



**UNDERSTANDING OF SAMPRAPTI (PATHOGENESIS) OF
TAMAKA SHWASA W.R.TO BRONCHIAL ASTHAMA**

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INTRODUCTION

The word *Samprapti* is obtained from the combination of **SAMA + PRA + AP + KITNA**, meaning obtaining, getting, acquisition^[1] According to Ayurveda, the series of pathological changes that occurs starting from vitiation of *Doshas* to the manifestation of disease is known as *Samprapti*^[2] and measures which break the pathogenesis bring about *Samprapti vighatana* and preciously termed as *Chikitsa*.

General Samprapti of Shwasa

Samprapti of *Shwasa roga* is well defined in all Ayurvedic classics. In the leading text of Ayurveda i.e., Charaka Samhita, Acharya Charaka described a general *Samprapti* for both *Hikka* and *Shwasa*^[3] along with a specific *Samprapti* of *Tamaka Shwasa*. This shows that although the original pathogenesis upto sthanasansrya is similar in both *Hikka* and *Shwasa* but yet they have some differences at the level of manifestation. In *Shwasa* it is mainly vitiated *Vata dosha* along with *Kapha* (Rasagata *Ama*) which produces the leading symptoms.

मारुतः प्राणवाहीनि स्रोतांस्याविश्य कुप्याति ।

उरःस्थ कफमुद्धूय हिक्काशवासान् करोति सः ॥

मारुतः = वात ; प्राणवाहिनी = प्राणसंज्ञक वात वाहिनी, स्रोतांसि आविश्य = प्रविश्य कुप्याति, कुपिता भवति । सः कुपितः : मारुत ; उरः स्थः = उरनाम प्रदेशे स्थित्वा, कफम् = श्लेष्माणं उद्धूय = उदीर्य, हिक्काशवासान् = हिक्काशवासाख्यान् व्याधीन् करोति = कुरुते इत्यर्थः^[4]

i.e. *Vata* provoked by various aetiological factors enter the *Pranavaha srotas* get vitiated and rouses up the *Kapha* present in the *Urah* (chest). Obstruction of the *Pranavayu* and *srotovigunata* produces five types of *Shwasa* and *Hikka*. This is common *Samprapti* for both *Shwasa* and *Hikka* which shows that Marutaprakopa (Vitiation of *Vata*) and Shleshmodirna (rising up of *Kapha*) occurs commonly in the pathogenesis of both diseases. In this *Samprapti* two terms are of great importance.

1. Urasthita – This word shows that vitiated *Vata* resides in the *Ura* (lung field). Acharya Vagbhatta told that –
कफोपरुद्गमनः पवनो वधिगास्थितः ।

प्राणोदकात्र वाहीनी दुष्टः स्रोतांसि दूष्यन् ।

उरःस्थ कुरुते श्वासाम् ।^[5]

Arundatta in his commentry upon this, told that *Urasthita* is –

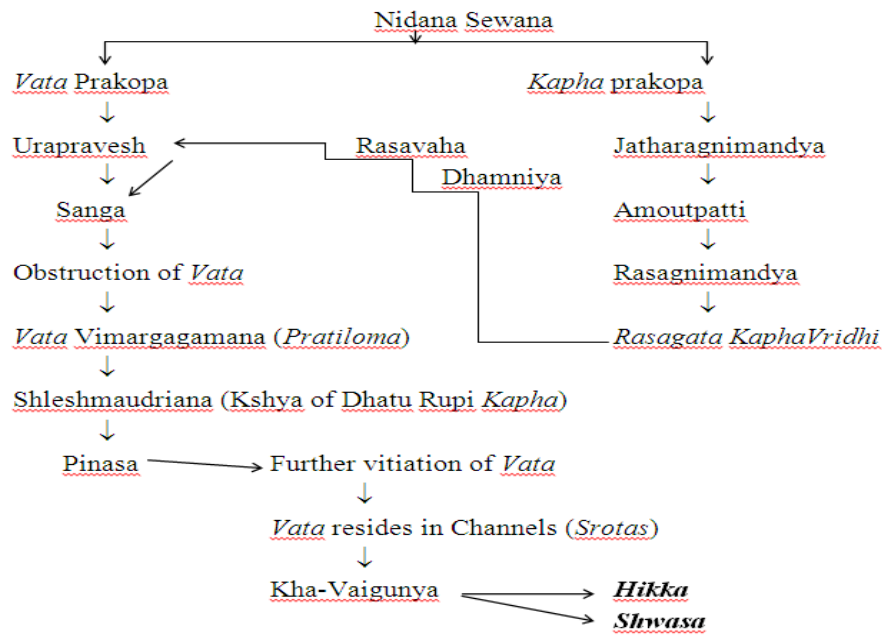
पवनो विष्वगास्थित इत्यनेनेवोरःस्थत्वे लब्धे उरःस्थ ग्रहणं प्रकर्षार्थम् ।

अतिशयेनोरः स्थितः श्वासं करोतित्यर्थः ।^[6]

This shows that the vitiated *Vayu* resides at *Ura* (chest region) to produce disease, *Hikka* and *Shwasa*. Here it is noted that word *Urah* signifies chest region including lung as well as heart. In Ayurveda *shwasa* is also defined as a symptom of *Hridya roga*^[7] which shows that Acharya very well know that dyspnea can also be developed due to cardiac disease and may be for this very purpose they use the word *Urah* instead of *Phusphusa*.

