

## Vatavyadhi viz a viz neurological diseases in Ayurveda: aetiology, pathogenesis and clinical presentation.

**Samarakoon, S.M.S**

Department of Cihitsa,  
Gampaha Wickramarachchi  
Ayurveda Institute,  
University of Kelaniya,  
Yakkalamulla, Sri Lanka.

### Abstract

*Vatavyadhi* can simply be correlated with neurological disorders that are complicated in terms of diagnosis, management and prognosis. The diseases, which manifest due to involvement of *vata* directly or indirectly, may be grouped under neurological disorders in modern medicine point of view. These diseases are very difficult to understand because of which it need utmost care for the proper management. There are certain points described in "Madukoshā" commentary on *Madhavanidāna* to explain the nature of *vatavyadhi* as follows i.e., *vatavyadhi* are: (a). Very difficult to cure, (b). Of acute in onset, (c). Complex as well as critical, (d). Some times needed emergency treatment. (e). Often strong in nature, (f). Needed utmost care and specific therapies. Neurological disorders viz., *vatavyadhi* are very common in clinical practice, yet many physicians are uncomfortable with diagnosis and unprepared for these diseases in clinical practice. With the advancement in the medical field, various algorithms are presented as aids to diagnose and to manage these disorders for which clear-cut knowledge of the diseases is essential in terms of anatomical and patho-physiological point of view. Therefore being the key factor of these diseases, nature and function of *vata* both in healthy and diseased state should be analysed to identify the actual picture of the disease in Ayurvedic context.

**KEY WORDS:** *Vatavyadhi*, neurological disorders

### Introduction

Veda is the most ancient literature that is available in the world. In all four *vedas* viz: *Rigveda*, *Yajurveda*, *Samaveda*, and *Atarvaveda* contains the knowledge of health, disease and their *chikithsa*. Especially, *Atarvaveda* contains great description of Ayurveda because of which it is called an *upanga* of *Atarvaveda*. In *Atarvaveda* we get the reference of "vatikrit" which may be of *vatavyadhi*. In almost all literature of Ayurveda, *vatavyadhi* can be seen in detail under special category of *Nanatmaja vatavyadhi* (Ca.Su.20.10). The following are the various references of *vatavyadhi* available in important Ayurvedic literature.

### Charakasamhita

*Charaka* has described *vatavyadhi* in detail including *Nidana* (aetiology) in general, which is common for all types of *vatavyadhi*, the specific *Samprapti* (pathogenesis), *Rupa* (signs and symptoms), and *Chikithsa* (treatment) in the 28<sup>th</sup> chapter of *chikitsa sthana*. While enumerating the eighty-*nanatmaja vatavyadhi*, *Charaka* has included *pakshaghatha* also in this chapter. (Ca.Su.20.11). Further, *Charaka* has annotated the line of treatment of *vatavyadhi* in chapter 28<sup>th</sup> of *Chikitsasthana*. (Ca.Ci.28.100).

### Sushrutasamhita

*Sushruta* has explained the aetiological factors of *vatavyadhis* in general in 1<sup>st</sup> chapter of *nidanastana*. (Su.Ni.1.60-63). The treatment of the disease has been dealt in detail in chapter five of *chikithsastana*. (Su.Ci.5.19).

### Ashtangasamgraha

The common aetiological factors of *vatavyadhi* including *pakshaghatha*, signs and symptoms and prognosis have been described in 16<sup>th</sup> chapter of *Nidanastana*. (AS.Ni.15.40-43). Further the treatment of *vatavyadhi* has been dealt in 23<sup>rd</sup> chapter of *Chikitsastana*. (AS.Ch.23.30). *Ashtanga samgraha* has followed the *Sushruta Samhita*.

### Ashtangahridayasamhita

*Vagbhata* once again has dealt with the general causative factors of *vatavyadhi* specific signs and symptoms and prognosis in 15<sup>th</sup> chapter of *nidanastana*. (AHS.Ni.15.41). The treatment has been given in the chapter 21 of *chikitsastana*. (AHS.Ci.21.43-44). *Ashtangahrada* follows the *Charaka samhita*.

### Madhavanidhana

*Madhavakara* in 22<sup>nd</sup> chapter of his *Madhava: Nidana* or "Rogavinischaya" deals with the general causative factors of *vatavyadhi*,

pathogenesis, signs and symptoms and prognosis of all types of *vata*vyadhi including *pakshghatha*. (Ma.Ni.22.43-47).

### Pathophysiological Aspect of *vayu*

#### Physiological aspect

The human body comprises of three humors (*doshas*) namely *Vata*, *Pitta* and *Kapha* out of which *vata* is considered as the chief humor. *Vata* is one of three fundamental factors by which the human body is made and which is responsible for construction or destruction of the body. The equilibrium of these three *doshas* viz., *vata*, *pitta*, *kapha* results in good health and in imbalance in diseases. These three factors are known as *Tridosha*, *Tridhatu*, and *Trimala* on the basis of their physiological functions and pathological states in the body. When they support the body they are called *dhatu* and when they become vitiated in the body they are called *dosha* when they result in pollution in the body they are called *mala*. (Sh.Pu.Kh.3.23). Among the three *dosha*, *vata* is the chief factor because it helps the proper functioning of *pitta*, *kapha*, *dhatu* and *malas*. *Ashanga samgraha* of *Vagbhata* has mentioned that *vata* (*Pavana*) is the chief of all the good or bad of the world in its normal and abnormal states respectively. (AS.Ci.15.01). Therefore *vata* is called *Vishvakarma*, *Vishvatma*, *Vishvarupa*, *Vibhu*, *Vishnu*, *Prajapati*, *Srasta*, *Dhata*, *Mrutyu*, *Samharta* and *Antaka*. Hence all efforts should be made to maintain its normalcy. (AS.Ci.15.2-6.)

