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TO STUDY THE USE OF MODERN DIAGNOSIS TECHNIQUE IN SHWAS VYADHI

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ABSTRACT :

Shwas is the disease manifest in *Pranvah Strotas*, in which derangement of *Pranvayu* occur. In *Ayurveda Shwas* may appear as *Swatantra Vyadhi* or may appear as a symptom of other disease, termed as *Partantra Vyadhi*. *PranVayu* is directed in upward movement resulting in sound like *Bhastrika i*s called as *Shwas.* On the basis of clinical feature *Shwas Vyadhi* classified in five type viz. *Urdhva, Maha, Chinna, Tamak & KShudra*. In this modern era, there are various diagnostic tools are available so diagnosis of various diseases made easy. As Swash is the disease of *Pranvahastrotas* and this *Strotas* termed as *Darun* by *Acharyas*, hence it is necessary to diagnosed *Shwas Vyadhi* and give treatment.

Keywords : *Shwas Vyadhi, Pranvah Strotas, PranVayu,* Modern Techniques

INTRODUCTION: Ayurveda is Science of life which describes what is favorable and what is unfavorable to life. If a person doesn't follow rules mentioned by *Ayurvedic Acharyas* it leads to several pathogenesis, which ultimately produced different *Vyadhies* and this manifest due to *Asatmya Aahar sevan*. *Acharya Sharangadhar* describes *Shwashan Prakriya*, in which body take *Ambar Piyush* i.e Oxygen inside which helps to held and maintain *Deha* and *Jatharagni*[1].*Acharyas* had explained about *Strotas*. *Pranvaha strotas* is *Darun Strotas* with respect to other *Strotasas*[2]. And this *Strotas* can be compare with Respiratory system. *Shwas Vyadhi* is one of the disease manifest in *Pranvah Strotas* hence *Shwas Vyadhi* involved respiratory system in its pathophysiology. *Acharya Charak* describes the role of *Vayu* in physiological functioning of body as well as pathological manifestation of diseases[3]. In *Shwas Vyadhi Pran Vayu Vikruti* seen[4]. If *Vayu* predominantly as associated with the *Kapha*, obstructs channel of circulation and circulates all over the body. This aggregated *Vayu* causes *Shwas*[5]. On the basis of clinical feature *Shwas Vyadhi* classified in five type viz. *Urdhva, Maha, Chinna, Tamak & Kshudra*[6]. According to prognosis, *Shwas Vyadhi* is of three type viz. *Saddhya i.e Kshudra Swash, Kriccha Sadhya i.e Tamak Shwas and Asadhya i.e Maha, Urdhva*[7]. In this modern era, there are various diagnostic tools are available so diagnosis made easy. Also various diagnostic tools are used for diagnose of respiratory diseases. This study helps to know how modern technics helps & used for diagnosis of *Ayurvedic Shwas Vyadhi.*

AIM: To study the use of Modern Diagnosis Technique in *Shwas Vyadhi.*

OBJECTIVE

1. To study *Lakshanas* of five type of *Shwas Vyadhi* & compare it with Respiratory Disorders.
2. To study use of Modern Technique for Diagnosis of *Shwas Vyadhi*.

Review of literature:

Charak Samhitha is the text in which detailed description of *Shwas Vyadhi* is available in 17th chapter of *Chikitsa Sthan*. In *Sushrtut Samhitha* also there is detailed

description of *Shwas Vyadhi* in 51th chapter of *Uttartandra.ShwasVyadhi* explained in *Ashtang Hridaya* as well as in *Ashtanga Samgrah* at 4th chapter of Nidan and 4th chapter of *Chikitsa Sthan*. *Chikitsa* of *Shwas vyadhi* has explained in *Khila Sthan* 10th chapter in Kashyap Samhitha. In *Madhav nidan* and *Yogaratnakar* explained about *Shwas Vyadhi*.

Lakshanas of five type of _Shwas Vyadhi_:

In *Ayurveda* types of *Shwas Vyadhi are* described *Maha Shwas, Urdhava Shwas, Chinna Shwas, Kshudra Shwas, Tamak Shwas*[8] are described.