2. Kupyati –According to Acharya Sushruta, *Vyadhi* (disease) originated from that site where there is *Kha-vaigunya*.^[8]

Now the question arises wheather the vitiated *Vayu* enters the *Srotas* (Channel) and produces the disease or the *Vata* enter the vile *Srotas* i.e., *Srotas* having *Kha-Vaigunya* and then get vitiated. Here two conditions can occur (1) *Vata* get vitiated by taking *Vataprakopaka Nidana* and then enter into *Pranavaha srotas* and produces vitiation of *srotas*, and (2) *Vata* inters the channel, and faces obstruction (due to *Kapha=Ama*) and obstructed *Vata* get vitiated to produce vitiation of *srotas*.



Now according to Ayurveda there are two main cause of vitiation of Vata (1) *Dhatukshya* and (2) *Margaabrana*.^[9] In *Shwasa Samprapti* both the above two condition are found showing that vitiation of Vayu is both due to *Dhatukshya*, (*Dhatu rupi kapha kshya*) producing *Rukshata*, *Kharta*, and *Srotosankocha* etc. that is making them less elastic rough and constricted and *margaabrana* due to *Kapha* to produce *Pinasa* (rhinitis) and *Sputum* (expectoration) etc.

Thus, by the general *Samprapti* given by Acharya Charaka,³ it is clear that there is *Agnimandya* producing *Ama* which obstructs the channels and vitiation of *Vata dosha* in *Pranavaha srotas* that cause *Hikka* and *Shwasa roga*. In summary it can be said that there is mainly.

- Vitiation of Vata
- Sroto dushti
- Depletion of Dhatu rupi Kapha

Specific Pathogenesis (Vishishta Samprapti)

According to Acharya Charaka –

यदा स्रोतांसि संरुद्ध्य मारुतः कफपूर्वकः विष्वग्प्रजति संरुद्धस्तदा श्वासान्करोति सः।^[10]

यदा = पूर्व हिक्का श्वासयोः समान सम्प्राप्ति कथनान्तरं प्रश्नोऽयं समुपस्थितः यत् किम् हिक्काश्वासयोः सहैवोत्पत्तिः सन्जायते पृथक् वा ? यदि पृथक्, तर्हि कदा केन प्रकारेण वा श्वासः सजायेत ? भगवता आश्रेयेणदमुपलक्ष्येव समाहितं यत्-यदा, कफपूर्वकः कफेन संयुक्तः तथा कफप्रधानाद्यरेण संजातेऽग्निमधि वातशयोत्पत्तिः कफ पूर्विका भवति तेन ऊवंत कफ पूर्वकः। मारुतः – प्राणवायुः स्रोतांसि – प्राणवाहीनि, संरुद्ध्य – अवरुध्य – अवरोधं कृत्वा वा, संरुद्धः – स्वयमपि अवरुद्ध – श्लेष्मावृत्त किंवा श्लेष्माणवरुद्ध मार्गत्वात् अवरुद्ध गतिः भूत्वा प्रकुपितो भवति सः, विष्वग् – विशुअन्वतीति विष्वक् संवतः। उर्ध्व-अध तिर्यकः। इत्यर्थः ब्रूजति – परिभ्रमति गच्छति वा सर्व शरीरं। विशेषतः प्राणवह स्रोतांसि। तदा = सः = मारुतः, श्वासान् – सर्वान् श्वासान्, करोति।^[11]

Ama produces due to *Agnimandya* circulates through *Rasavahi dhamniya* and resides in *Pranavaha srotas* to produce obstruction in the passage of *Vata*. *Vata* vitiated due to obstruction and by itself get spreads in all

direction especially in *Pranavaha Srotas* and upper part of body and produces *Shwasa Roga*.

There is three important things in this pathogenesis as.

- 1) *Kaphapurvaka Maruta* (*Vata* in association with *Kapha*).
- 2) *Srotansi Samrudhya* (obstruction of respiratory channels).
- 3) *Vishvavrajati* (spreading in all direction)

1) Kaphapurvaka

Acharya Gangadhara^[12] in his commentary upon this write that this, means that *Kapha* is associated with *Vayu* or *Vata* preceded by *Kapha*. Acharya Sushruta, and Vagbhatta also told the same i.e. - “प्राणोऽथकफः संयुक्तः।” नणद्ध^[12] कफोपरुद्ध गमनः।; टणद्ध^[13] In *Samprapti* of *shwasa roga* there is first vitiation of *Kapha* followed by *Vata* and this is the main difference between the pathogenesis of *Hikka* and *shwasa roga*. Where as in *Hikka* there is first vitiation of *Vata dosha* followed by *Kapha dosha*. In *shwasa roga* just opposite occurs i.e. first there is vitiation of *Kapha* due to *Agnimandya* followed by *Vata dosha*.

This word also signify that there is sama *Vayu* and *Shwasa* originated due to vitiation of both *Kapha* and *Vata dosha* as told by Acharya Charaka.

कफवातात्मकावेतौ^[14]

2) Srotamasi Sanrudhya (Obstruction of channels)

In above shloka only *srotas* word written and no clarification in given about any specific *srotas* that is vitiated in *Samprapti*. According to Acharya Chakrapani there is mainly vitiation of *Pranavaha*, *Udakavaha* and *Annavaha srotas* whereas according to Acharya Gangadhara there is only vitiation of *Pranavaha Srotas*.

3) Vishvagavrajati

This word signifies the motion of vitiated *Vayu* all over the body and in *Pranavaha Srotas*. *Urdhva*, *Adha* and *tiryak Paribhraman* of *Vata*. This word denotes *Vata* and its utmost importance in the pathogenesis of diseases. This shows that not only the normal respiration is under control of *Vata* but also its abnormalities (*Shwasa roga*) are mainly due to *Vata*.

