



**CHAPTER 2**  
**LITERARY RESEARCH**

## 2.0 LITERARY RESEARCH FROM ANCIENT SCRIPTURES

**TITLE: A CRITICAL REVIEW OF VĀTAVYĀDHI (PERTAINING TO SPINAL CORD INJURY) ACCORDING TO VARIOUS ĀYURVEDIC SAMHITĀSIS PRESENTED.**

This chapter presents an overview of principles related to spinal cord injuries and treatment thereof from ancient Indian scriptures.

### 2.1 AIM

To study conceptually etiopathogenesis and management of spinal cord injury as a *Vāta Vyādhi* by critically reviewing ancient *Āyurvedic* texts.

### 2.2 OBJECTIVES

1) To understand the concept of spinal cord injury as a *Vāta Vyādhi* through an analysis of ancient *Āyurvedic* texts.

2) To bring out overlapping ideas present in the ancient text with modern notions of spinal cord injury and its management.

### 2.3 INTRODUCTION

This chapter deals with the knowledge related to patho-physiology and management of spinal cord injury as an *vāta vyādhi* according to *Yoga* and *Āyurveda*.

According to the classical *Āyurvedic* text *Aṣṭāṅga Saṅgraha* diseases are of two types: *Nijāvyādhi* (true or inherent disease) and *Āgantuja vyādhi* (disease caused due to external factors). However, *āgantuja vyādhi* can get transformed into *Nijā vyādhi* at any

point of time but not vice-versa. Traumatic spinal cord injury (SCI) is an *āgantuja vyādhi* which in course of time gets converted into *nijā vyādhi (Vātavvyādhi)*.

Traumatic SCI leading to paraplegia or quadriplegia shows close resemblance with *vātika* disease pertaining to symptomatology of aggravated *vayu*, as described in Ayurvedic texts. Hence, the literary research on critical analysis of etiopathology, symptomatology and management of spinal cord injury as a vata vyadhi was proposed.

### 1.3.1 *Āyurveda*

*Āyurveda* is one among the ancient health care systems in the world. The term *Āyurveda* consists of two words “*Āyu*”, life and “*veda*”, knowledge; so *Āyurveda* is a comprehensive science of life. It encompasses all the regimens to be followed from birth till death in order to have a healthy life. It also deals with treatment of different diseases. According to *Āyurveda* the purpose of the human life is to achieve *puruśarartha* (the four human goals) viz. *dharma* (righteousness), *artha* (resources for living), *kāma*(desires) and *mokṣā* (liberation).

धर्मार्थ सुख साधनं आरोग्यं मोलमुत्तम् ॥ च सु : १/२५ ॥

*dharmārtha sukha sādhanam ārogyam molamuttam* || *Ca Sū: 1/25* ||

It is very important to have good health in order to achieve the four goals of life(*puruśarartha*).

शरिरमाध्यमंखलुधर्मसाधनम् ॥ रघुवंशं ॥

*śariramādhyamaṅkhaludharmasādhanam* || *raghuvamśari* ||

Maintaining perfect health of the body (*śarira*) is the primary requirement (*mādhyam*) to achieve this final goal (*sādhana*) of living in a righteous life.

### 2.3.2 Definition of Health according to *Āyurveda*:

What is health? It is not just the absence of diseases. WHO says, “it’s not mere absence of disease, but it is a state of well being at physical, mental, social and spiritual level”. *Āyurveda* offers a broad perspective for the definition of health. It has a unique definition which encompasses all dimensions of human existence and relates to balance at all levels of existence.

समदोषसमाग्निश्चसमधातुमलक्रियाः ।

प्रसन्नान्नात्मेन्द्रियमनःस्वस्थ्य इत्यभिधीयते ॥ सु सू १५/४१ ॥

*samadoṣasamāgniścāsamadhātumalakriyāḥ ।*

*prassannātmendriyamaṇḥsvasthya ityabhidhiyate ॥ Su Sū 15/ 41 ॥*

*Sama doṣa* – equilibrium/balanced state of *tridoṣa*, *sama-nāgniḥ ca* – equilibrium in *pañca agni*, *sama dhātu*- equilibrium condition in *saptadhātus*, *malakriya*- normal state of evacuation of *mala*, *prasannātmendriya maṇḥ*- blissful state of sense organs and mind is called *svāsthya*, i.e., perfect health in which a person is established in this inner being.

### 2.3.3 Aim of *Āyurveda*

स्वस्थस्य स्वास्थ्य रक्षणं अतुरस्य विकारप्रशमनं ।

*svasthasya svāsthya rakṣāṅam aturasya vikārapraçamanaṅ ॥*

Aim of *Āyurveda* is protection of health of healthy person and to cure the disease of diseased person.

Let us look at each one of these aspects, *doṣa* (the humors), *dhātu* (tissues) and *mala* (waste products) in details as portrayed in this science.

### 2.3.4 Doṣa:

According to *Āyurveda* the body is composed of three main fundamental components derived from the five basic elements of the Universe (earth, water, aether, fire and space). These are called *Doṣa*.

### 2.3.5 Classification of Doṣa:

वायुःपित्तकफस्चेतित्रयोदोषसमासत ।

मनसःपुनरुधिष्टोरजश्चतमवच ॥ च सू 1/57 ॥

*vāyūṇipittākaphascetitrayodoṅṅasamāsata |*

*manasaṇpunarudhiṅṅorajaṇcatamaevaca || Ca Sū 1/57 ||*

Depnding on their location, the *Doṣas* are divided into main types viz. *sāririka doṣa* and *doṣa*- the biological forces or energies in the body are classified into three types depending on their functions. These are *vāta* (responsible for movement, locomotion and all kinds of cellular transport, etc.), *pitta* (responsible for all kinds of metabolic processes) and *kapha* (responsible for nourishment and cellular growth).

सर्वशरिरचरास्तुवातपित्तश्लेष्मनः ।

सर्वास्मिन्शरिरिकुपिताकुपितःशुभाशुभानिकुर्वन्ति ॥ च सु 20/9 ॥

*sarvaśariracarāstuvātapittaśleśmanaḥ |*

*sarvāsmiṅsarirekupitākupitaḥśubhāśubhānikurvanti || Ca Sū 20/9 ||*

*Tridoṣas* are present in the entire body and they are responsible for maintaining health in their normal state; the same *doṣa* destroy health when they become abnormal/vitiated.

## 2.4 METHODOLOGY OF THE STUDY

This study was done by thoroughly reviewing the English translated versions of classical *Āyurvedic* literature, *Caraka Samhitā*, *Suśruta Samhitā*, *Aṣṭāṅga Saṅgraha*, *Mādhava Nidāna*, magazines and research journals on *Āyurveda*, as well as Pubmed and Google Scholar databases. Based on the collected information logical interpretation was done to understand the patho-physiology, clinical features and management of SCI as a *VātaVyadhi*.

### Management of Fractures according to *Āyurveda*

अथातो भग्नचिकित्सितं व्याख्यास्यामः ॥१॥

यथोवाच भगवान् धन्वन्तरिः ॥२॥

*athāto bhagnacikittsitam vyākhyāsyāmaḥ* ॥1॥

*yathovāca bhagavān dhanvantariḥ* ॥ Ca.Ci. 8/2॥

Now I shall expound the chapter on treatment of bhagna (fracture and dislocation).