Sr.No	*Shwas Prakar*	*Lakshanas*	Comparative Symptom
1	*Maha Shwas*	Because of upward movement of aggravated *Pran Vayu* a patient take deep breath(*Uccha Shwas*) associated with loud sound continuously like an intricate bull, on account of obstruction to the respiratory channel. He loses his physical and mental senses, his eyes (eye balls) became bewildered, His eyes and face become distorted, He suffers from Anemia and Constipation, His voice becomes feeble, He loses mental stamina and his deep inspiration becomes audible even from distance this aliment is called *Maha Shwas* a patient suffering from this leads to death instantaneously. This can be correlated with Biot's Breathing.	**Symptoms of Biot's Respiration[7] :** Biot's Respiration is an abnormal pattern of breathing characterized by groups of quick, shallow, (*Uccha Shwas*) inspirations followed by regular or irregular periods of apnea. It is caused by damage to Pons due to stoke or Trauma or by pressure on Pons due to uncal or tentorial herniation. This type of Respiration seen in Meningitis or raised ICP.
2	*Urdhwa Shwas*	Prolonged Expiration as well as inability to have Inspiration. Adhesion of mouth and breathing channels with phlegm. Looking with eye ball moved upwards, Be wilder eyes, Unconsciousness, Affliction with excessive pain, Dryness Of mouth, Dislike everything. This can be correlated with Stertorous Breathing.	**Symptoms of Stertorous Breathing :** A stertor is a respiratory sound characterized by snoring or gasing. It is caused by partial obstruction of air way above the level of Larynx and by vibrations of tissue of Naso-pharynx or soft palate. It is low pitched nonmusical and occurs during inspiration only .In general it is snor or snuff sound. Stertorous Breathing occurs in Coma, Pneumonia, lung abscess, or in dying patients and can be treated. Loss of nervous control of the pharynx, Soft Palate particularly from damage to instance by stroke or tumor to the vagus and hypoglossial cranial nerves causes Stertorous Breathing. In Pneumonia we can see

			the congestion due to Phlegm so the patient breathing pattern is Snory.
3	*Chinna Shwas*	Interruption or stoppage of breath on account of affliction of all the channels carrying vital air Great Distress ,Affliction with pain as if a vital organ (*marma*) is injured ,Affliction with constipation associated with flatulence sweating and fainting, Burning sensation in the region of urinary bladder , Excessive tears in the eyes ,Excessive Emaciation ,One of the eyes becomes red while the patient struggles for breath, Mental bewilderment, Dryness in mouth, Discoloration of skin and delirium Looseness of joints This can be correlated with Chyne stroke Respiration	**Symptoms of Cheyne Stroke Respiration** Cheyne Stroke Breathing is characterized by progressive deeper and sometimes faster breathing followed by a gradual decrease that result in temporary stop in breathing called apnea .The pattern repeats with each cycle usually taking 30 seconds- two minutes. It is an oscillation of ventilation between apnea and hyperpnoea, this phenomenon can occur during deep sleep, brain tumors hyponatremia. It may be caused by damage to respiratory centers or by physiological abnormalities in chronic heart failure and also seen in newborns with immature respiratory systems and can be treated.
4	*Kshudra Shwas*	*Vayu* mildly aggravated in the *Koshta* on account of exertion and unctuous regimen causes *Kshudra Shwas* (mild dyspnea) It does not cause much discomfort in the body. The body is not too much afflicted thereby. It is not painful as other forms of *Shwas*. It does not obstruct the proper movement of food and drink. It does not cause any pain or complication in sense organs. This variety of dyspnea is curable. This can be correlated with Dyspnea on Effort.	**Symptoms of Dyspnea on effort or Breathlessness** : It is defined as difficulty in breathing disorder or inadequate breathing, uncomfortable awareness of breathing and is experience of breathlessness which may be either acute or chronic. It is Mild Dyspnea. It occurs in COPD, Myocardial infarction, Pneumothorax, Congestive heart disease, and can be treated. Different physiological pathways lead shortness of breath including via ASIC chemo receptors, lung receptors .It is thought that three main components contribute to dyspnea these are afferent signals, efferent signals and some information processing.
5	*Tamak Shwas*	*Vayu* moving in reverse order pervades the channels of vital breath afflicts the neck and head, and stimulates phlegm to cause	11Typical Symptoms include recurrent episodes of wheeze (*Ghureguraka*), Chest tightness, Breathlessness and Cough

		rhinitis. This *Vayu* thus obstructed produces following signs and symptoms *Ghurghur* gets tremors and coughs becomes motionless, injuries to life , Because of acute spasms the patient ,He faints again and again while coughing, since the phlegm does not come out ,he becomes all the more restless, He is relived for sometime soon after phlegm come out, His throat is chaoaked because of which he is unable to speak freely, He does not get sleep while lying down he gets (more of) dyspnoea Because the sides of chest in that position get afflicted by *Vayu* but he is relived of this discomfort in sitting posture, He develops special liking for hot things,his eye balls become prominent (project outside) ,Too much sweating appears in his forehead and he becomes restless, mouth becomes dry frequently ,gets frequent paroxysm of dyspnea, the attack gets aggravated when clouds appear in the sky ,when exposed to water (humidity),cold ,when easterly wind blows and when he resorts to *Kapha* aggravating food and regimens. This can be correlated with Bronchial Asthma.	these symptoms get exaggerated in cold weather, exposure to airborne allergens or pollutants.