Samprapti of Tamaka Shwasa

प्रतिलोमं यदा वायु स्रोतांसि प्रतिपद्यते।
ग्रीवां शिरश्च संगृह्य श्लेष्माणं समुदीर्यणं च।
करोति पीनस तेन रुद्धो घूर्णुरुकं तथा
अतीव तीव्र वेगं च श्वास प्राण प्रपीडकम् ।।^[15]

प्रतिलोमः – विरुद्ध गति : वायु, यदा स्रोतांसि – प्राणवाहीनि, प्रतिपद्यते – प्राप्तो भवति, तदा – उपरोधत, ग्रीवा शिरश्च संगृह्य, श्लेष्माणं च समुदीर्य, पीनसं – प्रतिश्याय विशेषं करोति। तेन – उदीर्णं श्लेष्मणा, रुद्धः – अवरुद्ध पथत्वेन बाधोपेतः सन्वर्हिगच्छश्च, घूर्णुरुकं – कण्ठेघुघुरं शब्दम्, अतीव तीव्र वेगं, च तथा च, प्राणप्रपीडकम् – प्राणानां प्रपीडकम्। प्राणोदेहाग्निः सरतीवेत्येवं प्रपीडाजनकम् – गंगाधरः। श्वासं – तमकश्वासं करोति इत्यर्थः।

Vitiated *Vayu* moves in opposite direction and reaches upto neck and throat where it rouse the *Kapha* (*Dhatu rupi*) and produces *Pinasa* and *Pratishaya* (rhinitis). Vitiated *Vayu*, when obstructed by this *Kapha* (*Margavrana*) produces *Ghurghurakam* sound and *Tivravega Shwasa* (asthmatic attacks).

Now in this pathogenesis there are two things which are important to note –

1) *Pratilomavaya* – This denotes that *Vata* flow in reverse direction. Acharya Charaka in the *Samprapti* of *Kasa roga* told that *Adhahpratihata Vayu* i.e., the *Vata* normally going in downward direction when get vitiated moves in reverse direction i.e., upward direction to produce *Kasa*. Although Acharya not clearly mentioned that it is *Apana Vayu* which get vitiated to produce *Shwasa roga* but by using this term, (*Pratiloma*) he tries to clarify that this is the same *Vata* i.e. *Apana Vayu* which in normal physiological condition goes downward and helps in expelling out *Malamutra* get vitiated and starts moving in upward direction i.e. (*Pratiloma*) to produce *Shwasa roga*.

Vata when get obstructed by *Ama* (srotavarodha) not able to move in downward direction and thus its normal physiological function (i.e.expulsion of *malamutra*) is obstructed and patient suffers from the complaint of constipation, a cardinal sign of *samaVata* -

वायुः सामो विबन्धाग्निसादतन्द्रान्त्रकूजनैः^[16]

The obstructed *Vata* moves upwards (*Pratiloma Gati*) and causes vitiation of *Pranavaha Srotas sthita Vata* i.e. *Pranavayu* and *Udanavayu* to cause *shwasa roga*.

Shleshmana Samudriana – Vitiated *Vayu* start flowing in reversed direction (*Pratiloma gati*) and reaches upto head and neck where, it rouses the *Kapha* to produce *Pinasa* (*Coryza/rhinitis*). Here the important thing is that *Vata* cause erosion of regional *Kapha* which underlines the *Pranavaha Srotas* (*Dhaturupi Kapha kshaya*). This eroded *Kapha* obstruct the passage of air to produce *Ghurghurkam Shabda* (wheezing sound). *Vata* due to its *ruksha* and *Khara guna* further produces *Srotovaigunya*. In the *Samprapti* of *Tamaka Shwasa* there is both *Srotosanga* as well as *Kha-vaigunya* along with that there is both aggravation of *Mala Rupi Kapha* and depletion of *Dhaturupi Kapha*.

According to modern medical science also, in bronchial asthma due to mast cell reaction and eosinophil reactions (granular protein in this cell and oxygen derived free radicals) are capable of destroying the airway epithelium which then is sloughed into the bronchial lumen in the form of *cerola bodies*. Besides resulting in a loss of barrier and secretory function, such damage elicits the production of chematactic cytokines, leading to further inflammation.¹⁷

In *Madhukosha Commentary*^[18] it is said that.