#### Properties of *vata*

*Vata* is composed of mixture of five *bhutas* with the predominance of *vayu* and *akasha* and other three *bhutas* viz., *pruthivi*, *aap*, *teja* are in minute forms. *Ruksha* (roughness or nonunctous), *laghu* (lightness), *shita* (coldness), *daruna* (unstableness), *khara* (rough or coarseness), and *vishadha* (non-sliminess) are the important properties of *vata* (Ca.Su.12.4), and the drugs having opposite properties pacify *vata*. (Ca.Su.10). Of the three *doshas*, *vayu* is the most powerful in view of activating others and putting them to work, and further it is possessing *rajoguna* (activity), *sukshma* (subtle), *shita* (cold), *ruksha* (dry), *laghu* (light in weight), *chala* (unsteadiness). These properties enable *vata* to move in the *malasaya* (colon), *agnistana* (duodenum), *koshta* (alimentary tract), *hrada* (heart), *khanta* (throat), and *sarvanga* (the whole body) (Sh.Pu.Kh.28.325).

*Vayu* is self born and omnipotent because of independence, eternity, all pervasiveness. *Vata* has universal characters and is worshiped by entire world as *vata* is the cause of origin and destruction of all substances. (Su.Ni.1.5-6). *Vata* is un-manifested but manifest by the actions, non unctuous, cold, rough, light, moving obliquely, having two properties (sound and touch) which predominance of *rajas*, having incomprehensible powers, carrier of *doshas*, distinguished in congregation of diseases, quick acting, frequently moving and situated in *pakvasaya* (intestines) and *guda* (rectum) (Su.Ni.1.7-8). It is stated that *vata* is having *yogavahi* i.e. the medium which when associated with other *doshas*, project their qualities without losing its own qualities. It bound in the fundamental qualities of *rajas*, i.e. principal in cohesion and action.

#### Functions of *vata*

*Vayu* is life, strength, and sustainer of the body. *Vayu* is the entire world. It is master of all (Ca.Ci.28.3). The person whose *vayu* is with unimpeded movements and in normal states live long for hundred years devoid of diseases (Ca.Ci.28.4). *Caraka* has mentioned that *vata* in its normal states, sustains all organs of the body, initiates all types of actions, restrains and impels the mental activities, coordinates all the sense faculties, and helps in enjoining in their objects. It brings about compactness in all the tissue elements of the body. It promotes speech, originates touch sensation as well as sound. It is the responsible factor of auditory and tactile sense faculties. It is the causative factor of joy and courage. It stimulates the digestive power, absorbs the nutrients, expels out the excreta, creates channels of the body, and moulds the embryo. It is the indicative of life span. (Ca.Su.12.8). It can be understood by the above description that all the vital functions of the body is under control of normal functions of *vata*. *Vata* is having immense power to control and coordinate these functions.

The nervous system and nervous phenomenon nearly resemble with the functions of *vata* in the body. All types of sensory and motor functions of the body are under the control of nervous system. By the above description it can be concluded that *vata* is having following functions;

1. It is the force that governs the position; movement; orbit of the sun and moon;



- the constellation and planetary system in the same way *vata* that is present in the body govern all functions of the body.
2. It carries all sense impressions to the mind. (*yantra-tantra-dhara*).
  3. *vata* course through the body is self originated, subtle and all pervasive.
  4. It is invisible by itself its works are patent or manifest.
  5. It is instantaneous in action and radiates through living beings in constant currents; it is non-sentiment.
  6. It is the simulative force which keeps the *kapha, pitta, dhātu* and *mala* in motion very much like the wind is the force that propels clouds from place to place in the sky.
  7. Physiological functions of *vata* are ascribed as a biophysical force or a material entity or a complex of such entities.
  8. Chief functions of *vata* are to induce enthusiasm; imparting motion to the body; inspiration and expiration; responsible for voluntary actions; i.e., walking and speaking etc.; conduction of efferent impulses from sensory organs exo-receptors; to maintain the circulation of respective *rasadhi dhātu* in the body; excretion of waste products from the body; to regulate peristalsis of GIT; absorption and circulates the nutrients to the tissues; to evacuation of stool; to perform motor activities of the body; regulation of natural urges; which can be voluntarily inhibit or provoked; regulation of the functions of the sensory organs.
  9. Biological *vayu* is the force inside the body, self-generating and self-propagating energy that is responsible for the conduct, regulation and integration of all vital functions of the body.
  10. It holds the body elements in proper form and maintains the integrity of the body as a whole.
  11. It is potent stimulator to *agni* (digestive and metabolic forces)
  12. If *vata* performs its normal physiological functions, he/she lives longer.