As propounded by Lord Dhanvantari:

अल्पाशिनोऽनात्मवतो जन्तोर्वातात्मकस्य च ॥

उपद्रवैर्वा जुष्टस्य भग्नं कुच्छेण सिध्यति ॥३॥

*alpāśino'nātmavato jantorvātātmakasya ca* ॥

*upadravairvā juṣṭasya bhagnam kuccheṇa sidhyati* ॥Ca.Ci. 8/3॥

Bhagna is cured with difficulty if the patient eats little, has no self-control, is of *vātika* constitution or is afflicted with complications.

Complications are fever, flatulence, retention of urine and faeces etc. *Jejjāta* does not accept this reading; however, I have followed *Gayī* who accepts it.

लवणं कटुकं क्षारमम्लं मैथुनमातपम् ॥४॥

व्यायामं च न सेवेत भग्नो रुक्षान्नमेव च ॥

*lavaṇam kaṭukam kṣāramamlam maithunamātapam ॥  
vyāyāmaṁ ca na seveta bhagno ruksānnameva ca ॥ Ca.Ci. 8/4 ॥*

The patient of bhagna should abstain from salt, pungents, alkali, sours, coitus, sun-heated, physical exercise and rough food.

शालिर्मांसरसः क्षीरं सर्पिर्यूषः सतीनजः ॥५॥

ब्रुंहणं चान्नपानं स्याध्येयं भग्नाय जानता ॥

*śālimānsarasaḥ kṣīram sarpiryūṣaḥ satīnajaḥ ॥  
brumhaṇam cānnapānam syādhyeyam bhagnāya jānatā ॥ Ca.Ci. 8/5 ॥*

The learned surgeon should provide *śalirice*, meat-soup, milk, ghee, pea-soup and weight-promoting food and drinks to that suffering from bhagna.

मधूकोदुम्बराश्वत्थपलाशककुभत्वचः ॥

वंशसर्जवटानां च कुशार्थमुपसंहरेत् ॥६॥

*madhūkodumbarāśvatthapalāśakakubhatvacaḥ ॥  
vaṁśasarjvaṭānām c kuśārthamupasaṁharet ॥ Ca.Ci. 8/5 ॥*

Barks of *madhūka udumbara aśvattha palāśa arjuna vaṁśa sarja* and *vaṭa* should be collected for use as splint.

आलेपनार्था मञ्जिष्ठां मधुकं रक्तचन्दनम् ॥

शतघृतघृतोन्मिश्रं शालिपिष्टं च संहरेत् ॥७॥

*ālepanārthā mañjiṣṭhā madhukam raktacandanam ॥  
śatadhautaghṛtonmiśram śālipiṣṭam ca saṁharet ॥ Ca.Ci. 8/7 ॥*

For paste, *mañjiṣṭhā, madhuka rakta candanam* and *śalirice* mixed with ghee washed hundred times should be collected.

सप्ताहादथ सप्ताहात् सौम्येष्व्रतुषु बन्धनम् ।

साधारणेषु कर्तव्यं पञ्चमेऽहनि ॥८॥

आग्नेयेषु त्र्यहात् कुर्याद्वग्नदोषवशेन वा ॥

*saptāhādatha saptāhāt saumyeṣvratuṣu bandhanam ।*

*sādhāraṇeṣu kartavyam pañceme'hani ॥Ca.Ci. 8/8॥*

*āgneyeṣu tryahāt kuryādbagnadoṣavaśena vāa ॥*

Bandaging should be done every week in saumya (cold) seasons, once every five days in moderate seasons and on every third day in hot seasons or as required by the condition of bhagna.

तत्रतिथिलं बध्दे सन्धिस्थैयं न जायते ॥९॥

गाढेनापि त्वगादीनां शोफो रुक् पाक एव च ॥

तस्मात् साधारणं बन्धं भग्ने शंसन्ति तद्विदः ॥१०॥

*tatratiśithilam badhde sandhisthaiyam na jāyate ॥Ca.Ci. 8/9॥*

*gāḍhenāpi tvagādīnām śopho ruk pāka eva ca ॥*

*tasmāt sādharmaṇam bandham bhagne śaṁsanti tadvidāḥ ॥Ca.Ci. 8/10॥*

When too loose bandage is applied, the joint does not get stabilised, (on the other hand), if tight one is applied, it may produce inflammation of skin etc., pain and suppuration. Hence the expert recommend moderate bandage in bhagna.

न्यग्रोधदिकषायं तु सुशीतं परिषेचने ॥

पञ्चमूलीविपक्वं तु क्षीरं कुर्यात् सवेदने ॥११॥

*nyagrodhadikaṣāyam tu suśītam pariṣecane ॥*

*pañcamūlīvipakvaṁ tu kṣīraṁ kuryāt savedane ॥Ca.Ci. 8/11॥*

Well cooled decoction of *nyagrodhādi* drugs should be used for sprinkling while in case of painful condition, milk cooked with (laghu) *pañcamūla* should be used (for sprinkling).

The use of *nyagrodhādi* decoction is indicated in predominance of *pitta* (*paittika* constitution and hot season) to promote union and to prevent suppuration etc. in case where *vāta* is predominant and associated with *pitta* and pain, the other formulation (of *laghupancāmūla*) is useful because of having *sīta vīrya*.

सुखोष्णमवचार्य वा चक्रतैलं विजानता

*sukhoṣṇamavacāryam vā cakratailam vijānatā* || Ca.Ci. 8/12 ||

Or the learned surgeon should use lukewarm cakrataila (for sprinkling). This is useful in person of *vāta-kapha* constitution having pain and in cold season. *Cakratailam* – some take it as oil freshly extracted by pressing, others, however, take it as uncooked oil extracted by the method of *aṇutaila*.

विभज्य कालं दोषं च दोषघ्नौषधसंयुतम् ॥१२॥

परिषेकं प्रदेहं च विदध्याच्छीतमेव च ॥

*vibhajya kālam doṣam ca doṣaghnauśadhasamyutam* ||

*pariṣekaṁ pradehaṁ ca vidadhyācchītameva ca* || Ca.Ci. 8/12 ||

Sprinkling and paste should verily be cold and prepared of *doṣa* alleviating drugs according to time and *doṣa*.

‘Ca’ indicates that hot may also be used if required by the condition of *doṣa*.

गृष्टिक्षीरं ससर्पिष्कं मधुरौषधसाधितम् ॥१३॥

शीतलं लाक्षया युक्तं प्रातर्भग्नः पिबेन्नरः ॥

*gṛṣṭikṣīraṁ sasarpīṣkaṁ madhurauśadhasādhitam* ||

*śītalam lākṣayā yuktam prātarbhagnaḥ pibennaraḥ* || Ca.Ci. 8/13 ||

The patient of bhagna should drink in the morning, milk of primiparous cow mixed with ghee, processed with sweet (*kākolādi*) drugs, well cooled and added with *lākṣā*.

The method of preparation is as follows- sweet *kākolādi* drugs 10gm should be boiled in eight times milk along with four times water till milk remains. Now ghee and *lākṣā* are added in quantity of 10gm. This is the dose for one day. This should be given in light bowels.

पतनादभिघाताद्वा शूनमङ्गं यदक्षतम् ॥

शीतान् प्रदेहान् सेकांश्च भिषक् तस्यावचारयेत् ॥४७॥

*patanādabhighātādvā śūnamāṅgaṁ yadakṣatam ॥*

*śītān pradehān sekāṁśca bhiṣak tasyāvācārayet ॥Ca.Ci. 8/47॥*

If the part is swollen but unabraded due to fall or trauma, the surgeon should manage it with cold pastes and sprinklings.

Hot pastes etc. should never be applied as they might cause haemorrhage and suppuration.

