka Swasa

When Tamaka swasa is associated with such symptoms as Jwara and Murcha it is termed as Pratamaka Swasa. It's only super added infection in cases of bronchial Asthma. It is caused by Udavarta, dust, indigestion, old age and due to suppression of natural urges. Chakrapani is of the opinion that kapha and vata are predominant doses in Tamaka Swasa.

But Pitta is equally vitiated in pratamaka swasa and this is responsible for fever.[21]

NIDANA

Tamaka Swasa is mentioned as Kashtasadya or Yaapya. Nidana has got much importance in such diseases which remain for longer period. Vyadhi goes on as long as patients get exposed to these Nidana. Hence their thorough knowledge is essential to avoid Nidana. In Ayurvedic texts, Nidana of Tamaka swasa as such are not mentioned separately but Nidana of Swasa Roga in general are given.

1) Dosha Prakopaka Nidana : Aharaja, Viharaja

2) Khaivaigunyakaraka

3) Vyanjaka - (Aggravating factors)

Table no. 1: showing the Vataprakopaka Nidanas of Tamaka Swasa.[22-25]

Vataprakopaka Aharaja Nidana	**C.S.**	**S.S.**	**A.H.**	**A.S.**
Rukshanna	+	+	-	-
Vishamashana	+	+	-	-
Anashana	-	+	-	-
Sheetashana	-	+	-	-
Adhyashana	-	+	-	-
Vishasevana	+	+	+	-
Dvandatiyoga	+	-	-	-
Sheetambu	+	+	+	+
Visambhibhojan	+	+	-	-
Vataprakopaka Viharaja Nidana	**C.S.**	**S.S.**	**A.H.**	**A.S.**
Raja	+	+	+	+
Dhuma	+	+	+	+
Vata	+	+	+	+
Sheetasthana Sevana	+	+	-	-
Sheetambu	+	+	-	-
Vyayama	+	+	-	-
Gramya Sevana	+	+	-	-
Atiapatarpana	+	-	-	-
Marmaghata	+	+	-	+
Bharavahana	-	+	-	-
Vegavidharana	+	+	-	+
Shuddhi Atiyoga	+	+	+	+
Kantha Pratighata	+	-	-	-
Urah Pratighata	+	-	-	-
Karmahata	+	+	-	-
Ayasa	-	-	-	+
Jarana	-	-	-	+

Table no. 2: showing the Kaphaprakopaka Nidanas of Tamaka Swasa.[22-25]

Kaphaprakopaka Aharaja Nidana	C.S.	S.S.	A.H.	A.S.
Masha	+	-	-	-
Nishpava	+	-	-	-
Pinyaka	+	-	-	-
Pistabhojan	+	-	-	-
Jalaja Mamsa	+	-	-	-
Guru Bhojana	+	+	-	-
Ama Kshira	+	-	-	-
Dadhi	+	-	-	-
Anupapishita	+	-	-	-
Tila Taila	+	-	-	-
Abhishyandi	+	+	-	-
Sleshmala dravya	+	-	-	-
Shaluka	+	-	-	-
Utkledi Ahara	-	-	+	+
Kaphaprakopaka Viharaja Nidana	C.S.	S.S.	A.H.	A.S.
Abhishyandi Upchara	+	-	-	-
Divaswapna	-	-	-	+

Khavaigunyakaraka Nidana

1) Raja 2) Dhuma 3) Abhighata

4) Due to improper treatment of other disease like Rajayakshma.

Vyanjaka Hetu (Aggrevating factors)

Tamaka Swasa is in which dyspnoea occurs in attack. Some factors which precipitate Dosha and produce episodes of dyspnoea are termed as Vyanjaka Hetu. To curtail the episodes of dyspnoea, perception of these Hetus is necessary.

Table no. 3: showing the Vyanjaka Hetu of Tamaka Swasa.

Vyanjaka Hetu	C.S.	S.S.	A.H.
Megha	+	-	+
Ambu	+	-	+
Pragavata	+	-	+
Sheeta	+	-	+
Shleshmavardharaka	+	-	+
Udavarta	+	-	-
Ajirna	+	-	-

Table no. 4: showing the Pathological nature of Hetu.