श्लेष्माणं समुदीर्यचेत्यनेन सामान्य सम्प्राप्ति लब्धस्यापि

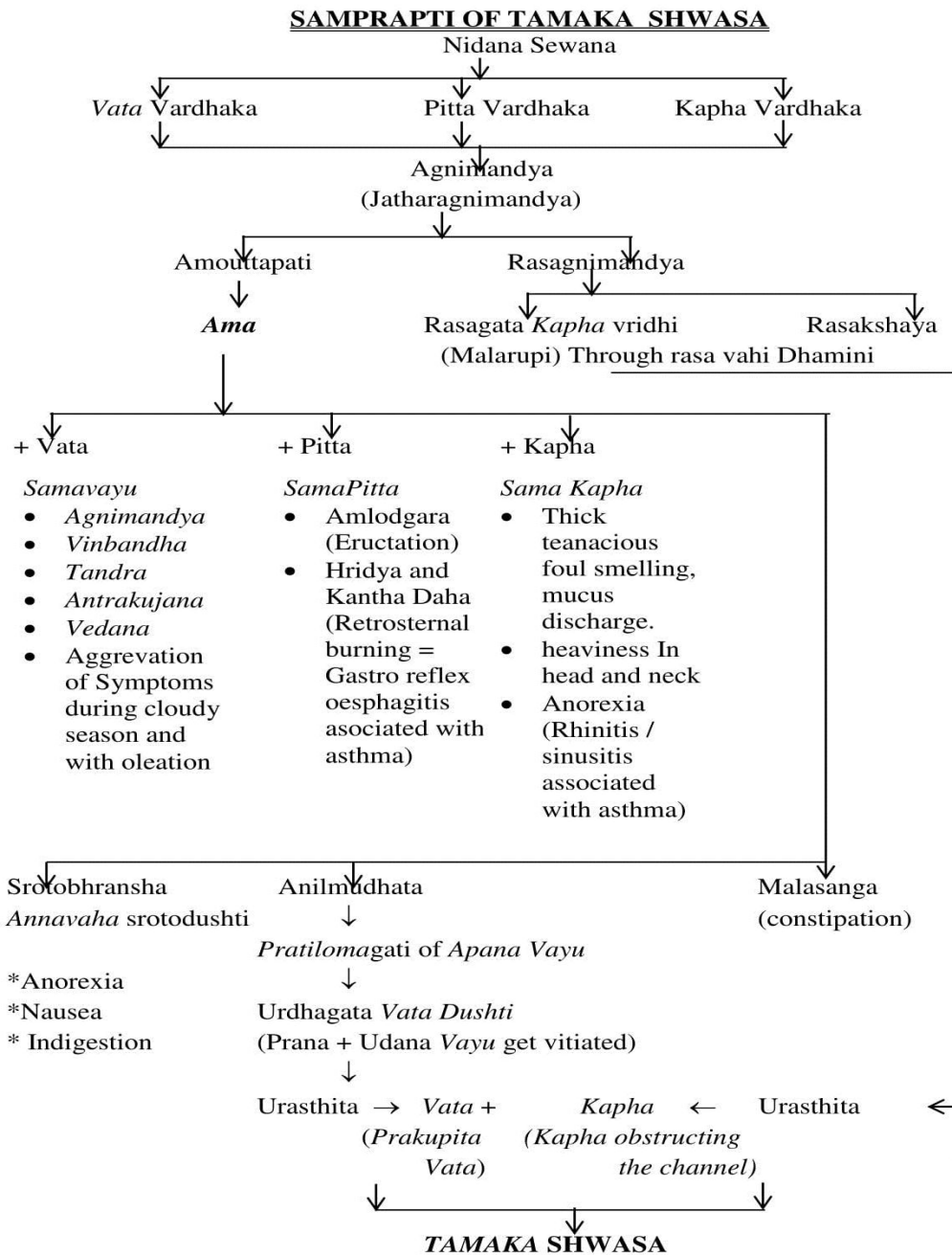
लेष्मः पुनरभिधानदिह विशेषेण कारणत्वं बोधयति।

।बबवतकपदह जव ।बीतलं बीतचंदप^[19]
श्लेष्माणं समुदीर्य च इत्यनेन सामान्य सम्प्राप्त्युक्तस्यापि

श्लेष्मणः पुनरभिधानात् इह विशेषेण कारणत्वं दर्शयति।

This shows that the word *samudriana* denotes the erosion of *Dhatu rupi Kapha* by vitiated *Vayu* which expulsion to produces *Pinasa*.

It can be said that recurrent attack of *Coryza* is prodromal sign of asthma. As recurrent infection leads to edema and infiltration of lymphocytes, neutrophils etc. in airways i.e. there is state of persistent subacute inflammation of airways, later on produce asthma. Modern medical science also support this fact that there is strong relationship between rhinitis and Asthma. It is now being appreciated that allergic rhinitis and asthma considered as '*one airway and one disease*'.



**TAMAKA SHWASA
SAMPRAPTI GHATAKA**

The origination of disease or the process of development of disease is known as *Samprapti*. Part which have main role in the pathogenesis of disease are given below –

1. <i>Udabhava sthana</i>	–	<i>Pittasthana</i>
		<i>Kapha, Vata, Pitta</i>
2. <i>Dosha</i>	–	<i>Kapha – Kledaka, Avalambaka</i> <i>Vata – Apana, Prana, Udana</i> <i>Pitta – Pachaka Pitta</i>
3. <i>Dushya</i>	–	<i>Rasa Dhatu</i>
4. <i>Srotas</i>	–	<i>Pranavaaha, Annavaaha, Udakavaaha</i>
5. <i>Adhithana</i>	–	<i>Uraha Pradesh</i>
6. <i>Srotodushti Prakar</i>	–	<i>Sanga, Vimargagamana, Atipravriti</i>
7. <i>Rogamarga</i>	–	<i>Abhyantara (Koshtha)</i>
8. <i>Sadhyashadyata</i>	–	<i>Chirkari + Yapya</i>

UDBHAVA STHANA

Acharya Charaka told that *Tamaka shwasa* is originated from *Pittasthana*, whereas *Astanga Samgraha*, *Hridaya*, *Rasaratan samucchya* has mentioned *Amashaya* as *Udbhava sthana* and *Urah* as *Vyakti Sthana* of *Shwasa roga*.

In his commentary Cakrapani says that *Urdhva Amasaya* is the seat of *kapha*^[20] whereas *Adhomasaya* is the seat of *Pitta*. Acharya Charaka also accepted *Amashaya* as the main seat of *Pitta*. Now the question arises why Acharya use the term '*Pittasthana*'^[14] instead of *Amashaya* as a origin seat of *Shwasa*. If he just wants to emphasis on the role *Agnimandya* on pathogenesis of *Shwasa*.