अथ जङ्घोरुभग्नानां कपाटशयनं हितम् ॥

कीलका बन्धनार्थं च पञ्च कार्या विजानता ॥४८॥

यथा न चलनं तस्य भग्नस्य क्रियते तथा ॥

सन्धेरुभयतो द्वौ द्वौ तले चैकक्ष्च कीलकः ॥४९॥

*atha jaṅghorubhagnānām kapāṭaśayanam hitam ॥*

*kīlakā bandhanārtham ca pañca kāryā vijānatā ॥48॥*

*yathā na calanam tasya bhagnasya kriyate tathā ॥*

*sandherubhayato dvau dvau tale caikakṣca kīlakaḥ ॥Ca.Ci. 8/49॥*

For those having fracture and dislocation of leg and thigh wooden cot is suitable. In this, for stabilizing, five nails are provided so that there should not be any movement in the affected part. For this, two nails on each side of the joint and one at the sole are fixed.

Wooden cot is essential as it allows movement of the patient from one place to the other along with the cot while immobilizing the affected part with fixed nails. Five nails are provided considering fracture of one of the legs and thighs. Such as in fracture of leg two nails are fixed on each side of the ankle joint, two, in similar way, on each side of the knee joint and one at the sole-thus five. If both legs are fractured, seven nails are required-two on each side of ankle, knee and hip joints and one at the sole.

श्रोण्यां वा पुष्टवंशे वा वक्षस्यक्षकयोस्तथा ॥

भग्नसन्धिविमोक्षेषु विधिमेनं समाचरेत् ॥५० ॥

*śronyām vā puṣṭhavaṁśe vā vakṣasyakṣakayostathā ॥*

*bhagnasandhivimokṣeṣu vidhimenam samācaret ॥Ca.Ci. 8/50॥*

These procedures should be adopted in cases of fracture and dislocation in hip, vertebral column, chest and clavicles too.

### Management of Neck Injuries

कर्णं स्थानादपहृतं स्थापयित्वा यथास्थितम् ॥

सीव्येद्यथोक्तं तैलेन स्रोतश्चाभिप्रतपयेत् ॥३१ ॥

कृकाटिकान्ते छिन्ने तु गच्छत्यपि समीरणे ॥

सम्यङ्ङिनवेश्य बध्नीयात् सीव्येच्चापि निरन्तरम् ॥३२ ॥

आजेन सर्पिषा चैवं परिषेकं तु कारयेत् ॥

उत्तानोऽन्नं समश्रीयाच्छयीत च सुयन्त्रितः ॥३३ ॥

*karṇam sthānādapahr̥tam sthāpayitvā yathāsthitam ॥*

*sīvyedyathoktam tailena strotāścābhipratapayet ॥Ca.Ci. 8/31॥*

*kṛkāṭikānte chinne tu gacchatyapi samīraṇe ||  
samyāninaveśya badhnīyāt sīvyeccāpi nirantaram ||Ca.Ci. 8/32||  
ājena sarpiṣā caivam pariṣekam tu kārayet ||  
uttāno'nnam samaśnīyācchayīta ca suyantritaḥ ||Ca.Ci. 8/33||*

If ear is severed from its place, it should be sutured as mentioned earlier after restoring it to its normal position. If neck is cut up to the back portion and air is coming out, it should be set properly, sutured continuously and bandaged. Then it should be sprinkled with goat's ghee. The patient should lie down with restricted movements and take food while in supine position.

The patient should also pass urine, stool, etc. in supine position.

पुष्टे व्रणो यस्य भवेदुत्तानं शाययेत्तु तम् ॥  
अतोऽन्यथा चोरसिजे शाययेत् पुरुषं व्रणे ॥३६॥  
*puṣṭhe vraṇo yasya bhaveduttānam śāyayettu tam ||  
ato'nyathā corasije śāyayet puruṣam vraṇe ||Ca.Ci. 8/36||*

One who has wound in back should lie down in supine position while in wound situated in chest the patient should be made to lie in the opposite position e.g. facing downwards.

These positions are prescribed with the idea that impurity may be discharged unimpeded otherwise it might cause cavity. *Jejjaṭa* interprets like this. *Gayī*, however, reads in contrary way as follows –

“पुष्टे व्रणो यस्य भवेदनुत्तानः शयीत सः । अतोऽन्यथा चोरसिजे शयीत पुरुषो व्रणे” ॥इति ॥

### Signs and Symptoms of *vātika* Diseases

सङ्कोचः पर्वणां स्तम्भो भेदोऽस्थनां पर्वणामपि ॥२०॥

लोमहर्षः प्रलापश्च पणिपृष्ठशिरोग्रहः ॥

खाञ्ज्यपाङ्गुल्यकुब्जत्वं शोषोऽङ्गानामनिद्रता ॥२१॥

गर्भशुक्रजोनाशः स्पन्दनं गात्रसुप्तता ।

शिरोनासाक्षिजत्रूणां ग्रीवायाश्चापि हुण्डनम् ॥ २२ ॥

भेदस्तोदार्तिराक्षेपो मोहश्चायास एव च ।

एवंविधानि रूपाणि करोति कुपितोऽनिलः ॥२३॥

हेतुस्थानविशेषाच्च भवेद्रोगविशेषकृत् ।

*saṅkocāḥ parvaṇām stambho bhedo'sthnām parvaṇāmapi ॥Ca.Ci. 28/20॥*

*lomaharṣaḥ pralāpaśca paṇiprṣṭhaśirograhaḥ ॥*

*khāñjyapāṅgulyakubjatvaṁ śoṣo'ṅgānāmanidrātā ॥Ca.Ci. 28/21॥*

*garbhaśukrarajonāśaḥ spandanam gātrasuptatā ।*

*śironāsākṣijatrūṇām grīvāyāścāpi huṇḍanam॥Ca.Ci. 28/22॥*

*bhedastodārtirākṣepo mohaścāyāsa eva ca ।*

*evaṁvidhāni rūpāṇi karoti kupito'nilah ॥Ca.Ci. 28/23॥*

*hetusthānaviśeṣācca bhavedrogaviśeṣakṛt ।*

Aggravation of vayu gives rise to the following signs and symptoms:

- (1) Contraction, stiffness of joints and pain in the bones as well as joints;
- (2) Horripilation, delirium and spasticity of hands, back as well as head;
- (3) Lameness of hands and feet, and hunch-back;
- (4) Atrophy of limbs, and insomnia;
- (5) Destruction of foetus, semen and menses;
- (6) Twitching sensation and numbness in the body;
- (7) Shrinking of the head, nose, eyes, clavicular region and neck;
- (8) Splitting pain, pricking pain, excruciating pain, convulsions, unconsciousness and prostration; and
- (9) Similar other signs and symptoms.

The aggravated vayu produces specific diseases because of the specific nature of the causative factors and the seats of manifestation.

### **Aggravation of *vāyu* all over the body**

सर्वाङ्गकुपिते वाते गात्रस्फुरणभङ्गने ॥२४ ॥

वेदनाभिः परीतश्च स्फुटन्तीवास्य सन्धयः ।

*sarvāṅgakupite vāte gātrasphuraṇabhaṅjane* ||Ca.Ci. 28/24||

*vedanāabhiḥ parītaśca sphuṭantīvāsya sandhayaḥ* ।

Aggravation of *vāyu* all over the body produces the following signs:

- (1) Twitching sensation and breaking pain in the body;
- (2) Affliction of the entire body with different types of pain; and
- (3) A feeling as if the joints are getting cracked.