Hetu	Dosha	Guna	Dushya/ Srotasa	Samprapti
Cold water, excessive cold drinks	Vata, Kapha	Sheet	Rasa	Sankocha pradhan
Rukshanna	Vata	Ruksha	Rasa	Dhatukshayajanya
Vishamahara	Kapha	Abhishyandi	Rasa	Kaphapradhana
Heavy diet like masha	Kapha	Guru	Rasa, Rakta	Kaphapradhana
Vidahi diet	Pitta	Vidahi	Rasa, Rakta	Pittapradhana
Abhishyand diet like Dadhi	Kapha	Guru	Rakta, Mamsa	Aamajanya
Jalaj, Anup Mamsa	Kapha	Guru	Rakta, Mamsa	Aamajanya
Tila Tail	Kapha	Snigdha	Rasa	Kapha, Aampradhana
Visha Sevana	Tridosha	Vyavayi	Rakta, Oja	Immediate & Asaatmya type
Excess use of dadhi, milk	Kapha	Guru, Abhishyandi	Rasa	Kapha, Aampradhana
Dust, fumes, pollen contact	Vata, Kapha	Ruksha, Laghu	Pranavaha	Srotovaigunya
Sheet vihara	Vata, Kapha	Sheet	Rasa, Pranavaha	Sankocha Pradhana
Sheetal Jala Snana	Vata, Kapha	Sheet	Prana, Rasavaha	Sankocha
Excessive Vyayam	Vata	Ruksha	Deficient Dhatusneha	Dhatukshayajanya, Sankoch
Excessive Vyavaya Adhva	Vata	Ruksha	Deficient Dhatusneha	Pratiloma Dhatukshaya
Vegavarodha	Vata	-	Pranavaha	Vatapradhana
Excessive Shodhana	Vata	Ruksha	Rasa	Vatapradhana

PURVAROOPA

Symtoms indicative of the appearance of particular disease in future are known as purvaroopa. They are predicted by the localized vitiated doshas during the fourth stage of kriyakala i.e. sthanasamshraya. Purvaroopas are clue to developing pathology or dosha dushya sammurchna. Hence the forth coming disease, its nature, severity etc can be diagnosed at early stage. When the symptoms of actual disease are misguiding, the history of specific purvaroopa is helpful in differential diagnosis. The disease manifests early or passes next state of kriyakala i.e. vyaktavasta.

In Ayurvedic classics Purvaroopa of Tamaka Swasa have not described separately, so the purvaroopa of Swasa Roga may be considered as the Purvaroopa of Tamakaswasa.[26]

Table no. showing Purvaroopa of Tamaka Swasa.

Purvaroopa	C.S.	S.S.	A.H.	M.N.
Anaha	+	+	+	+
Parshvashoola	+	+	+	+
Pidanam Hridayasya	+	+	+	+
Pranasya Vilomata	+	-	+	+
Bhakta Dvesha	-	+	-	-
Arati	-	+	-	-
Vadanasya Vairasyata	-	+	-	-
Aadhmana	-	-	-	+
Shankh Nistoda	-	-	+	+
Shula	-	-	-	+

ROOPA

Roopa is the specific sign and symptoms present at the actual stage of manifestation of the disease. These become evident particularly in vyaktavasta of the kriyakala. Vyaktavasta of Tamaka Swasa is Shwasakricchta, Kasa, Muhurmuhurshwasa vega, Asinolabhatesoukhyam, Kaphanishthivan, Peenasa, Urashoola, Parshvashoola etc. All the Acharyas have explained the lakshanas of Tamaka Swasa.

Table no. 6: showing the Roopa of Tamaka Swasa.[27-30]

Roopa	C.S.	S.S.	A.H.	M.N.
Greeva Parigraha	+	+	+	+
Shira Parigraha	+	-	+	+
Peenasa	+	-	+	+
Ghurghurakam	+	+	+	+
Prana prapeedaka Swasa	+	-	-	+
Kasena Pratamyati	+	-	-	+
Kasat Pramohanam	+	-	+	+
Shleshmana Vimokshane Shukham	+	-	-	+
Shamyati Kaphe heena	-	+	-	-
Krichhara bhashitum	+	-	-	+
Anidra/svapata vivardhate	+	+	-	+
Asino labhate saukhyam	+	-	-	+
Ushnabhinandati	+	-	-	+
Uchhritaksha	+	-	+	+
Lalat Sweda	+	-	+	+
Mukha Shosha/ Trishna	+	+	+	+
Muhurmuhur Swasa	+	-	+	+
Sakapha Kasa	-	+	-	-
Vamana	-	+	-	-
Aruchi	-	-	+	-

DISCUSSION

Samprapti is an important factor to understand the process of manifestation of a disease. It is that stage of kriyakala through which one can understand the involvement of concerned dosha, dhatus and malas. The changes takes place from nidana sevana to manifestation of the disease are dealt methodically under the concept of samprapti.[31] The knowledge of samprapti is very essential for understanding the prognosis as well as treatment of the disease. The disintegration of samprapti itself is the treatment '**samprapti vighatanameva chikitsa'.**[32]

In the pathogenesis of Tamaka swasa three types of Avarana may be available.