Accepting only *Amasaya* as the origin seat of *Shwasa* will not seem to be proper, as it is observed that some disorder of heart, kidney, liver and even some physiological condition leads to *Dyspnea*. For this very purpose, Acharya use the term '*Pittasthana*' instead of *Amashaya* as the origin seat of *Shwasa*. He wanted to show that *Shwasa* is not originated only due to *Agnimandya* at *kostha* level, but in the pathogenesis of *Shwasa* there may be vitiation of any one of the '*Pittasthana*'.

Tripathi V.K. (1981) has opined that other seats of *Pitta* should also be considered as a seat of origin of *Shwasa Roga*.

According to Acharya charaka *Amasaya* lies between *Nabhi* and *stana*.

नाभिस्तनान्तरं जन्तोःमाशय इति स्मृतः।^[21]

Thus the term *Amashaya* is used to denote the area upto small intestine. Where as large intestine can be correlated with *Pakvashaya* As we know that process of digestion is completed upto small intestine and only absorption occurs in *Pakvasaya*. So in summary we can say that a disease originated from *Amasaya* are originated due to default in the process of digestion. In all if proper digestion not occurs in *Amasaya* it leads to formation of *Ama*, which is the root cause of *Shwasa*. This *Amavisha* may be considered as histamine (Upadhyay Y.N. 1977). Intestine is one of the organs where histamine is highly distributed. Association of HCl of gastric juice seems to be controversial in relation to *Pittasthana* in *samprapti* of *Shwasa roga*. Mansfield and Stain (1978) has observed undoubted subjective and objective evidences of bronchoconstriction after infusion of 0.1 N HCl into

esophagus and reversed effect after administration of Antacid. However, Upadhyaya Y.M. (1977) observed that there is no relation between bronchial asthma and HCl. About three fourth of asthmatics have reflux oesophagitis. Also it is practically seen that in patient of asthma there is always constipation, indigestion and sometime eructation also found. Although burning sensation and eructation mostly found in *Pattika Prakriti*. All these prove that there is definitely *Agnimandya* and vitiation of *Pachaka Pitta* at the level of *koshtha* in the pathogenesis of *Tamaka shwasa*.

Considering the role of other *Pittasthana* in the pathogenesis of *Tamaka shwasa*, first we have to know *Pittasthana* told by Acharya Caraka.–

स्वेदो रसो लसीका रुधिरमामशयश्चेति पित्तस्थानानि
तत्रापि आमाशयो विशेषेण पित्तस्थानम्।^[22]

Thus according to Ayurveda *sweda*, *Rasa*, *Lasika*, *Rakta* are the seat of *Pitta* and their vitiation produces *Tamaka shwasa*. Also in the treatment part of *Tamaka Shwasa*, Acharya Charaka quoted "Tamake tu Virechanam, tasmad urdhvadhya Sanshodhanam hitam". Virechana supports the baseline treatment for *Pittadosha*.

NOW ACCORDING TO MODERN PHYSIOLOGY

Water and heat are byproduct of metabolism. When water evaporates from the body surface, 0.58 calori of heat is last for each gram of water that evaporates. Even when a person is not sweating water still evaporates insensibly from the skin and lung at a rate of about 450 – 600 ml./day. This causes continual heat loss at a rate of 12 to 16 calories per hour. This insensible evaporation through the skin results from the continual diffusion of water. Thus it can be said that heat loss \propto 1/ sweating or metabolism \propto heat produce or BMR \propto 1/sweating.