### **Aggravation of *vāyu* in the muscles and fat tissues**

गुर्वङ्गं तुद्यतेऽत्यर्थं दण्डमुष्टिहतं तथा ।

सरुक् श्रमितमत्यर्थं मांसमेदोगतेऽनिले ॥३२ ॥

*gurvaṅgam tudyate'tyartham daṇḍamuṣṭihatam tathā* ।

*saruk śramitamatyartham māṁsamedogate'nile* ||Ca.Ci. 28/32||

Aggravation of *vāyu* in the muscles and fat tissues gives rise to the following signs:

- (1) Heaviness of the body;
- (2) Excessive pain in the body as if the person had been beaten with a staff or with fist-cuffs: and
- (3) Excessive fatigue along with pain.

### **Aggravation of *vāyu* in Bones and Bone-marrow**

भेदोऽस्थिपर्वणां सन्धिशूलं मांसबलक्षयः ।

अस्वप्नः संतता रुक् च मज्जास्थिकुपितेऽनिले ॥३३॥

*bhedo'sthiparvaṇām sandhiśūlarī māmśabalakṣayaḥ |  
asvapnaḥ santatā ruk ca majjāsthikupite'nile ||Ca.Ci. 28/33||*

Aggravation of *vāyu* in the bones and bone-marrow gives rise to the following signs:

- (1) Cracking of the bones and joints;
- (2) Piercing pain in the joints;
- (3) Diminution of muscle-tissue and strength;
- (4) Insomnia; and
- (5) Constant pain.

#### Aggravation of *vāyu* in Ligaments and Nerves

बाह्याभ्यन्तरमायामं खल्लिं कुब्जत्वमेव च ।

सर्वाङ्गैकारोगांश्च कुर्यात् स्नायुगतोऽनिलः ॥३४॥

*bāhyābhyantaramāyāmāṁ khallim kubjatvameva ca |  
sarvāṅgaikāṅgarogāṁśca kuryāt snāyugato'nilah ||Ca.Ci. 28/34||*

Aggravation of *vāyu* in the snayu (ligaments and nerves) gives rise to the following signs:

- (1) Opisthotonus and emprosthotonus;
- (2) Khalli (neuralgic pain in feet, shoulders, etc.);
- (3) Hunch-back; and *Vātika* diseases pertaining to the entire body or a part thereof.

#### Aggravation of *vāyu* in *sirās* (vessels)

शरीरं मन्दरुक्शोफं शुष्यति स्पन्दते तथा ।

सुप्तास्तन्व्यो महत्यो वा सिरा वाते सिरागते ॥३६॥

*śarīraṁ mandarukśoḥaṁ śuṣyati spandate tathā |  
suptāstanvyo mahatyo vā sirā vāte sirāgate ||Ca.Ci. 28/36||*

Aggravation of *vāyu* in *sirās* (vessels) gives rise to the following signs and symptoms:

- (1) Mild pain and oedema in the body;

- (2) Emaciation and throbbing of the body;
- (3) Lack of pulsation in the vessels; and
- (4) Thinness or excessive thickness of the vessels.

### Aggravation of *vāyu* in Joints

वातपूर्णद्रुतिस्पर्शः प्रवृत्तिश्च सवेदना

प्रसारनाकुञ्चनयोः प्रवृत्तिश्च सवेदना ॥३७॥

इत्युक्तं स्थानभेदेन वायोर्लक्षणामेव च

*vātapūrṇadrutisparśaḥ pravṛttiśca savedanā*  
*prasāranākuñcanayoḥ pravṛttiśca savedanā* ||Ca.Ci. 28/37||  
*ityuktaṁ sthanabhedenā vāyorlakṣanāmeva ca*

Aggravation of *vāyu* in the joints gives rise to the following signs:

- (1) Odema of the joints which, on palpation, appears as if it is a leather bag inflated with air; and
- (2) Pain while making efforts for extension and contraction of the joints.

Thus, the signs and symptoms caused by aggravated *vāyu*, on the basis of its location in different parts of the body, are described.

पाणिपादशिरःपृष्ठश्रोणीः स्तभ्नाति मारुतः ॥४२॥

दण्डवत्स्तब्धगात्रस्य दण्डकः सोऽनुपक्रमः ।

*pāṇipādaśiraḥpṛṣṭhaśroṇīḥ stabhnāti mārutaḥ* ||Ca.Ci. 28/42||  
*daṇḍavatstabdhagātrasya daṇḍakaḥ so'nupakramaḥ* |

Understanding the effect of *vayu* on parts of the body is necessary before we look for symptoms of paralysis with its many manifestations. We present below the symptoms of paralysis.

*Pakṣavadha (Hemiplegia), ekāṅga-roga (Monoplegia) and sarvāṅga-roga*

**(Paralysis of the Entire Body)**

हत्वैकं मारुतः पक्षं दक्षिणं वाममेव वा ॥४३॥

कुर्याच्चेष्टानिवृत्तिं हि रुजं वाक्स्तम्भमेव च ।

गृहीत्वाऽर्धं शरीरस्य सिराः स्नायूर्विशोष्य च ॥४४॥

पादं संकोचयत्येकं हस्तं वा तोदशूलकृत् ।

एकाङ्गरोगं तं विद्यात् सर्वाङ्गं सर्वदेहजम् ॥४५॥

*hatvaikam mārutaḥ pakṣam dakṣiṇam vāmameva vā ||Ca.Ci. 16/43||*

*kuryācceṣṭānivr̥ttim hi rujaṁ vākstambhameva ca |*

*gṛhītva'rdham śarīrasya sirāḥ snāyūrviśoṣya ca ||Ca.Ci. 16/44||*

*pādān saṅkocayatyekam hastam vā todaśūlakṛt |*

*ekāṅgarogaṁ tam vidyāt sarvāṅga sarvadehajam ||Ca.Ci. 16/45||*

When the aggravated *vāyu* paralyzing one side of the body – either right or left – causes immobility of that side in association with pain and loss of speech, [then the ailment is called *pakṣa-vadha*]. By afflicting half of the body, the aggravated *vāyu* may cause constriction of the vessels and ligaments as a result of which there will be contracture, either of one leg or one hand along with aching or piercing pain. This ailment is called *ekāṅga-roga* (monoplegia).

If, however, the above mentioned morbidity pervades the entire body, then the ailment is called *sarvāṅga-roga* (paralysis of the entire body).

### **Aggravation and Occlusion of Vāyu**

*Vāyu* gets aggravated in two different ways, viz., (1) by the diminution of tissue elements; and (2) by the occlusion of its channel of circulation.

In the body of an individual, *vāyu*, *pitta* and *kapha* move through all the channels of circulation. Amongst them, *vāyu*, because of its subtle nature impels the remaining two *doṣas* to scatter in different places of the body, and obstructs the channels of circulation leading to the manifestation of various diseases, and drying up of tissue elements like *rasa* (plasma), etc.

*Vāyu*, as described above, gets aggravated in two different ways, viz., (1) by the diminution of the tissue elements which provide nourishment (*sāra*) to the body, and (2) by the occlusion of the channels of circulation. Because of this occlusion or obstruction, the speed of the movement of *vāyu* gets arrested which leads to its aggravation.

All the *doṣas* move through all the nadis or channels of the body. But *vāyu* has a specific property in as much as it can move even through the subtle channels in the body. Thus, among the three *doṣas*, *vāyu* is the most powerful one. Therefore, the aggravated *vāyu*, even though occluded by *pitta* and *kapha*, has the power to get the other two *doṣas* scattered into different parts of the body to cause diseases. This aggravated *vāyu*, though occluded may also dry up plasma, etc.