#### Classification of *vata*:

*Sushruta* says that *vata* which is actually one, is divided according to names, locations, functions and diseases (Su.Ni.1.12). *Vayu* is classified into five types viz; *Prana, Vyana, Udana, Samana*, and *Apana vayu*. Their different seats and normal functions have been described in almost all Ayurvedic classics. *Sushruta* emphasized that these five types *vayu* when situated in equilibrium sustain the body (Su.Ni.1.12). *Sharangadhara* also has mentioned above five divisions of *vata*. He mentions "*Samana*" as synonym for *vata*. (Sh.Pu. Kh.3.28). All authors of Ayurvedic classics have classified the *vayu* in five principle divisions on the basis of their functions which are: *pranavayu-praspandana; udanavayu-udvahaṇa, vyana-vayu-purana; samanavayu-vivechana; apnanavayu-dharana*. (Ca.Su.15.4).

#### According to the names

According to the names *vata* is of five types i.e., *prana, udana, samana, vyana* and *apana vayu*. (AHS.Su.11.4).

#### Pranavayu

*Charaka* has stated that seat of *pranavayu* as *murdha* (head), *urah* (thorax), *khanta* (throat), *jihva* (tongue), *asya* (mouth) and *nasa* (nose) The opinion of *Ashtangahradaya* and *Ashtanga samgraha* are also the same. It upholds and supports the intellect, heart and *indriya* along with other functions i.e., salivary secretions (*nishtivana*), sneezing (*kshavatu*), deglutition (*udgara*), respiration, (*nishvasa*). According to *Susruta* it carries food inwards and also sustain the *prana*, if vitiated produces diseases such as hiccup, dyspnoea etc. (Su.Ni.1.13).

#### Udanavayu

According to *Charaka* and *Vagbhata* the seat of *udana vayu* is *urah* (chest). It moves from *khanta* i.e., throat to *nabhi* i.e., umbilicus according to *Charaka*; or from *nasa* i.e., nose to *nabhi* according to *Vagbhata*. It is responsible for production of voice; *prayatna, urja, bala, varna, smriti*. *Susruta* enumerated the functions of *udanavayu* as speaking and singing, when vitiated; it particularly causes supraclavicular diseases (Su.Ni.1.14).

#### Samanavayu

This is responsible for regulation of digestion i.e., *pachana kriya* as it is accompanied with *agni*. It moves in the organ where ingested food is undergoing digestion.

After digestion it discriminates *sarabhaga* (nutrients) and *kittabhaga* (waste products). When vitiated it causes *gulma*, deficiency of *agni* and diarrhoea etc. (Su.Ni.1.15).

#### **Vyanavayu:**

Both *Charaka* and *Susruta* say that *vyanavayu* moves all body over and impels circulation of *rasa*. It also causes sudation, haemorrhage, and five types of body movements, viz: *gati*, *prasarana*, *uthkshepana*, *nimesha*, *unmesha*. When it vitiated causes generalised diseases. (Su.Ni.1.17-18). According to *Vagbhata*, *vyanavayu* is located in *hradaya* and performs and coordinates all voluntary functions.

#### **Apanavayu:**

*Apanavayu* is located in *vrushana*, *vasti*, *medra*, *nabhi*, *uni*, *vamkshana* and *guda* according to *Charaka*'s view (Ca.Ca.28.12-15). *Susruta* says the *pakvasaya* is the main seat of *apanavayu* (Su.Ni.1.19-20). *Vagbhata* has mentioned that *sroni*, *vasti*, *medra*, *uru* as seats of this variety of *vata*. The functions of this are mostly downwards i.e. expulsion of *garbha* (foetus), *artava* (menstrual discharge), *shukra* (semen), *mutra* (urine), and *purisha* (faeces). When *apanavayu* vitiated, causes severe diseases of urinary bladder and rectum (Su.Ni.1.20). When all the five types of *vayu* get aggravated simultaneously in a person, he may lead to death (Su.Ni.1.21).

#### **According to the location:**

*Susruta* enumerated a number of types of *vata* on the basis of their location i.e., *amashayagata vata*, *pakvashayagata vata*, *indriyagata vata*, *twakgata vata*, *raktagata vata*, *mansagata vata*, *medagata vata*, *siragata vata*, *snayugata vata*, *sandhigata vata*, *astigata vata*, *majjagata vata*, *sukragata vata*, *sarvangagata vata*, and many variety of *avruta vata* (Su.Ni.1.22-51). Further more, *Susruta* has outlined *vastigata vata*, *manyagata vata*, *sirshagata vata*, (Su.Ca.4.3,9-10).

#### **According to disease:**

*Suptivata* (Su.Ci.4.8), *apatana*, *dandapatana* - *ka*, *dhanusthambha*, *abhyantarayama*, *bahirayama*, *pakshaghatha*, *apatantaka*, *manyasthambha*, and most of the eighty types of *vata* diseases (Su.Ni.1), (BP.MK.4-16; Ca.Su.20.11). It is quite evident from the above description of five types of *vayu* that the normal functioning of them, being in normal physiological sites and in equilibrium is perform their functions. When *vata* deranged in

site, functions and when imbalanced afflicts the body with disorders and take away the life shortly, (Ca.Ca.28.12-14).