Prakupita Vayu – Avrita Sama Dosha (Kapha)

While describing pathogenesis of Swasa Charaka described that Vitiation of Vayu takes place due to its own etiological factors and after reaching to the Pranavaha Srotasa it gets obstructed by local Kapha leading to manifestation of Swasa Roga. In this case Kapha is not vitiated it is in normal state, but it is vitiated Vayu which brings out this Kapha leading to the obstruction.[33]

Sama Vata- Avrita by vitiated Dosha (Kapha)

In the same chapter another pathogenesis of Swasa has been explained by Acharya Charaka. In this case Kapha gets vitiated due to its own etiological factors and this vitiated Kapha obstructs natural Gati of Vayu in Pranavaha Srotas leading to Swasa. Here Vayu is not vitiated initially but vitiated Kapha obstructs natural Gati of Vayu leading to provocation Vata. In this way Acharya Charaka has clearly explained two modes of pathogenesis of Swasa.

Vitiated Vata- Vitiated Dosha (Kapha)

However, third type of Samprapti can also be considered where both Vata and Kapha are vitiated due to their own etiological factors as mentioned by Charaka in Nidana of Swasa. Here Vitiated Kapha causes Avarana of vitiated Vayu obstruction of Vayu leads to Swasa.

Every physician should consider these three types of pathogenesis of Swasa during deciding management. Symptoms also differ according to pathogenesis and obviously management will be also different. While mentioning Samprapti of Swasa Roga Sushruta opines that Viguna Pranavayu is involved in the Pathogenesis, commenting on it Dalhana says that Prana

Vayu devoid of its normal function gets combined with Kapha causing obstruction of Channels leading to the manifestation of Swasa Roga.[34] Swasa & Kaasa have been mentioned by Sushruta due to Prana Vayu Dushti.[35]

According to Vagbhata vitiation of Vayu takes place due to own etiological factors and this vitiation occurs all over body. This vitiated Vayu gets obstructed by Kapha present in Urahsthana which further leads to Aavaranajanya Vataprakopa. It tries to get rid of from obstruction of Kapha which results into further vitiation of Vata. This pathogenesis occurs at Urahsthana but originates from Aamashaya leading to Swasa.

After going through the Samanya Samprapti of Swasa Roga, the specific Samprapti of Tamaka Swasa according to Charaka & Madhav Nidana is as follows.

Pratilomam Yada Vayu....

In the Vishesha Samprapti of Tamaka Swasa it is clearly mentioned that vitiation of Vayu takes place due to its own etiological factor and this vitiated Vayu while moving in the reverse order pervades in the Pranavaha Srotasa where it gets obstructed by Kapha Dosha. From this it can be clearly inferred that besides the obstruction caused by Kapha Dosha there is preexisting resistance to the flow of Vayu which is responsible for its pratiloma gati initially. This may be due to association of Ama with Vayu leading to Saama Vayu as it is having Pittasthana Samudbhava. Detoriation of Agni leads to Ama formation which gets associated with Vayu. In the symptomatology of Saama Avastha Strorodha has been mentioned. Obstruction to the free movement/functioning of Vata occurs in Pranavaha Srotasa leading to the narrowing of air ways.

Secondly Pranavayu in its normal course maintains the physiology of Air ways through which it is traversing. But in vitiated state this Vayu causes Sankocha (Spasm) of air ways. Stambha & Sankocha are the Karma of vitiated Vayu. Also, this Vayu produces Rukshatva, Kharatva in Pranavaha Srotosa leading to further broncho-constriction which in turn causes Pratiloma Gati of Prana Vayu.

As a result, Saama vayu leads to Shotha in the Pranavaha Srotas i.e., airways. Shotha is described as a symptom of Saamavayu. As per modern concept asthma is considered as chronic inflammation of airways also this Aamavisha which may be correlated with

histamine, prostaglandin by some scholars which is responsible for the inflammatory condition.

Chakrapani opines that both Vata and Kapha Dosha gets vitiated separately due to their own etiological factors and gets accumulated in their respective places which further leads to Prakopa and Prasara stage. Both these Dosha then enter the Pittasthana, Vitiates the Jatharagni which is present at Pittasthana. This hampered function of Agni leads to Ama formation & subsequently Dhatu's will be not formed properly and increase in Rasamala Kapha takes place. Kapha Vriddhi takes place mainly in Swasthana i.e., Urah Sthana. This Vriddha Kapha obstructs natural Gati of Vayu. Also factors like Dust, Smoke and irritant gases directly affect Pranavaha Srotasa and may acts as trigger factor or Prerak Hetu.