#### **Occlusion of *Vāyu* by *Pitta*:**

लिङ्ग पित्तावृत्ते दाहस्तृष्णा शूलं भ्रमस्तमः ॥६१॥

कट्वम्ललवणोष्णैश्च विदाहः शीतकामिता ।

*liṅga pittāvṛte dāhastr̥ṣṇā śūlaṁ bhramastamaḥ* ||Ca.Ci. 28/61||

*kaṭvamlalavaṇoṣṇaiśca vidāhaḥ śītakāmitā* ।

Occlusion of *vāyu* by *Pitta* produces the following signs:

- (1) Burning sensation, morbid thirst, colic pain and giddiness;

- (2) Tamas (a feeling as if entering into darkness);
- (3) Burning sensation by taking pungent, sour, saline and hot ingredients of food;  
and
- (4) Craving for cold things.

### Occlusion of *vāyubyKapha*

शैत्यगौरवशूलानि कट्वाद्युपशयोऽधिकम् ॥ ६२ ॥

लङ्घनायासरूक्षोष्णकामिता च कफावृते ।

*śaityagauravaśūlāni kaṭvādyupaśayo'dhikam* ॥ *Ca.Ci. 28/62* ॥

*laṅghanāyāsarūkṣoṣṇakāmitā ca kaphāvṛte* ।

[*Ca.Ci. 28/62 – 1/2 63*]

Occlusion of *Vāyu* by *kapha* gives rise to the following signs:

- (1) Feeling of cold and heaviness;
- (2) Colic pain;
- (3) Considerable relief by the intake of pungent and such other ingredients; and
- (4) Desire for fasting, exercise and ununctuous as well as hot ingredients.

### Occlusion of *Vāyuby Rakta*(Blood)

रक्तावृते सदाहार्तिस्त्वङ्मांसान्तरजो भृशम् ॥६३ ॥

भवेत् सरागः श्वयथुर्जायन्ते मण्डलानि च ।

*raktāvṛte sadāhārtistvaṅmānsāntarajo bhṛśam* ॥ *Ca.Ci. 28/63* ॥

*bhavet sarāgaḥ śvayathurjāyante maṇḍalāni ca* ॥

Occlusion of *Vāyuby Rakta*(Blood) gives rise to the following signs:

- (1) Excessive pain associated with burning sensation in the area between the skin and muscle tissue;
- (2) Oedema with reddishness; and

(3) *Maṇḍala*(circular type of rash).

### Occlusion of *Vāyuby Māmsa* (Muscle Tissue)

कठिनाश्च विवर्णाश्च पिडकाः श्वयथुस्तथा ॥६५॥

हर्षः पिपीलिकानां च संचार इव मांसगे ।

*kaṭhināśca vivarṇāśca piḍakāḥ śvayathustathā* ||Ca.Ci. 28/65||

*harṣaḥ pipilikānāṃ ca sañcāra iva mānsage* ।

[Ca.Ci. 28/64 <sup>1</sup>/<sub>2</sub>- <sup>1</sup>/<sub>2</sub> 65]

Occlusion of *Vāyuby Māmsa* (muscle tissue) gives rise to the following signs:

- (1) Appearance of hard and discolored pimples and swelling;
- (2) Horripilation; and
- (3) Formication (a feeling as if ants are moving in the body).

### Occlusion of *Vāyuby Medas* (Fat)

Occlusion of *vāyuby medas* (Fat) gives rise to the following signs and symptoms:

- (1) Appearance of oedema in the limbs which is mobile, unctuous, soft and cold; and
- (2) Anorexia.

This condition is called *ādhyā-vāta* which is difficult to cure.

### Occlusion of *Vāyuby Bone Tissue*

स्पर्शमस्थनाऽऽवृते तूष्णं पीडनं चाभिनन्दति ॥६६॥

संभज्यते सीदति च सूचीभिरिव तुद्यते ।

*sparsamasthnā'vrte tūṣṇaṃ pīdanaṃ cābhinandati* ||

*sambhajyate sīdati ca sūcībhiriva tudyate*||Ca.Ci. 28/66||

[Ca.Ci. 28/66 - 67]

Occlusion of *Vāyuby Bone Tissue* gives rise to the following signs and symptoms:

- (1) Liking for hot touch, and pressure (kneading);
- (2) Experience of breaking pain and depression; and
- (3) A feeling as if pricked with needles.

### Occlusion of *vāyu* by bone-marrow

मज्जावृत्ते विनामः स्याज्जृम्भनां परिवेष्टनम् ॥६७॥

शूलं तु पीडयमाने च पाणिभ्यां लभते सुखम् ।

*majjāvṛṭte vināmaḥ syājjṛmbhanāṃ pariveṣṭanam ॥Ca.Ci. 28/67॥*

*śūlam tu pīḍyamāne ca paṇibhyāṃ labhate sukham ।*

[Ca.Ci. 28/67 - 68]

Occlusion of *vāyu* by bone-marrow gives rise to the following signs and symptoms:

- (1) Bending of the body;
- (2) Yawning;
- (3) Twisting pain;
- (4) Colic pain; and
- (5) The patient gets relief if pressed with hand.

### Occlusion of *Vāyu* by *Semen*

शुक्रावेगोऽतिवेगो वा निष्फलत्वं च शुक्रगे ॥६८॥

*śukrāvego'tivego vā niṣphalatvaṃ ca śukrage ॥Ca.Ci. 28/68॥*

Occlusion of *vāyu* by *Semen* gives rise to the following signs and symptoms:

- (1) Non-ejaculation or excessive ejaculation (premature ejaculation) of semen; and
- (2) Sterility.

### Occlusion of *Vāyu* by *Food*

भुक्ते कुक्षो च रुग्जीर्णे शाम्यत्यन्नावृत्तेऽनिले

*bhukte kukṣou ca rugjīrṇe śāmyatyannāvṛṭte'nile*

[Ca.Ci. 28/69]

Occlusion of *vāyu* by *Food* gives rise to the following signs and symptoms:

- (1) Pain in the pelvic region after intake of food; and
- (2) Alleviation of pain after digestion of food.

**Occlusion of *Vāyu* by *Urine*:**

मूत्राप्रवृत्तिराध्मानं बस्तौ मूत्रावृतेऽनिले ॥६९॥

*mūtrāpravṛttirādhmānaṁ bastau mūtrāvṛte'nile* ||69||

[*Ca.Ci. 28/69*]

Occlusion of *vāyu* by *Urine* gives rise to the following signs and symptoms:

- (1) Retention of urine; and
- (2) Distention of urinary bladder.

वर्चसोऽतिविबन्धोऽघः स्वे स्थाने परिकृन्तति ।

व्रजत्याशु जरां स्नेहो भुक्ते चानह्यते नरः ॥७०॥

चिरात् पीडितमन्नेन दुःखं शुष्कं शकृत् सृजेत् ।

श्रोणीविक्षणपृष्ठेषु रुग्विलोमश्च मारुतः ॥७१॥

अस्वस्थं हृदयं चैव वर्चसा त्वावृतेऽनिले ।

*varcaso'tivibandho'dhaḥ sve sthāne parikṛntati* ।

*vrajatyāśu jarāṁ sneho bhukte cānahyate naraḥ* ||*Ca.Ci. 16/70*||

*cirāt pīditamannena duḥkhaṁ śuṣkaṁ śakṛt sṛjet* ।

*śroṇīvaṅkṣaṇapṛṣṭheṣu rugvilomaśca mārutaḥ* ||*Ca.Ci. 16/71*||

*asvasthaṁ hṛdayaṁ caiva varcasā tvāvṛte'nile* ।

[*Ca.Ci. 28/70 - 72*]

**Occlusion of *Vāyu* by *Stool***

Occlusion of *vāyu* by *stool* gives rise to the following signs and symptoms:

- (1) Absolute constipation;
- (2) Gripping pain in the colon (abode of stool);
- (3) Instantaneous digestion of the ingested fat;

- (4) Abdominal distention after the digestion of food;
- (5) Because of the pressure of the [undigested] food, the patient voids after a long time. The voiding is painful and the stool is dry;
- (6) Pain in the hips, groin and back;
- (7) Upward movement of *vāyu* (flatus of gas) in the abdomen; and
- (8) Uncomfortable sensation in the cardiac region.