#### **Seat of vata:**

It is important to know the normal seats of *vayu* because in abnormal conditions it may occupy some other places in the body and localised symptoms may arise. *Pakvasaya* (large intestine), *kati* (lumbar region), *sakti* (thighs), *srota* (ears), *asti* (bones); *sparshanendriya* (skin); are the normal seats of *vata* among which *pakvasaya* is the main seat. (AHS.Su.12.1).

#### **Pathological aspects of vata:**

When concerning the derangement of *doshas*, two types of derangements may occur viz: *vrudhhi* and *kshaya* (AHS.Su.11.5-6).

#### **Vata vrudhhi (hyper functioning of vata):**

*Karshita* (emaciation), *karshnya* (blackish discoloration), *ushnakmitva* (affinity to hot), *kampa* (tremors), *anaha* (distention of abdomen), *shakrutgraha* (constipation), *bala-nidra-indriya-bransha* (loss of strength), *pralapa* (irrelevant speech), *bhrama* (giddiness) and *dinata* (limidity) are manifested in *vrudhhi* state of *vata* (AHS.Su.11.5-6).

#### **Vata kshaya (hypo functioning of vata):**

*Vata kshaya* is indicated by *angasada* (debility of the body), *alpabhashita* (speak very little), *sanja nasha* (loss of sensation), *moha* (loss of consciousness), *sheshmavrudhhi*, *manda-chestata* (very little physical activity), *apraharshata* (depression), *praseka* (ex: salivation), *aruchi* (loss of appetite), *hrallasa* (eructations) and *agnivaishamyā* in the body (AHS.Su.11.25).

Symptoms of *vata* when associated with *ama* i.e., *samavata* are *vibhandha*, *agnisada*, *tandra*, *antrakujana*, *angavedana*, *angashota*, *angagraha*, *atopa*, *staimitya*, *gaurava*, *snigdatva*, *arochaka*, *ketu-ruksha abhilasha*, *arati* and *adhma*. When we critically analyse the function of *vata*, they are all related to the function of nervous system, i.e., central as well as peripheral. These five types can also be correlated with the plexuses existing in the body and governing the regional functions as follows

1. *Prana vata*- parasympathetic nerves participating in pulmonary plexus.
2. *Udana vata*- cardiac plexus-parasympathetic portion.



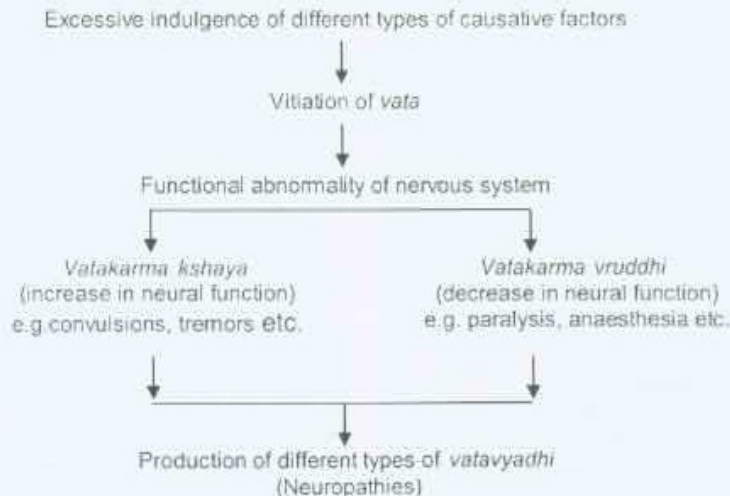
3. *Samana vata*- coeliac plexus- parasympathetic portion.
4. *Vyana vata*- motor nerves of the whole body.

According to medical science, entire functions of the body are governed by nervous system that is controlled by the brain. But, according to the ancient Indian concept, even the functions of brain are controlled by *vata*. Therefore, *vata* is a substance which controls the functions of the nervous system as well as of the brain. Therefore, *vata* may be the neuro-humors that regulates the functions of central as well as peripheral nervous system and can be measured as well with the help of scientific aids.

#### The Meaning of the term *Vatavyadhi*

*Vatavyadhi* means an extra-ordinary ('*asadharana*') diseases resulting from vitiation of *vayu* alone. While commenting on *vatavyadhi nidana* (chapter-22), *Vijayarakshitha* has outlined in his commentary that, "*vikruta vata janito asadharana vyadhih vatavyadhi hi*" i.e., the extraordinary diseases which resulting from *vata*

alone is *vatavyadhi* (*Madukosha* on Ma.Ni.22). In case of *vatavyadhi* there are some specialities regarding their *nidana* as well as *chikitsa*. All the three authors of *Vrudatraya* have given a separate chapter for *vatavyadhi* and described the causative factors, pathogenesis, signs and symptoms, prognosis (*sadhya asadhyata*), and treatment in detail under these chapters. On the other hand, we do not find any parallel description for *pitta* and *kaphavyadhi* in separate chapter. For this the authors have given following explanation that *vata* is the chief among *tridosha* and the key factor of producing movement of other two *doshas*. *Vayu* is quick acting (*ashukari*), very powerful (*atibala*), and therefore the diseases created by *vata* are serious (*ganyastvat vikaranam*), they are difficult to cure (*dussadyatvat*); they are capable of throwing a person in to a serious condition within a short period of time (*ashu eva atyayakarivat*); and they require special type of treatment (*vishista chikitsatvat*) (*Madukosha* on Ma.Ni.22). Some of *vatavyadhi* manifest due to aggravation of function of *vata* e.g. *akshhepa* (convulsions) while some others due to depletion of function of *vata* e.g. *pakshaghatha* (hemiplegia)



