DIAGNOSTIC APPROACH TO DIAGNOSE THE TYPE OF SWASA

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ABSTRACT
To diagnose any disease, the patient should be thoroughly interrogated and examined to determine the dominance of the Dosha in disease manifestation, involvement of Dhatu and Mala, affliction of the Srotas with the type of Srotodushhti and other factors of Samprapti. Vata and Kapha Dosha will be responsible for the manifestation of Swasa, Rasa Dhatu will be involved in the pathogenesis, Pranavaha and Rasavaha Srotas will be afflicted during the course of the disease with the Srotodushti as Sanga and Vimargagamana will occur. Ayurveda literatures list five types of Swasa namely Mahaswasa, Urdhwa Swasa, Chinna Swasa, Tamaka Swasa and Kshudra Swasa. These types are compared to metabolic acidosis, acute pulmonary oedema, respiratory centre distress, bronchial asthma and respiratory dysfunction due to abdominal distension respectively. An attempt is being made to differentiate the subtypes of Swasa by different diagnostic parameters.

Keywords: Maha Swasa, Urdhwa Swasa, Chinna Swasa, Tamaka Swasa, Kshudra Swasa

INTRODUCTION
Expression of the symptom Swasa (breathlessness) is not uniform among the patients, though it is difficulty in breathing, a patient may describe either as a sense of fatigue in the chest, vague discomfort in the chest while breathing, breathlessness, sense of choking (suffocation) or undue and uncomfortable awareness of breathing. As per Charaka Samhita, 5 types of Swasa are explained namely, Mahaswasa, Urdhwa Swasa, Chinna Swasa, Tamaka Swasa and Kshudra Swasa. Though the cardinal symptom of Swasa is present in these different types of Swasa, the mode of onset, pathological processes, clinical features are different among them. Here, an attempt is being made to differentiate clinically regarding the types of Swasa.

Each type of Swasa shows a distinct pattern clinically. Based on these observations, the types of Swasa are analysed based on the following parameters.

Previous history of the illness
In most of the occasions, the disease Swasa manifests as a consequence to certain diseases. These diseases are listed as aetiological factors for the Swasa. These diseases are said to predispose the so called Nidanarthakara Roga. These causative factors are segregated to predispose specific type of Swasa.
Atisara (diarrhoea⁴), Chardi (vomiting⁴), Visuchika (gastro enteritis⁴), Shuddyati yoga (excess purification procedure) are the conditions where in involvement of alimentary canal are seen in the form of excessive vomiting or diarrhoea. Excess fluid loss along with electrolyte imbalance will eventuate during these pathological conditions. Dourbalya (whole body weakness), Sharira Rukshata (dryness of the body parts or loss of skin turgor) and Ati Apatarpana (excess emaciation) are the conditions leading to malnutrition or undernourishment. These are the diseases in which metabolic disturbances may occur during the course of the illness; loss of alkali in diarrhoea, malnutrition and starvation leading to ketosis in protracted vomiting leading to metabolic disturbances, hyponatraemia⁴ in particular. It can be considered that these disease entities predispose Mahaswasa⁵.

Hridaya Marmabhigghata (myocardial infarction⁶), Pandu roga (anemia⁶) and Raktapitta (bleeding diathesis⁷) group of diseases lead to cardiac failure resulting in pulmonary oedema. These diseases may predispose Urdhwa Swasa⁹.

Siro Marmabhigghata (head injury, injury to the posterior cranial fossa in particular¹⁰), Visha Sevana (exposure to toxic substances¹¹) are the conditions where dysfunction of respiratory centre is noticed which is responsible for the abnormal breathing pattern. These may predispose Chinna Swasa¹².

Kasa (cough¹³), Pratishyaya (rhinitis¹³), Kshatakshaya (injury to the chest¹⁴) and Manasa Dosha (unstable or weak mental functions¹⁵) are resulting in the abnormal function of respiratory system. These may predispose to Tamaka Swasa¹⁶. Definitely the same factors may initiate the obstructive airway disease i.e. bronchial asthma¹⁷.