As a result of pre-existing Khavaigunya in Pranavaha Srotasa, vitiated Saama Dosha in Prasara Avastha gets lodged in Urasthana and also increased Kapha in Urah Sthana further causes Srotorodh. This vitiated Pranavayu causes broncho-constriction (Sankocha) & provokes Kapha Dosha which further leads to Avarana of Vayu. Thus, two types of pathogenesis i.e. Sanga and Vimargagamana occur in case of Tamaka Swasa.

Samprapti Ghatakas

Dosha	**:**	Vata (especially Prana Vayu), Kapha (Kledaka & Avalambaka Kapha)
Dushya	**:**	Rasa, Udaka, Rakta
Agni	**:**	Mandagni, Vishamagni
Ama	**:**	Rasa Dhatvagnimandya
Srotas	**:**	Prana, Anna, Udakavaha Srotasa
Udbhava Sthana	**:**	Pittasthana (Cha.), Aamashaya (Vag.)
Vyakta sthana	**:**	Urah, Fuffhusa
Dushti prakara	**:**	Sanga, Vimarg
Rogamarga	**:**	Abhyanatar
Vyadhi swabhava	**:**	Ashukari

PATHYAPATHYA

According to Dosha's Pathya is decided, which is the food and regimen which maintains the health and at the same time help in the regression of the disease. On the contrary Apathya is that food and regimen which aggravates the diseased condition and diminishes the vyadhiskshamatwa. As a matter of fact pathya is used as synonym for chikitsa emphasizing its importance. Pahaya plays an important role in prevention and recurrence of the disease as well as treatment.[73]

PATHYA

- Annavarga: - Purana sashtik, Raktashalidhanya, wheat, Yava, Mudga, Kullath
- Shakavarga: - Parval, Jivanti, Baingan, Chollai
- Phalavarga: - Bimbiphala, Jambeeri phala, Nimbu, Draksha, Amalaki, Amlavetasa, Bilva, Amla rasa, pradhanaphala, Pakva Kushmanda.
- Dugdhavarga: - Ajadughdha, ghrita, Puranaghrita
- Mamsavarga: - Mamsa of Deer, Tittar, Peacock, Hen, Lava, Shuka, Rabit, Jangala Mamsa and mamsa rasa.
- Peya: - Warm water, Honey, Arista (Alcohal) Gomutra (Cow's urine), Sauviraka.
- Others: - Trikatu, Hingu, Jeera, Kapur (Campher), Saindhava, Elaichi.
- Vihara: - Devaswapa, Pranayam, Ushnajala snana, Avagaha swedana, Abhyanga, Medicated Cigars (Dhumapana)

APATHYA

- Anna (Aharavarga): - Rukshanna, Guruanna, Vistambhi ahara, Nishpava, Masha & Kapha-Vata vardhaka ahara.
- Phala varga: - Banana, Apakva kushmanda
- Dugdhavarga: - Dahi, unboiled milk.
- Mamsa varga: - Matsya, Anupa Mamsa
- Peya: - Dushitajala, Cold water
- Shakavarga: - Kanda shaka, Saursava.
- Vihar: - Exposure to cold, dust and polluted environment, weight lifting, exercise, indulgence in sexual activities (ghramyadharma), Chinta, Long journey, Suppression of mutravega etc.

CONCLUSION

Tamak Shwasa is a disease provoked by Vata and Kapha, originated from pittasthan and characterized by obstruction due to Pranavaha Srotas.

REFERENCES

1. Pranadavyurjayta Ru., 10/90/3.
2. Ayurna Pranah Ru. 1/66/7.
3. Yajurveda 15/2.
4. Sat.Brah. 4th part, 12 Khanda, 3rd Adhayaya.
5. Aman.1: 33.
6. Aman 2/58.
7. BR.AR.UD 1/19.
8. Chand 1st Chapter, 2nd part.
9. Ch. Chi 17/8.
10. Su.Sam. Ut. 51.
11. Ha.Sam.chap.1.
12. K.Sam. Khil sthan chap. 10.
13. M.S. Bhaghel –Researches in Ayurveda.
14. Tamakastu Kaphodudbhava. M.N. 12.
15. Su.Ut.51/4.
16. Vachaspatyam page-5/59 part-6.
17. Shabdakalpadrum Page 178, Part 4.
18. Halayudha Kosha Page 676.