In all types of *vatavyadhi* (*nanatmaja vatavyadhi*), the following characters are observed viz, *rauکشaya* (roughness), *shaitya* (coldness), *laghutva* (lightness), *vishadha* (non sliminess), *gati* (motion), *amurtatva* (formless) and *avastitaitva* (instability). (Ca.Su.20). Further more, when vitiated *vata* enters the respective organs produce following actions i.e., *sramsa* (separation), *bramsa* (dislocation), *vyasa* (division), *sangha* (attachment), *bheda* (tearing), *sada* (malaise), *harsha* (exhilaration), *tarsha* (thirst), *kampa* (tremors), *varta* (circumvention), *chala* (looseness), *toda* (piercing pain), *vyata* (pain) and *chesta* (movement). (Ca.Su.20). And also produce feelings of *khara* (coarseness), *parusha* (roughness), *vishadha* (non- sliminess), *sushira* (porousness), *aruna vama* (reddish lusture), feeling of astringent taste in mouth, *virasa mukatva* (tastelessness), *sosha* (wasting), *shula* (pain), *supti* (numbness), *samkocha* (contraction), *stambha* (stiffness) and *khanjata* (limping) (Ca.Su.20).

#### Classification of *Vatavyadhi*:

*Vatavyadhi* can be classified in to following categories in different angles (Ajey K S, 2004).

#### 1. *Samanyaja and Nanatmaja vatavyadhi*.

*Samanyaja vyadhi* originate by the vitiation of more than one *dosha* for e.g., *prameha* (including diabetes mellitus), *unmada* (psychosis), *apasmara* (epilepsy) etc., whereas *nanatmaja vyadhi* develops due to the vitiation of only one *dosha* for e.g. *brama* (vertigo), *ardita* (facial paralysis), *hanugraha* (lock jaw) etc. There are eighty-*nanatmaja vatavyadhi* in Ayurveda including *pakshaghatha* (Ca.Su.19.3; Ca.Su.20.11).

#### 2. *Vatavyadhi* originating from *koshtanga* of the body.

*Anaha* (distention of abdomen), *tuni* (renal colic), *pratuni* (ureteric colic), *adhmana* (generalised tympanitis), *pratyadhmana* (gastric tympanitis) and *amashaya gata vata* (acute gastro enteritis) etc., are the diseases of *koshtanga*.

#### 3. *Dusyagata vata vyadhi*.

When the vitiated *vata* is localized to various *dusya* (*dhatu*s and *malas*) of the body produces the diseases relevant to particular *dushtyas* such as *raktagata vata* (hypotension), *mansagata vata* (myopathy), *medogata vata* (muscle fatigue), *astigata vata* (rheumatism), *majja gata vata* (osteomyelitis) and *sukragata vata* (sex neurosis).

#### 4. Localised *vatavyadhi*:

These are produced by the local involvement of vitiated *doshas* such as *sandhigata vata* (arthritis), *siragata vata* (engorge veins), *khalli* (cramps), *kampavata* (parkinsonism), *gudrasi* (sciatica), *visvachi* (brachial neuritis), *avabahuka* (frozen shoulder), *krostuka shirsha* (pyogenic arthritis of knee), *hanugraha* (lock jaw), *manya stambha* (neck rigidity), *jihva stambha* (glossal palsy) and *sira graha* (trigeminal neuralgia).

#### 5. Generalised *vatavyadhi*:

Here the vitiated *vayu* produces a number of ailments involving a major part of the body, those are *pakshavadha* (hemiplegia), *ardhita*, *khanja* (limping), *pangu* (lame of both legs), *akshepaka* (hysterical convulsions), *apatnaka* (tetanus like convulsions) and *snayugata vata* (disease of tendons and ligaments).

#### 6. *Avaranajanya vatavyadhi*.

The hypothesis of *avarana* is very important in case of *vatavyadhi*. When the *vata* is covered by vitiated other *doshas* i.e., *pitta* and *kapha*, *dushas* (*sapta dhatus*), or by *malas* (*trimalas*), it is produced diseases which are called *avarana janya vatavyadhi*. *Charaka* has stated 42 such diseases, while *Susruta* has mentioned 10 types of *avarana janya vatavyadhi* respectively (Ca.Ci.28.201; Su.Ni.1.32-39).

#### 7. On the basis of clinical features:

Further *vatavyadhi* may be classified in to some sub groups on the basis of some important clinical features. They are;

- **Painful neuropathies:** Here the cardinal symptom is pain. According to Ayurvedic texts there are a number of diseases that produce pain and they are *tuni* (renal colic), *pratuni* (ureteric colic), *gudrasi* (sciatica), *sandhigata vata* (arthritis), *vata khantaka* (ankle sprain), *visvachi* (brachial neuralgia), and *siragraha* (trigeminal neuralgia).
- **Convulsive neuropathies:** Some *vatavyadhi* are essentially associated with convulsions, for examples: *vopatu* (tremors), *kampavata* (parkinson's disease), *apatnaka* (tetanus like convulsions), *apatnaka* (hysterical convulsions) and *akshepaka* (convulsions).