Modern diagnostic techniques used in Diagnosis of Respiratory diseases.[9,10]

Sr. No	diagnostic techniques	Indication
1	Spirometry	1. To Diagnose or manage asthma. 2. To detect respiratory diseases in patient presenting with breathlessness 3. To distinguish respiratory from cardiac disease as the cause. 4. To measure bronchial responsiveness. 5. To diagnose and differntiate between obstructive lung disease and restrictive lung disease. 6. To conduct pre- operative risk assessment before anesthesia or cardiothoracic surgery. 7. To diagnose the vocal cord dysfunction. 8. Direct measurement of lung volumes and

		capacities.
2	Arterial blood gas(ABG)	Analysis of arterial blood to determine the adequacy of lung function in the exchange of gases.
3	Po2(Partial Pressure of Oxygen)	Abbreviation for partial pressure of oxygen measurement of the amount of oxygen in the blood.
4	PaCO2(Partial Pressure of Carbon Dioxide)	Abbreviation for partial pressure of carbon dioxide, measurement of the amount of carbon dioxide in the blood.
5	Bronchoscopy	Use of a flexible endoscope, called a bronchoscope, to examine the airway Used in diagnosis of possible lung cancer, chronic cough cause, sacoidosis, as well as cause of bleeding lung Used in biopsy
6	Nasopharyngoscopy	Use of a flexible endoscope to examine the nasal passages and the pharynx to diagnose, structural abnormalities, such as obstructions, growths and cancer
8	Lung biopsy	Removal of small piece of lung tissue for pathologic examination
9	Lung scan/ ventilation perfusion scan	To detect abnormality of ventilation(respiration) or perfusion (blood flow)
10	MRI	To visualize lung lesion
11	Pulmonary function test(PFT)	For measurement of lung volumes and capacities
12	X-Ray	To detect lesion of lung Hem thorax, plural effusion, collapse, embolism, pulmonary edema, opacities, emphysema etc
13	CT Scan	To detect lesion of lung
14	Allergy Testing	It is Skin or Blood test Identified allergy, recommended for allergen immunotherapy
15	Sputum Eosinophilia	WBC in Saliva and mucus

DISCUSSION: There are various Diagnostic techniques are available for Diagnosis of various respiratory Diseases. As taken in Consideration of *Shwas Vyadhi* given in *Ayurvedic Samhitha* which is the *Vyadhi* of *Pranvah Strotas* and have 5 types viz *Urdhva, Maha, Chinna, Tamak & Kshudra*.

1. *MAHA SHWAS*- Spirometry, Arterial blood gas(ABG), PO2(Partial Pressure of Oxygen), PaCO2(Partial Pressure of Carbon Dioxide), Lung scan/ ventilation perfusion scan, Bronchoscopy
2. *URDHVA SHWAS* - Spirometry, Arterial blood gas(ABG), PO2(Partial Pressure of Oxygen), PaCO2(Partial Pressure of Carbon Dioxide), Lung scan/ ventilation perfusion scan, Nasopharyngoscopy, Pulmonary function test(PFT), X-Ray
3. *CHINN SHWAS*- Spirometry, Arterial blood gas(ABG), PO2(Partial Pressure of Oxygen), PaCO2(Partial Pressure of Carbon Dioxide), Lung scan/ ventilation perfusion scan, Bronchoscopy, Pulmonary function test(PFT), X-Ray, MRI,CT Scan
4. *KSHUDRA SHWAS*- Spirometry, Arterial blood gas (ABG), PO2 (Partial Pressure of Oxygen), PaCO2, Lung scan/ ventilation perfusion scan.
5. *TAMAK SHWAS*- Spirometry, Arterial blood gas (ABG), PO2(Partial Pressure of Oxygen), PaCO2(Partial Pressure of Carbon Dioxide), Lung scan/ ventilation perfusion scan, Pulmonary

function test(PFT), X-Ray, Allergy Testing, Sputum Eosinophilia.

All above techniques helps for diagnosis of each type of *Shwas Vyadhi* with respective conditions and causes of *Pranvahstrotas Dushti*. Spirometry is the test which can be helpful for diagnosis of each type of *Shwas Vyadhi*. Hence all Modern techniques helps in Diagnosis of *Shwas Vyadhi*.

CONCLUSION: *Shwas* is the *Vyadhi* manifested with *Pranvah Strotodushti*. This *Strotas* can be compare with respiratory system. As in Ayurvedic text there are 5 types of *Shwas Vyadhi* explained in detail. Every type has its specific character, so it is necessary to evaluate type of *Shwas Vyadhi* for proper care and treatment. To know which *shwas Prakar* present in respective patient these diagnostic techniques are helpful. All the Diagnostic technique used in diagnosis of respiratory diseases can be used for Diagnosis of *Shwas Vyadhi* with respective characteristics and cause of *Shwas Vyadhi*, which helps for diagnosis of *Shwas Vyadhi*.

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