Amapradosha (Diseases of the alimentary canal due to improper digestion¹⁸), Anaha (distension of the abdomen¹⁹), Udavarta (Abnormal reversal in the course of vata with in the alimentary tract²⁰), Alasaka (distension of the abdomen due to the accumulation of undigested food in the Amashaya i.e. stomach²¹) are responsible for the distension of the abdomen. The above mentioned conditions are primarily responsible for impaired movement of diaphragm. As it is primary muscle of respiration breathlessness will be evident. These features are observed in the patients suffering from Kshudraswasa²².

**Duration of the illness:**

Duration of the illness is another criterion by which differentiation of types of Swasaroga can be simplified. Short duration of the illness is the typical feature of Mahaswasa, Urdhwaswasa, Chinna Swasa. In contrast to this, patient of Tamaka Swasa or obstructive airway disease usually gives a long history of illness. The duration of Kshudraswasa or respiratory distress due to abdominal conditions is variable²³.

**Mode of onset:**

Like the duration of the illness, mode of onset of Swasa is also useful in the differential diagnosis of Swasa. Shighra Utpatti or sudden onset of Swasa or breathless is suggestive of Mahaswasa, Urdhwaswasa as well as Chinna Swasa. Chira Utpatti or gradual onset of breathlessness is most commonly observed in Tamaka Swasa and Kshudra Swasa. But sudden attack of Swasa can also be frequently observed in the patients of Tamaka Swasa²⁴.

**Character of Swasa:**

This is one of the most important and useful criteria to differentiate the Swasa roga.

Prana Vilomata²⁵: In Tamaka Swasa and Kshudra Swasa there will be laboured breathing with the predominance of expiration. Due to bronchospasm, patient has to put more effort during expiration in bronchial asthma²⁶. Inspiration is restricted due to reduced diaphragmatic movement in case of abdominal distension and hence expiration is predominant²⁷.

Deergham Ati Ghoshavan Swasiti – Sudirgha Sashabda Swasa – i.e. loud and prolonged respiration that can be heard from a distance is characteristic of Mahaswasa²⁸. Similarly in case of metabolic acidosis, hyperventilation is evident; breathing is intense with hissing and known as Kussmaul’s breathing²⁹.
**Sudirgham Urdhwa Swasa Nishwasas Rahita – Hraswa Nishwasas yukta** - in this breathing abnormality, patient shows prolonged expiration with no or shallow inspiration and is diagnostic of *Urdhwa Swasa*. Also in acute pulmonary oedema there will be asphyxiation as the alveoli that are flooded with fluid and breathing is rapid and no transfer of oxygen is possible.

*Nishwasya Punah Kshanantena Shwasiti – Vicchinnam Antara Antara Shwasiti* – Phase of respiration and no respiration occurring alternatively is pathognomonic of *Chinna Swasa*. In comparison to this when the disturbed functioning of respiratory centre develops, the respiration will be irregular. Alternative gradual appearance of phase of apnea and hyperventilation is characteristic of Cheyne Stokes breathing. Waxing and waning of respiration is also suggestive of this periodic breathing.

**Course of the illness:** Course of the illness is not uniform in different types of *Swasa roga*. The course of the illness may be *Nirantara* (persistent) or *Santara* (associated with Vega). *Nirantara* (persistent) symptoms seen in *Mahaswasa*, *Urdhwaswasa* and *Chinnaswasa* which may result in the death of the patient. In case of metabolic disturbances, acute pulmonary oedema and disturbance of respiratory centre, the symptoms are persistent. Definitely the prognosis is poor if energetic treatment is not being adopted. Occasionally in *Tamaka Swasa*, the course of the illness may be prolonged with continuous manifestation of symptoms usually associated with exacerbation and remission.

*Santara Vegavan* or episodic symptoms and long course of the illness are typically suggestive of *Tamaka Swasa*. The course of the illness is not specific in *Kshudra Swasa*. It may continuous or intermittent depending upon the inducing or triggering factor.