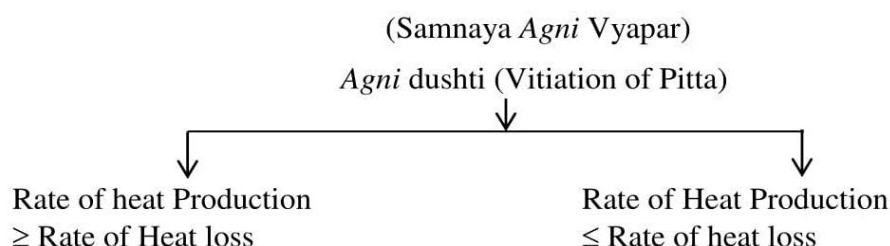
According to Acharya Charaka^[23] –

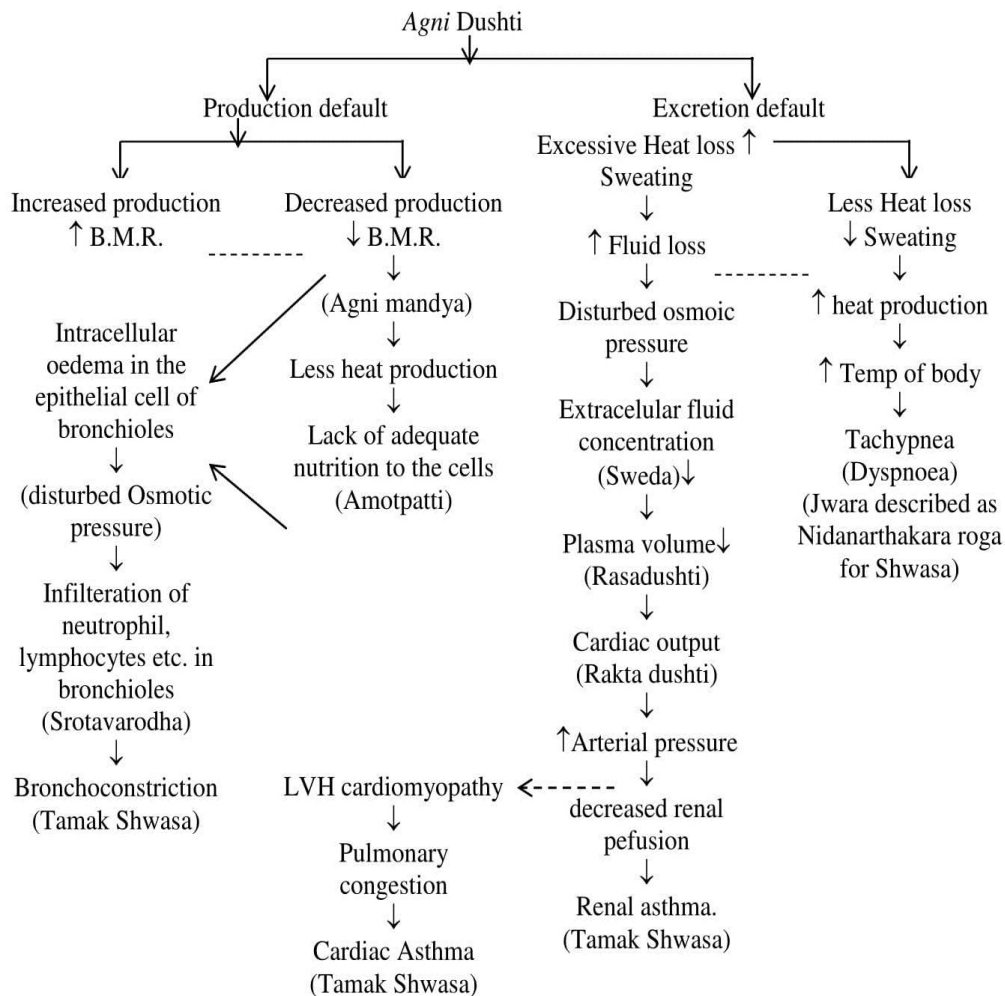
यत्तु सर्वशरीरश्च बाह्या त्वग्विभर्ति यत्तु त्वगन्तेर व्रणगत लसीका शब्दं
लभते यच्चोषमणाऽनुबद्ध्य लोमकूपेभ्यो निष्पत्तत् स्वेदशब्दमवाप्नोति तदुदकं
दशम्जलिप्रमाणम् दद्य

i.e. *sweda* is body fluid present below skin that evaporates due to heat. Thus *sweda* can be compare with the insensible loss of water from skin and lung. According to Acharya total body fluid is equals to *tem anjali* and comprises of *Sweda* and *Lasika*

In normal condition (haemostasis) –

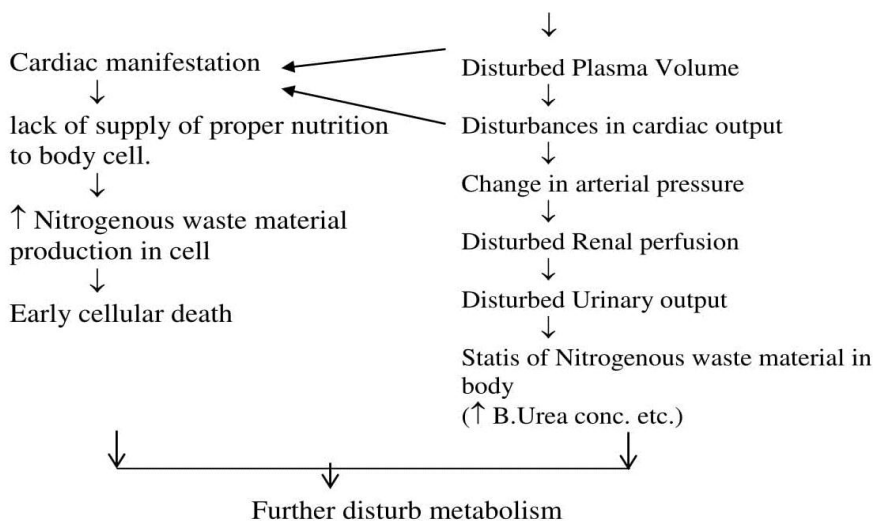
Rate of heat production = Rate of heat loss.





According to Modern Physiology Extracellular fluid volume, blood volume, cardiac output arterial pressure and urine output all of these are controlled at the same time and are directly affected by metabolism as^[24]

Defective metabolism → Disturbance in osmotic pressure between extracellular and intracellular fluid



Thus from above discussion it is clear that all diseases arises from defective metabolism which directly effects extracellular fluid, Blood volume, cardiac output, urine output i.e. body fluid concentration. This is similar to Ayurvedic description. *Shwasa* (Dyspnea) is mainly due to vitiation of *Agni* (B.M.R. = metabolism) at the level of *Sweda*, *Lasika* (extra cellular fluid), *Rasa* (plasma) and *Rakta* (Cardiac output).

Sweda, *Rasa* and *Lasika* can be compared with sweat, plasma and serum and all these constitute extracellular fluid compartment of body.

The composition of precursor secretion in sweat gland is similar to that of plasma except it does not contain the plasma proteins. Similarly serum fluid differs from plasma as it doesn't contain plasma portion (fibrinogen).