### Prognosis of *vātika* Diseases

पक्षाघातोऽङ्गसंशोषः पङ्गुत्वं खुडवातता ।

स्तम्भनं चाढ्यवातश्च रोगा मज्जास्थिगाश्च ये ॥ ७३ ॥

एते स्थानस्य गाम्भीर्याद्यत्नात् सिध्यन्ति वा न वा ।

नवान् बलवतस्त्वेतान् साधयेन्निरुपद्रवान् ॥ ७४ ॥

*kubjatā paṅgutva kḥuḍa-vātata vāyu āḍhya-vāta  
sandhicyutirhanustambhaḥ kuñcanaḥ* ॥ *Ca.Ci. 28/72* ॥

*pakṣāghāto' ṅgasamśoṣaḥ paṅgutvaḥ kḥuḍavātata |  
stambhanaḥ cāḍhacyavātaśca rogā majjāsthigāśca ye* ॥ *Ca.Ci. 28/73* ॥

*ete sthānasya gāmbhīryādyatnāt sidhyanti vā na vā |  
navān balavatastvetān sādhayennirupadravān* ॥ *Ca.Ci. 28/74* ॥

[*Ca.Ci. 28/72 - 74*]

The following diseases (because of their deep-seated obstinate nature) may get cured only by careful treatment; otherwise these diseases cannot be cured at all;

- (1) Dislocation of joints;
- (2) Lock-jaw;
- (3) Contracture;
- (4) *Kubjatā* (hunch-back);
- (5) Facial paralysis;
- (6) Hemiplegia;

- (7) Atrophy of limbs;
- (8) *Paṅgutva*(inability to walk because of muscular dystrophy);
- (9) *Khūḍa-vātatā* (affliction of the ankle joint by *vāyu* or arthritis);
- (10)Occlusion of *vāyu*by fat or *āḍhya-vāta*;
- (11) Diseases located in the bone-marrow and bones.

The above mentioned diseases could be treated only under the following circumstances:

- (1) If these ailments are of recent origin;
- (2) If the patient is strong; and
- (3) If these are not associated with complications.

### Oleation Therapy

क्रियामतः परं सिध्दां वातरोगापहां शृणु ।

केवलं निरुपस्तभमादौ स्नेहेरुपाचरेत् ॥ ७३ ॥

वायुं सर्पिर्वसातैलमज्जपानैर्नरं ततः ।

स्नेहक्लान्तं समाश्रास्य पयोभिः स्नेहयेत् पुनः ॥ ७५ ॥

यूषैर्ग्राम्याम्बुजानूपरसैर्वा स्नेहसंयुतैः ।

पायसैः कृशरैः साम्ललवणैरनुवासनैः ॥ ७६ ॥

नावनैस्तपणैश्चात्रैः..... ।

*kriyāmataḥ paraṁ sidhdāṁ vātarogāpahāṁ śṛṇu ।*

*kevalaṁ nirupastabhamādau snehairupācaret ॥ Ca.Ci. 28/73 ॥*

*vāyuraṁ sarpirvasātailamajjapānairnaraṁ tataḥ ।*

*snehaklāntaṁ samāśvāsya payobhiḥ snehayet punaḥ ॥ Ca.Ci. 28/75 ॥*

*yūṣairgrāmyāmbujānūparasairvā snehasamyutaiḥ ।*

*pāyasaiḥ kṛśaraiḥ sāmlalavaṇairanuvāsanaḥ ॥ Ca.Ci. 28/76 ॥*

*nāvanaistarpaṇaiścānnaiḥ..... ।*

[Ca.Ci. 28/75 –78]

Now, listen to the exposition on the effective line of treatment for the cure of the diseases by *vāta* exclusively, and if no occlusion is involved, then in the beginning, the patient should be treated by oleation therapy for which ghee, muscle fat, oil and bone-marrow should be administered. Thereafter, when the patient gets disgusted with the intake of oleation therapy, he should be consoled (rested for some time), and again oleation therapy should be administered with the help of milk, vegetable soup and soup of the meat of domesticated, aquatic and marshy-land-inhabiting animals after adding fat. He may be given *pāyasa* (preparation of rice and milk) and *kṛśara* (a preparation of rice, legumes, etc.) added with sour ingredients as well as salt. He may also be given *anuvāsana* type of medicated enema, inhalation therapy and refreshing food.

### Formentation Therapy

..... सुस्निग्धं स्वेदयेत्ततः ।

स्वभ्यक्तं स्नेहसंयुक्तैर्नादीप्रस्तरसङ्करैः ॥ ७८ ॥

तथाऽन्यैर्विधैः स्वेदैर्यथायोगमुपाचरेत् ।

..... *susnigdham svedayettataḥ* ।

*svabhyaktam snehasamyuktairnādīprastarasankaraiḥ* ॥ *Ca.Ci. 28/78* ॥

*tathā'nyavirvidhaiḥ svedairyathāyogamupācaret* ।

After the patient is properly oleated, he should be given fomentation therapy. Before the administration of fomentation therapy, the body of the patient should be properly oleated and thereafter, fomentation therapies, viz., *nāḍī-sveda*, *prastara-sveda*, *saṅkara-sveda* as well as other types of appropriate fomentation therapies should be administered [vide *Sūtra* 14 : 39-67 for details of these fomentation therapies].

## Effects of Oleation and Fomentation Therapies

स्नेहाक्तं स्विन्नमङ्गं तु वक्रं स्तब्धमथापि वा ॥ ७९ ॥

शनैर्नामयितुं शक्यं यथेष्टं शुष्कदारुवत् ।

हर्षतोदरुगायामशोथस्तम्भग्रहादयः ॥ ७० ॥

स्विन्नस्याशु प्रशाम्यन्ति मार्दवं चोपजायते ।

स्नेहश्च धातून्संशुष्कान् पुष्णात्याशु प्रयोजितः ॥ ७१ ॥

बलमग्निबलं पुष्टिं प्राणांश्चम्बिवर्धयेत् ।

अस्कृत्तं पुनः स्नेहैः स्वदैश्चाप्युपपादयेत् ॥ ७२ ॥

तथा स्नेहमृदौ कोष्ठे न तिष्ठन्त्यनिलामयाः ।

*snehāktaṁ svinnamaṅgaṁ tu vakraṁ stabdhamathāpi vā ॥ Ca.Ci. 28/79 ॥*

*śanairnāmayitum śakyam yatheṣṭam śuṣkadāruvat ।*

*harṣatodarugāyāmaśothastambhagrahādayaḥ ॥ Ca.Ci. 28/70 ॥*

*svinnasyāśu praśāmyanti mārdayam copajāyate ।*

*snehaśca dhātūnsaṁśuṣkān puṣṇātyāśu prayojitaḥ ॥ Ca.Ci. 16/71 ॥*

*balamagnibalaṁ puṣṭiṁ prāṇāṁścapbhivardhayet ।*

*askṛttaṁ punaḥ snehaiḥ svedaiścāpyupapādayet ॥ Ca.Ci. 16/72 ॥*

*tathā snehamṛdau koṣṭhe na tiṣṭhantyanilāmayāḥ ।*

[Ca.Ci. 28/79 1/2 - 1/2 83]

As a dry wood can be slowly bent as desired, by the application of unctuous substance and fomentation, similarly even a curved or stiff limb can be slowly brought back to normalcy by the administration of oleation and fomentation therapies.