**Severity of illness:**
Severity may be *Mridu*, *Daruna* or *Aniyamita* in different types of *Swasaroga*. The illness will be *Daruna* (severe) in case of *Mahaswasa*, *Urdhwaswasa* and *Chinnaswasa*. In these types of *Swasa*, the patient will be confined to bed and incapable of doing any activities. Apart from this, the patient may exhibit different states of altered consciousness like *Tamodarshana* (darkness in front of eyes), loss of orientation of space and time (*Pranashta Jnana Vijjana*), delirium (*Pralapa*), *Vichetana* (complete loss of consciousness). The severity of illness also holds good for metabolic disturbances, acute pulmonary oedema and distress of the respiratory centre.

*Mridu* severity of the illness is typical feature of *Kshudra Swasa*. Here, the functional ability of the patient is altered negligibly whereas, *Aniyamita* severity is considered to be variable which is observed in *Tamaka Swasa*. The variable severity from mild to severe is also observed in bronchial asthma. Degree of severity can also be assessed by the amount of physical exercise and development of dyspnoea.

**Associated phenomena:**
The symptom *Swasa* is usually associated with other symptoms. These associated symptoms are dissimilar in different types of *Swasa*. And for the same reason, this can be effectively used in the differential diagnosis of *Swasa*. *Pranashta Jnana Vijjana* (loss of orientation of space and time), *Badhha Mutra varchas* (retention of urine and constipation) are usually associated with *Mahaswasa*. This can also happen in metabolic disturbances.

*Shleshmavrita Mukhasrota* (flooding of mouth and nostrils with respiratory secretions), *Urdhwaadrishti* (upward gaze), *Vibhrantakshi* (unstable eye movements), *Pramoha* (confused state) are associated in case of *Urdhwaswasa*. These are also observed in acute pulmonary oedema.

In case of *Chinna swasa*, *Marmacheda ruk* (chest discomfort), *Bastidaha*, *Mutranirodha* (disturbance of urinary system), *Pralapa* (delirium), *Murcha* (altered state of consciousness) are seen. These symptoms though non specific, may be seen in the patients who are having disturbance in respiratory centre and are depending upon the causative illness.
Vishushkasya (dryness of mouth), Lalatasweda (sweating in the forehead region), Ut shunaksha (oedema around eyes) are seen in the patient of Tamaka Swasa\(^6\). All these symptoms are observed in the patient of bronchial asthma. Associated symptoms are usually absent in Kshudraswasa.

**Modifying factors:**
Severity of Swasa is frequently altered by some aggravating and relieving factors. By identifying these factors one can differentiate the types of Swasa. Aggravation of the Swasa occurs in case of Amuchyamanma Shleshma (lack of expectoration), Shayane Sthiti (patient in recumbent posture), Meghambu Shita Pragyvata (exposure to cold and cloudy weather), Shleshmala Ahara Sevana (consumption of food and drinks which increase the Kapha Dosha in the body), Raja Sevana (exposure to dust), Dhuma Sevana (exposure to smoke), Ratrisamaya (night hours), Manodoshya (emotional factors). Relief from Swasa occurs in case of Shleshma Nishtivana (expectoration of sputum), Ushna Upachara (warm environment and food) and Asine Sukhamubhava (more comfort in upright posture)\(^7\).

**Seasonal variations:**
The incurable types of Swasa that include Mahaswaswa, Urdhwaswasa and Chimmawaswa have fatal outcome, manifests comparatively for a short duration\(^8\). Hence, seasonal changes do not influence the severity of the illness. In contrast to this, in case of Tamaka Swasa, worsening of the symptoms is frequently noted in rainy and winter seasons\(^9\). In case of Kshudra Swasa also, no variation in the severity of the symptoms was noted during the changes in the season\(^10\). Thus, seasonal influence in the symptoms of Swasa is always confirmatory of Tamaka Swasa.

**CONCLUSION**
In a nutshell, Swasaroga is diagnosed when the clinical manifestation suggests the vitiation of Vata and Kapha Dosha, affliction of Rasa dhatu in Pranavaha srotas. Differential diagnosis of individual type of Swasa is possible by the detailed analysis of previous history of illness, severity, associated symptoms, modifying factors and seasonal variation. Differential diagnosis of Swasa becomes easy as these factors show a variation in the clinical presentation.

**REFERENCES**

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