- **Degenerative neuropathies associated with myopathies:** *Khanjavata* (localized myopathy), *sarvanga vata* (generalized myopathies), *ardhanga vata* (hemiplegic myopathy) and *adharanga vata* (paraplegic myopathies) are the example in this category of *vata* diseases.
- **Visceral neuropathies:** These are the diseases which manifest in association with internal organs for examples, *adhmana*, *pratyahmana*, *mukha* (aphasia), *minmina* (rhinophonia), *gadgada* (disarthria), *amashayagata vata*, *pakvashayagata vata* (irritable bowel syndrome), *anaha*, *ashlila* (enlargement of the prostate) and *pratyashlila* (rectovesical tumors).
- **Paralytic neuropathies:** These types of *vata* *vyadhi* are mainly consisting of *Pakshaghatha* (hemiplegia) and *Ardita* (facial paralysis).

#### **Nidana of VataVyadhi (Causative Factors):**

In Ayurvedic classics the word *nidana* carries two meanings viz. causative factors and diagnosis. It is very important to know the cause of a disease, because in many diseases where the cause is known, the treatment will be very easy. In this light the *chikitsa* has been defined as "*sankshepatah kriyayogo nidana parivarjanam.*" (Su.Su.1.25).

The causative factors mentioned in Ayurveda may be classified into many types. But for more conveniency, the causes may be mainly divided into two groups viz. general and specific. In some diseases general causes have been described, in some others specific causes and in some other diseases both general and specific causes are given by different Ayurvedits. In case of *vata* *vyadhis* the description of causes is under general category.

Under such circumstances we have to consider the general causative factors to understand how some of them can be responsible for the causation of this disease. Several causative factors have been mentioned in Ayurvedic texts.

#### **Charakasamhita**

The causative factors which have been mentioned in *Charakasamhita* are; regular intake of rough,

cold, little and light food, excessive coitus and vigils, faulty therapeutic measures, excessive elimination of impurities and blood, excessive movements such as leaping, jumping and wayfaring, over physical exertion, wasting of *dhatu*s, excessive emaciation, uncomfortable bed and seat, anger, fear, regular sleeping in day time, suppression of urges, *amadasha*, injury, fasting, injury to vital parts, falling down from elephants, horses, camels, and other fast running vehicals. (Ca. Ca.28.15-18).

#### **Sushrutasamhita:**

*Sushruta* has preferred to discuss the entire physiology and pathophysiology of *vata* in the very begining chapter of *nidana* dealing with *vata* *vyadhi*. *Sushruta* has not mentioned common causative factors that are responsible for vitiation of *vata* resulting *vata* *vyadhi* in *nidanastana* of his text. He has outlined five types of *vata* and the signs and symptoms that produce if vitiated them. He has mentioned only the common *samprapti* or pathogenesis of the diseases of *vata* due to vitiated *vata*, in *nidanastana*. (Su.Ni.1). In the *sutrastana* of *Sushruta-samhita*, it has been mentioned the eighty types of *nanatmaja vata* *vyadhi*, their common characteristics and the organ specific actions if the vitiated *vata* enters the specific organ, apart from that there is no mention about *nidana* of *vata* *vyadhi*. (Ca.Su.20).

#### **Astangahridaya and Ashtangasangraha:**

*Vagbhata* has followed *Charaka* in case of *nidana* of *vata* *vyadhi* in *nidanastana* of his texts. In the *Astanga hridaya*, he has narrated the same *vata* *vyadhi* *nidana* which has been mentioned in twenty eighth chapter of *chikitsastana* (AHS.Ni.15). Further he added that *vata* get aggravated by over indulgence of food and activities causing loss of tissues (*dhatukshaya*). *Bali* (*vata*) then fills the empty channels and moves greatly more than normal inside them or by getting enveloped (*avarana*) by other *doshas* which have already filled up the channels. (AHS.Su.15.5-6) It is said that all diseases are caused by suppression of natural urges. *Vagbhata* says that the urges of flatus, faeces, urine, sneezing, thirst, hunger, sleep, cough, breathing on exertion, yawning, vomiting and semen should not be suppressed by force. (AHS.Su.4.2). He who is willing of happiness in his life, he should control the urges of greed, envy, hated, jealousy, love and keep control on his sense organs. (AHS.Su.4.24).

The above said causes can also be classified into three groups which are mentioned as below; viz causes for *dhatukshaya*, causes for *margavarana* and causes for both *dhatukshaya* and *margavarana* (Ca.Ca.28.59-60; AHS.Ni.15.7-9).

#### **Samprapti (Pathogenesis):**

*Samprapti* is the phenomenon of production of a disease comprising of the process of vitiation of the *doshas*, their spread all over the body, their location at morbid sites, involvement of local tissues (*dhatu*s and *dusya*s) and manifestation of signs and symptoms of a particular disease. (M.Ni.1.10). *Samprapti* encompasses entire spectrum of bodily changes both in clinical and subclinical stages of disease process. Generally Ayurvedic term *samprapti* compares to the English term 'pathogenesis'. According to Vagbhata, vitiation of *doshas* due to their respective causes, the spread of vitiated *doshas* throughout the body and then the manifestation of the disease is called *samprapti*; *Jati* and *Agati* are its synonyms (AHS Ni.1.8).