So, tingling sensation, pricking pain, ache, contracture, oedema, stiffness, spasticity, etc., get immediately alleviated, and the body is softened by the administration of fomentation therapy.

Oleation therapy, when administered, instantaneously provides nourishment to the emaciated tissue elements. It promotes strength, *agni* (enzymes responsible for digestion and metabolism), plumpness of the body and *elan vitae*.

The patient should be given oleation and fomentation therapies repeatedly as a result of which the *koṣṭha* (visceras in the abdomen and thorax) becomes soft, and the diseases of *vāyu* do not get an opportunity to get lodged there permanently.

### Elimination Therapy

यद्यनेन सदोषत्वात् कर्मणा न प्रशाम्यति ॥ ८३ ॥

मृदुभिः स्नेहसंयुक्तरौषधैस्तं विशोधयेत् ।

घृतं तिल्वकसिध्दं वा सातलासिध्दमेव वा ॥ ८४ ॥

पयसैरण्डतैलं वा पिबेद्दोषहरं शिवं ।

स्निग्धाम्ललवणोष्णाद्यैराहारैर्हि मलश्चितः ॥ ८५ ॥

स्रोतो बध्दवाऽनिलं रुन्ध्यात्तस्मात्तमनुलोमयेत् ।

दुर्बलो योऽविरेच्यः स्यात्तम् निरूहैरुपाचरेत् ॥ ८६ ॥

पाचनैर्दीपनीयैर्वा भोजनैस्तद्युतैर्नरम् ।

संशुद्धस्योत्थिते चाग्नौ स्नेहस्वेदौ पुनर्हितौ ॥ ८७ ॥

स्वाद्वम्ललवणस्निग्धैराहारैः सततं पुनः ।

नावनैर्धूमपानैश्च सवनिवोपपादयेत् ॥ ८८ ॥

इति सामान्यतः प्रोक्तं वातरोगचिकित्सितं ।

*yadyanena sadoṣatvāt karmaṇā na praśāmyati ॥ Ca.Ci. 16/83 ॥*

*mṛdubhiḥ snehasanyuktairauśadhaistam viśodhayet ।*

*ghṛtam tilvakasidhdam vā sātālāsiddhameva vā ॥ Ca.Ci. 16/84 ॥*

*payasairanḍatailam vā pibeddoṣaharam śivam ।*

*snigdhāmlalavaṇoṣṇādyairāhārairhi malaścitaḥ ॥ Ca.Ci. 16/85 ॥*

*stroto badhdavā'nilam rundhyāttasmāttamanulomayet ।*

*durbalo yo'virecyah syāttam nirūhairupācaret ॥ Ca.Ci. 16/86 ॥*

*pācanairdīpanīyairvā bhojanaistadyutairnaram ।*

*saṁśuddhasyotthite cāgnau snehasvedau punarhitau ॥ Ca.Ci. 16/87 ॥*

*svādvamlalavaṇasnidghairāhāraiḥ satatam punaḥ ।*

*nāvanairdhūmapānaiśca sarvānevopapādayet || Ca.Ci. 16/88 ||  
iti sāmānyataḥ proktaṁ vātarogacikitsitaṁ |*

[Ca.Ci. 16/83 - 89]

If because of inappropriate administration of [the above mentioned] therapies (oleation and fomentation) the ailments [caused by *vāyu*] do not subside, then the patient should be given elimination therapy with the help of mild drugs added with unctuous ingredients.

For this purpose, the patient should take medicated ghee prepared by boiling, either with *tilaka* or *sātalā* or he may take castor oil with milk. They help in the elimination of morbid material, and produce beneficial effects.

On account of the intake of food which is unctuous, sour, saline, hot, etc., the morbid material gets accumulated and it obstructs the channels of circulation leading to the occlusion of the [movement of] *vāyu*. Therefore, the patient should be given elimination (purgation) therapy.

If the patient is weak, and is therefore, unsuitable for the administration of purgation therapy, then he should be given *nirūha* type of medicated enema prepared with ingredients which are *pācana* (carminative) and *dīpana* (stimulant of digestion).

He should also be given food added with ingredients which are *pācana* and *dīpana*.

After the body is cleansed of morbidities as a result of which there is stimulation of *agni* (enzymes), it is beneficial to administer oleation and fomentation therapies again.

In addition, all the patients suffering from diseases caused by *vāyu* should be continuously given diet containing ingredients which are sweet, sour, saline and unctuous. All of them should also be treated with inhalation and smoking therapies.

Thus, the treatment of diseases caused by *vāyu* in general is described.

### Line of Treatment in General

सर्पिस्तैलवसामज्जसेकाभ्यञ्जनवस्तयः ॥ १०४ ॥

स्निग्धाः स्वेदा निवातं च स्थानं प्रावरणानि च ।

रसाः पयांसि भोज्यानि स्वद्वम्ललवणानि च ॥ १०५ ॥

बृहणं यच्च तत् सर्वं प्रशस्तं वातरोगिणम् ।

*sarpistailavasāmajjasekābhyañjanavastayah* ॥ *Ca.Ci. 16/104* ॥

*snigdhaḥ svedā nivātaṁ ca sthānaṁ prāvaraṇāni ca* ।

*rasāḥ payānsi bhojyāni svadvamlalavaṇāni ca* ॥ *Ca.Ci. 16/105* ॥

*brhaṇaṁ yacca tat sarvaṁ praśastaṁ vātarogiṇam* ।

[*Ca.Ci. 16/104 - 106*]

Ghee, oil, muscle fat, marrow, fomentation, massage, medicated enema, fomentation accompanied with oleation, residence in windless place, covering the body with blankets, meat-soup, different types of milk, food ingredients which are sweet, sour and saline, and such other measures which are nourishing – all these are beneficial for the patient suffering from diseases caused by the aggravated *vāyu*.

### Treatment of *Ardhāṅga-vāta* (Hemiplegia)

स्वेदनं स्नेहसंयुक्तं पक्षाघाते विरेचनं ॥ १०० ॥

*svedanaṁ snehasamyuktaṁ pakṣāghāte virecanaṁ* ॥ *Ca.Ci. 16/100* ॥

Fomentation accompanied with oleation and purgation therapies are useful for the treatment of hemiplegia.

## Importance of Oil in Curing Vātika Diseases

नास्ति तैलात् परं किञ्चिदौषधं मारुतापहम् ।

व्यवाय्युष्णगुरुस्त्रेहात् संस्काराद्बलवत्तरम् ॥ १८१ ॥

गणैर्वातहरैस्तस्माच्छतशोऽथ सहस्रशः ।

सिद्धं क्षिप्रतरं हन्ति सूक्ष्ममार्गस्थितान् गदान् ॥ १८२ ॥

*nāsti tailāt param kiñcidauṣadham mārutāpaham ।*

*vyavāyuyuṣṇagurusnehāt saṁskārādbalavattaram ॥ Ca.Ci. 16/181 ॥*

*gaṇairvātaharaistasmācchataśo'tha sahastraśaḥ ।*

*siddham kṣiprataram hanti sūkṣmamārgasthitān gadān ॥ Ca.Ci. 16/182 ॥*

There is no medication which excels oil curing *vātika* diseases because of its *vyavāyi* (which pervades the body before going through the process of digestion), hot, heavy, and unctuous properties. When cooked or processed with other drugs, it becomes more powerful therapeutically.