Dosha – *Vata* and *Kapha* are mainly involved in the pathogenesis of *Shwasa roga*. Among *Vayu* at first there is vitiation of *Apana* *vayu* which is followed by *Prana* and *Udana* *Vayu*. As according to Ayurveda *Shwasana Karma* (Respiration process) is mainly governed by *Prana* *Vayu*, so it is *Pranavayu* that is vitiated most to produce the disease. Difficulty in breathing, loss of enthusiasm, debility denotes vitiated function of *Udana* *Vayu*. Incorporation of *Agni* and *Swedvaha strotasa* in pathogenesis of *Shwasa* may also leads to vitiation of *Samana* *Vayu*. Accordingly 'Sarva kriya pratibadhya' there seems to be importance of *Vyana* *Vayu* is also there. In special pathology of *Tamaka Shwasa*, *Pitta* is also involved.

Dushya – *Doshas* after vitiating produces vitiation in *Dhatu* i.e., *Rasa*, *Rakta* etc. These vitiated *Dhatu*s are known as *Dushya*. Now as written in Charaka Samhita – *Ān~;L;ajlknhua /kkrwuka pksi'kks" k.kkSAA*^[15]

i.e. there is wasting of every *Dhatu* (from *Rasa* to *Sukra* = *Anuloma* *Kshaya*). But it is *Rasa Dhatu* that is vitiated first and most. Due to *Rasagnimandya* there is excessive production of *Rasagata Kapha* which produces *Shwasa*. Symptoms like *Annadweshya*, *Mukha shushakta*, *Guruta*, *Hrillasa*, *Angasada*, *Klama* shows *Rasadushti*. *Mamsa dhatu* is related with *phusphus* (lungs) and *amashaya* (stomach) also plays an important role in pathogenesis of *Shwasa*. It is seen that, in *mamskshina* persons, there found an increase in *Shwasa vega*

Srotas – In the pathogenesis of *Tamaka Shwasa*- *Prana*, *Udaka* and *Annavaha Srotas* are mainly involved.

कफोपरुद्धगमनः पवनो विष्वगीस्थतः
प्राणोदकात्रवाहीनि दुष्टः स्रोतांसि दूषयन्
उरःस्थ कुरुते श्वासमामाशयसमुत्पवम्^[25]

Manifestation of disease i.e., cardinal sign of *Tamaka Shwasa* appears with the involvement of *Pranavaha Srotas* i.e., although at first there is vitiation of *Annavaha srotas* but the disease appear as *Tamaka Shwasa* when *Dosha* vitiates *Pranvaha Srotas*. Also involvement of

purishvaha strotas related to *apan* *vayu* is also observed.

Srotodushti – *Sanga Vimargagamana* and *Atipravritti* are the types of *Srotodushti* present in *Tamaka Shwasa*. In *Tamaka Shwasa*, intake of *Guru*, *Abhishyandi*, *sleshmala Ahara* causes *Agnimandya* which in turn produces increase amount of *Ama* and *malabhuta shleshama*. This *shleshma* obstruct the path of *Vata*, this is known as *Sanga*. Due to Obstruction by *Kapha*, *Vata* changes its direction. It vander all over the body this is known as *Vimargagamana*. The obstructed *Vata* pervades the *Pranavaha Srotas* deplete *Dhatu rupi Kapha* which further provoke *Pranavayu* resulting in *Atipravritti*.

Adhithana– Acharya Vagbhatta considers *Urahsthana* as the *Adhithana* of *Tamaka Shwasa*. Whereas according to Acharya Charaka *Pranavaha Srotas* are *adhithana* of *Tamaka Shwasa*.

Observing minutly seems no conflict between the two, as because *Pranavaha Srotas* resides in *Urahkshetra*, *Urah* is broad term which involves *Hridya* also (total chest area). Thus covering cardiac asthma under the heading of *Tamaka Shwasa*. Acharya Charaka also uses *Urah* word at many places only to signify that *Tamaka Shwasa* develops not only due to pulmonary cause.

Agni– *Agni* *dushti* is a prime factor in the pathogenesis of *Tamaka Shwasa* vitiated *Vata* is responsible for *Vishmagni*. In *Visham* state it behaves erratically, digesting consumed food completely at some time and at other time its hypofunction results in incomplete digestion of food leads to *ama* formation, *Agni* deranged due to *Kapha* results into *Mandagni*, which also leads to production of *Ama*.

Nature of Disease – According to nature, diseases can be classified as.

(1) *Asukari*; (2) *Chirkari*

Those having rapid onset, severe symptoms and short course belongs to *Ashukari*; whereas those which are of long duration or of slow progression comes under the heading of *chirkari Tamaka Shwasa*, type of disease. According to Acharya Charaka, it is *Yapya* i.e. it can't be cured and one has to take medicine continuously.

Tamaka Shwasa according to types of samprapti

Sankhya Samprapti – Classification of disease according to its types and subtypes are detailed under the heading of *sankhya Samprapti*. According to *sankhya*, *Tamaka Shwasa* can be classified into three subtypes as (1) *Tamaka Shwasa*; (2) *Pratamaka shwasa*; (3) *Santamaka Shwasa*.

Vikalapa Samprapti -- “विकल्पो अंशाशकल्पना”^[26]
Anshansha kalpana of *doshas* in a diseases are known as *Vikalapa Samprapti*. *Tamaka Shwasa* as told by Acharya Charaka – कफवातात्मकवैतौ पित्तस्थानासमुद्भव’ is *Kaphavataja* *Vyadhi*. In *Tamaka Shwasa Shita*, *Ruksha*, *Khara* and

chala Guna of *Vata* is vitiated whereas *Shita, Guru* and *Picchila, Sthira guna* of *Kapha* are exaggerated due to increased *Guru* and *Picchila* and *Sthira* guna of *shleshma* its causes *srotosanga* and due to *chala guna* of *Vata* it produces *shwasa* (dyspnoea). *Shita guna* leads to bronchoconstriction (*Srotosankocha*) and malmucocillary functions. Due to *ruksha* and *Khara guna* of *Vata* it produces *Kha-vaigunya* leading to dry cough.