The vitiated *dosha* when find a suitable defective part or organ of the body, localise and stagnate and, as such find an opportunity to interact with the local tissues or *dhatu*s and also known as *dusya*s. The *dosha-dusya-sammurchana* (interaction) is the actual disease process. This interaction leads to develop of a special set of clinical manifestations that are the joint product of vitiated *dosha*, vitiated *dusya* and the vitiated site or organ (*adhistana*) involved.

According to Charaka, the *samprapti* is of six types viz., *sankhya*, *pradhanya*, *vidhi*, *vikalpa*, *bala* and *kala*. Vagbhata has included *vidhi samprapti* under *sankhya samprapti* itself (M.Ni.1.11). For the convenience, *samprapti* can be divided into two types viz., *samana* and *vishesha samprapti* (specific and non-specific). *Samana samprapti* occurs at the stage of *sthanasamshraya* stage while during *vyakti* stage *vishista samprapti* occurs.

#### **General Samprapti of Vatavyadhi:**

According to Charaka, *vata* become vitiated due to over indulgence of causative factors and depletion of tissues (*dhatu*s) that lead to the deficiency (*riktata* or empty space) in the contents of the *srotas*. The vitiated *vayu*, fills up the empty

channels and produces the different types of *vatavyadhi* depending upon the involvement of these *srotas* and the part of the body affected (Ca.Ca.28.1; AHV.Ni.15.8; BP.V.Ni.24.3). All the aggravating factors of *vata* may be divided into two main types depending upon their causative factors: namely, factors of depletion of *dhatu*s (tissues) and factors that lead to obstruction in the channels or *srotasmi*. (*dhatukshaya* and *margavarana*). (Ca.Ca.28.59).

Vitiated *vayu* due to *dhatu kshaya*, occupy in the empty channels and produce to increase the function of channels. Here the effects that produce by *vata* alone are very powerful in the process of *samprapti*. On the other hand, *vata* get enveloped (*avarana*) by the other *doshas* that are already accumulated in the channels, which produce loss of functions of the channels. Here the association of *vata* with one or more other *doshas* is not so powerful when comparing to that produce by *vata* alone in the disease process.

#### **Samprapti due to Dhatukshaya:**

Excessive indulgence of diet having profusely *ruksha* and *laghu* qualities, *langhana* (fasting or regular taking of less nutritious diet), excessive sexual intercourse and awakening in the night etc., lead to the depleting of body tissues and give rise to vitiation of *vata*. In the case of *vata vyadhi* produced by *dhatukshaya*, the deficiency of the contents of *srotas* (*riktata*) occurs. The vitiated *vata* then fills up these empty *srotas* and results in the manifestation of different diseases depending upon the part or organ of the body involved.

#### **Samprapti due to margavarana:**

*Margavarana* means the obstruction of the channels (*srotas*) by vitiated *vata* that associated with other *doshas* by any means. Here, partial or complete obstruction may occur and lead to creation of *riktata* in the *srotas* beyond the site of obstruction, and in this way vitiated *vayu* involves the parts supplied by these affected channels. *Sangha* type of *srotodushti* occurs in such cases. Hence, *vatavyadhi* may be produced either by *dhatukshaya* or *margavarana*. It is very important to know whether *pakshaghatha* is due to *dhatukshaya* or *margavarana* because the treatment of these two varieties are entirely different.



**Samprapti ghataka:**

There are several factors that are responsible for the pathogenesis of any disease. These are known as *samprapti ghataka* i.e., component of *samprapti*. Therefore, their assessment has to be done in relation to *vatavyadhi* in general.

- *Dosha-vata vrudhi, pitta and kapha kshaya.*
- *Dushya-rasa, rakta, mansa, asthi, sira, snayu.*
- *Agni-jataragni, dhatvagni.*
- *Ama-jataragni janya ama, dhatvagni janya ama.*
- *Srotas-rasavaha, raktavaha, mansavaha, astivaha, vatavaha srotas.*
- *Srotodusti-atpravrutti, sangha, siragranti, vimargagamana.*
- *Udbhava stana-pakvashaya, sirah.*
- *Sanchara stana-rasayani, vatavaha sira.*
- *Vyakta stana-affected body parts according to the disease; neck, shoulder, arm, hand, (half of the body).*
- *Adhistana-sira, snayu, dhamani.*
- *Roga marga- all three R.M. but mainly madyama.*
- *Swarupa-ashukari, chirakari.*
- *Swabhava- krichchra sadhya, asadhya.*

**Purvarupa of Vatavyadhi (Premonitory symptoms):**

According to Ayurveda, clinical features of a disease are divided into two parts i.e., *PurvaRupa* and *Rupa*. It is supposed that in the initial stage with the localisation of *doshas* in a particular area, part of the body some symptoms are developed. These are known as *purvarupa* (premonitory signs and symptoms) and later on when the disease is fully established, there will be full clinical manifestation. This is known as *rupa* (signs and symptoms) of the disease. The symptoms in the *purvarupa* stage may be partly due to the early lesion and other symptoms may be because of the initial body reaction to the new situation; it may be compared with the concept of adaptive mechanism. The features arising out of the adaptive mechanism are known as *purvarupa* that is of two types *samanya* and *vishista purvarupa*.