Therefore, oil should be cooked for hundred and thousand times with the group of drugs which alleviate *vāyu*. Such medicated oils cure diseases located in the minutest channels of the body quickly.

## Line of Treatment of Five Vāyus in General

उदानं योजयेदूर्ध्वमपानं चानुलोमयेत् ॥ २१९ ॥

समानं शमयेच्चैव त्रिधा व्यानं तु योजयेत् ।

प्राणो रक्ष्यश्चतुर्भ्योऽपि स्थाने ह्यस्य स्थितिर्धृवा ॥ २२० ॥

स्वं स्थानं गमयेदेवं वृत्तानेतान् विमार्गगान् ।

*udānam yojayedūrdhvamapānam cānulomayet ॥ Ca.Ci. 16/219 ॥*

*samānam śamayeccaiva tridhā vyānam tu yojayet ।*

*prāṇo rakṣyaścaturbhyo'pi sthāne hyasya sthitirdhṛvā ॥ Ca.Ci. 16/220 ॥*

*svam sthānam gamayedevam vṛtānetān vimārgagān ।*

For the morbidity of *Udāna-vāyu*, upward moving therapy (emesis) should be administered. For the morbidity of *apāna-vāyu*, downward moving therapy (purgation and medicated enema) should be employed. For the morbidity of *samāna-vāyu*, the therapy which causes stability in the abdomen (by alleviation) should be used. For the morbidity of *vyāna-vāyu*, all the above mentioned three categories of therapies should be employed. *Prāna-vāyu* is more important than these four types of *vāyu*; hence it should be protected with priority. Its state of equilibrium helps in the sustenance of life.

The *vāyus*, when occluded, go stray (move in different channels). Therefore, they should be brought to their own habitat.

### ***Pakṣāghāta According to Āyurveda***

The *Āyurvedic* text, Charaka Samhita says:

#### ***Pakṣāghāta:***

गृहीत्वाऽधृतनोर्वायुःसिराःस्नायूर्वीशोष्य च  
 पक्षमन्यतरंहन्तिसन्धिबन्धान् विमोक्षयन्  
 कृत्स्नोऽर्धकायस्तस्यस्यादकर्मण्योविचेतनः  
 एकाङ्गरोगं तंकेचिदन्येपक्षवधंविदुः  
 सर्वाङ्गरोगं तद्वच्च सर्वकायाश्रितेऽनिले  
 शुद्धवातहतः पक्षःकृच्छ्रनसाध्यमो मतः  
 कृच्छ्रनस्वन्येन संसृष्टोविवर्ज्यः क्षयहेतुकः

*grhītvā' dhṛtanorvāyuhṣirāḥsnāyūrvaśoṣya ca*  
*pakṣamanyataranḥantisanḍhibandhānvimokṣayan*  
*kṛtsno' rdhakāyastasyasyādakarmanyo vicetanaḥ*

*ekāṅgarogaṁtankecidanyepakṣavadhamviduḥ*

*sarvāṅgarogaṁtadvaccasarvakāyāśrite'nile*

*śudvavātahataḥpakṣaḥkṛcachnasādhyamomataḥ*

*kūccnasvanyenasamsrṣṭovivarjvāḥkṣayahetukaḥ* || *Ca.Su. 6/38 - 41* ||

Seizing half of the body, causes dryness of the veins and tendons, destroys (makes inactive) half of the body (either left or right) by loosening the joints. By this, half of the body becomes incapable of any function and insensible (loss of sense to touch). This is called by some as *Ekāṅgaroga* and by others as *Pakṣavadha*. Likewise, it is *Sarvāṅgaroga* when the entire body is invaded by *anila (vāta)*. *Pakṣavadha* caused by *vāta* alone (without the association of *pitta* or *kapha*) is most difficult to cure, difficult when associated with others (*doṣās*), that produced because of depletion (or loss of tissues) is incurable.

### ***Pakṣāghāta-AvabāhuCikitsā***

स्नेहनंस्नेहसंयुक्तंपक्षाघातेविरेचनं

अवबाहौहितंनस्यंस्नेहश्चोत्तरभक्तिकः

*snehanamsnehasamyuktampakṣāghātevirecanam* |

*avabāhauhitamnasyamsnehaśroottarabhatkikaḥ* | |

[*Ca.Su. 6/44*]

*Snehana* (Oleation) and *Virecana* (Purgative Therapy) accompanied with Oleation are the treatment for *Pakṣāghāta* (Hemiplegia). For *Avabāhu* (loss of movement of the arm), *Nasya* (nasal medication) and *Snehana* (Oleation) after meals are suitable.

## 2.5 DISCUSSION

Spinal cord injury (SCI) is a devastating condition and its management requiring a holistic approach. The *nidāna*, *samprāpti*, *lakṣaṇa* and *cikitsā* of *VātaVyādhi* has been described here as *śākhāgata vāta*, *koṣthagata vāta*, *katigata vāta*, *snāyugata vāta*, etc. Traumatic SCI (TSCI) can be analogous to an *āgantujavyādhi* initially, but it slowly gets transformed to *nijā vāta vyādhi*. Signs and symptoms of *vātikā* disease, such as features of aggravated *vāyu* in the bones, bonemarrow, ligaments, and nerves, blood vessels, joints, etc., is analogous with TSCI resulting in quadriplegia and paraplegia in modern medicine on the parameters of patho-physiology, clinical features, risk factors, and management. Occlusion of *vāyu* by *saptadhātus*, *pitta* and *kapha* will also resemble with clinical manifestation of SCI.

When the aggravated *vāyu* paralyses one side of the body, either right or left, it causes immobility of that side in association with pain and loss of speech, the ailment is called *pakṣa vadha*. The aggravated *vāyu* may affect half of the body leading to constrictions of the vessels and ligaments as a result of which there will be contracture of either one leg or one hand along with aching or piercing pain, and is known as *ekāṅga-roga* (monoplegia). If, however, this morbidity pervades the entire body, then the ailment is called *sarvāṅga-roga* (paralysis of the entire body).

Oleation, formentation and elimination therapies (*pañcakarma* treatments) are all beneficial for the patient suffering from diseases caused by aggravated *vāyu*. A recent single case study by (Singh and Rajoria, 2015) showed significant improvements in existing neurological deficits and quality of life of stabilized SCI with *pañcakarma*

procedures & *Āyurvedic* drugs, after 2 months of treatment. Another case study of a 52-year-old quadriplegia patient who had sustained SCI from a fall from stairs, also showed improvements in modified Barthel index (MBI) scores and neurological deficits (Rastogi, 2014).

## 2.6 CONCLUSION

SCI leading to paraplegia and quadriplegia can be categorized as a *VātaVyādhi* with its primary symptom such as pain, loss of movements and stiffness as its predominant feature. This section highlighted *nidāna*, *samprāpti*, *lakṣaṇa* and *cikitsā* of SCI as a *VātaVyādhi*. Clinical trials on the same have demonstrated promising results. *Āyurvedic* intervention as a composite treatment either alone or in conjunction with conventional rehabilitative measures holds promise of adding benefits into the currently utilized protocol of SCI management. Secondly, this section indicates the utility of *Āyurveda* as a composite intervention for the purpose of clinical practice and research.