Pradhanya Samprapti – Classification of disease according to predominance of *dosha* into dependent and independent one are known as *Pradhanya Samprapti*. In *Tamaka Shwasa* there is equal predominance of *Kpha* and *Vata doshas*. Whereas in *Pratamaka Shwasa* there is predominance of *Pitta dosha* and in *santamaka Shwasa* there is *anubandhatva* of *manas doshas*.

Bala Samprapti – Description of disease according to its strength is known as *Balasamprapti* strength of disease depends upon the strength, predominance of *Nidana*, *Purvarupa* and *Rupa*.

Kala Samprapti – The *Samprapti* according to which disease are describe on the basis of change in diurnal phase, change in season,, change after digestion, before digestion and during digestion are come under the heading of *Kala Samprapti*. As *Tamaka Shwasa* is mainly *Kaphavatatmaka Vyadhi*, thus it is exaggerated at the beginning and end of day and night, just after taking meal and after digetsion as these are the time of vitiation of *Kapha* and *Vata*. Similarly *Tamaka Shwasa* is mainly aggravates in *Varsha, Sharada, Hemanta, and Shishir Ritu* (Aug-Oct and Dec- Jan).

Vidhi Samprapti – This *Samprapti* shows the difference in various types of a particularly disease. According to *Vidhi Samprapti*. *Tamaka Shwasa* is classified as *Nija* and *Agantuja*. On the basis of *Mridu, Daruna, Sadhya* and *Asadhya* classification of disease, *Tamaka Shwasa* comes under the heading of *Daruna* and *Kashtyasadhya Vyadhi*.

Pratamaka and Santamaka Shwasa

Acharya Caraka describe *Pratamaka* and *Santamaka Shwasa* as a subtypes of *Tamaka Shwasa*.^[27] Whereas Acharya Chakrapani and Jejjata described only *Pratamaka shwasa* as a subtype of *Tamaka Shwasa* and according to their opinion *Santamaka* and *Pratamaka shwasa* are same. Sushruta and Vagbhatta also described only *Pratamaka Shwasa*. Now question arises that whether *Santamaka* and *Pratamaka shwasa* are same or different.

According to *Madhukosha Commentary*, *Pratamaka Shwasa* is synonym of *Santamaka shwasa* as evident from his verse " *Santamaka eva Pratamaka*."^[28] According to *Madhukosha Tika*, when *Tamaka Shwasa* becomes associated with *Jwara* and *Murcha* due to *Anubandha* of *Pitta* it is called *Pratamaka shwasa*.

The cause of *Pratamaka Shwasa* are *Udavarta, raja* or *dhuma* (dust particles), *Ama* (indigestive material), *Klinna Kaya* and *Vegavrodha* etc. It is aggravated by darkness or mental disorders. Although it is produced mainly due to *Vata* and *Kapha* but due to *Pitta anubandha*, it is pacified by *Shita Upchara*. Chakrapani has substaintiated it by saying that as *Madya* cures *Madatyaya* which itself caused by *Madapana*, so also *Pratamaka* caused by *Vata* and *Kapha* is pacified by *Shita upachara*^[29]

So it is clear that Pratamaka and Santamaka are synonym and are one and the same.

<i>Pratamaka</i>	<i>Santamaka</i>
<i>Jwara</i>	<i>Tamsavardhate</i>
<i>Murcha</i>	<i>Shitopacharne labha</i>
	<i>Majjastamasibashya</i>

Upashaya - Anupashaya

उपशयः पुनर्हेतुव्याधिविपरीतानां विपरीतार्थकारिणां

चौषधाहारविहारणामुपयोगः सुखानुबन्धः^[30]

According to Acharya Charaka suitable application of drug, diet and behaviour, which are contrary to etiology and disease or which produces effects contrary to both is known as *Upashaya*. The application of drug etc. which gives favourable results and aggravates the disease is called *Anupashaya*.

विपरीतोऽनुपशयो व्याध्यासात्स्यभिसञ्जितः^[31]

Both the *Upashaya* and *Anupashaya* are used for the diagnosis of disease.

Upashaya in Tamaka Shwasa –

यत्किञ्चित् कफवातघ्नं उष्णं वातानुलोमनम्।

भेषजं पानमन्नं वा तद्धितं श्वास हिक्किने^[32]

Any diet or behaviour that alleviates *Vata* and *Kapha* is *Upashaya* in *Tamaka Shwasa*. Thus following are *Upashaya* in *Tamaka Shwasa*.

1. Hot diet and reigmens
2. Vamana karma
3. Sitting posture
4. Virechana karma
5. Snehana and Swedana
6. Medicated Ghee
7. Honey

Anupashaya for Tamaka Shwasa are as follows.

1. <i>Shita Ritu</i>	2. <i>Durdin</i> (Cloudy day)
3. <i>Meghambu</i>	4. <i>Aptarpana</i>
5. <i>Shitambu</i>	6. <i>Ajirna</i>
7. <i>Pragvata</i>	8. <i>Virudha sevana</i>
9. Cold food, place etc.	

In above discussion and conclusion, author tried self efforts in understanding of patho physiology of *Tamaka Shwasa* in the light of modern perspective. So that one can be able to plan the treatment focusing the breakdown of pathogenesis of bronchial asthma in realistic way. The consideration may vary from person to person. Author

tried her own thinking with the help Ayurved Samhitas and modern texts. So I will happy to welcome the queries, discussion and support from readers of this article.

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