There are no specific prodromal symptoms or signs mentioned in any main Ayurveda texts related to *vatavyadhi*. Before the clear manifestation of the disease some symptoms usually occur which are called *purvarupa* of the

disease. (Ca.Ni.1.81). The premonitory symptoms are usually exhibited during the *sthanasamsraya* stage of the disease. (Madukosha on MN.22.5). They are important for the diagnosis and treatment of the disease at this stage and from *Susruta's* point of view the *sthanasamsraya* is the fourth *kriyakala* and if treated promptly the patient may be saved from the further damage or prevent from further pathogenesis of the disease.

According to some other Ayurvedic texts, *Avyakta lakshana* or unmanifested signs and symptoms are called *purvarupa*. (Ca.Ca.28.16; Y.RV.V.9). *Chakrapani*, while commenting on the word 'avyakta', mentions that few mild symptoms are to be taken as the meaning. (Ca.Ca.11.12). *Vagbhata* has also used the word *avyakta* while dealing with the *Purvarupa* in general (AHS.Ni.1.4). *Vijayarakhita*, the commentator of *Madhava nidana* gives very clear meaning on the term *Avyakta*, i.e., the symptoms that not exhibit clearly are called *purvarupa* and they are very less or mild symptoms due to (i). Less severe causative factors, and (ii). Less *avarana* of *dosha*. (Madukosha on MN.22.5).

**Rupa (General Symptoms of Vatavyadhi):**

The characteristic signs and symptoms of a disease are called *Rupa* that may be the more clear manifestation of *purvarupa* itself and they also are called *Atmarupa*. (Ca.Ca.28.19; Y.RV.V.811). *Apaya* means *laghuta* or lightness or feeling of well being as the result of alleviation of disease. *Vijayarakhita* said that symptoms presence in any slight degree and not total alleviation of disease is called *apaya*. Further, he says that *apaya* means occasional absence of the symptoms while *laghuta* means lightness of the body due to wasting of all *dhatu*s being done by *vata*. *Apaya* and *laghuta* are *atmarupa* (cardinal features) of *vatavyadhi*.

According to *Caraka*, the characteristic manifestations that develop during the course of the disease are called *lakshana* or *rupa* of the disease (signs and symptoms). *Akruti, chinha, samsthana*, and *vyanjana* are the synonyms. (Chi Ni/1/9). *Lakshana* are produced in the fifth *kriyakala* of the pathogenesis that is known as *vyakti*. Depending upon the causative factors *dosha dushya* and *srotas* involved, a particular type of *vatavyadhi* may develop, showing its own signs and symptoms. According to some eminent

scholars of Ayurveda, all eighty types of *vatavyadhis* can be classified under five main headings viz.,

- (i) *Akarmanyata pradhana vatavyadhi*,
- (ii) *Kampa pradhana vatavyadhi*,
- (iii) *Shula pradhana vata-vyadhi*,
- (iv) *Shosha pradhana vatavyadhi*
- (v) *Stambha pradhana vatavyadhi*.

*Pranavata* produces disturbances of consciousness, intelligence, memory, emotions, delusion, hallucination, orientation of place and time, sleep and dreams, difficulty in swallowing, sneezing, coughing and respiration etc. *Udanavata* is responsible for abnormality in speech (aphasia or dysarthria). *Samanavata* makes disturbances in the gastrointestinal system (constipation, flatulence, indigestion). *Vyanavata* creates difficulty in the movement of the limbs, convulsions, exaggerated jerks, and involvement in the movement of eyes. *Apanavata* loses the control of the sphincters i.e., of urinary bladder and the rectum.

#### References:

1. Ajeay, S. yadav, P.S: "Ayurveda Sammelana Patrika", Role of Vastikarma in the Management of Vata Vyadhi; march, 2004.
2. Bhatta Bheema; Shukla, C.P: Swedanam Snehasamyuktam Pakshaghate Virechanam; The effect of this treatment specially on Muscle power and tone in case of pakshaghata; M.D (Ayu) thesis, pp-39-42, 73, 104-105, 1979.
3. Dwarkanath, C: Introduction to Kayachikitsa; Popular Book Depot, Bombay, pp-45, 110, 145, 217, 392, 1959.
4. Kature, H. S: Ayurvediya Panchakarma Vijnana; vaidyanatha Ayurveda Bhavan; 6<sup>th</sup> ed; 5: 294-373; 6: 382-476, 1999.
5. Sharma, P.V: Charaka Samhita: (Text book with English translation); Chaukambha Sanskrit Bhavan; Varanasi; vol, II 1993.
6. Srikanta Murthy: Madhava Nidana (Rogavinischaya), Chaukambha Sanskrit Bhavan; Varanasi; 1987.
7. Tripathi, S.N; Upadyay, B.N: Pakshaghatham (Stroke) and its Management; Monograph submitted for All India Essay competition; pp-160-170, 1986.
8. Tripathi, D.S; Tripathi, Indradeva; Yogaratnakara (with vaidya prabha Hindi Commentary); Krishnadas Academy, 1998.