

CONCEPTUAL AND THERAPEUTIC STUDY OF PAKSHAGHATA

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ABSTRACT

Pakshaghata denotes the impairment of *Karmendriya*, *Gyanendriyas* and *Manas* of half part of body which may be either from head to toe or from mid of the body. Ingestion of *Shita*, *Ruksh*, *Laghu Ahara*, *Katu*, *Tikta rasa Ahara*, excessive activities, wake up at night, stress, chronic disorder, physical trauma, excessive walking or exercise, excessive loss of *Dhatus*, *Vega Dharana*, heavy weight lifting are some of *nidan* of *Pakshaghata*. The clinical features are *Chetanivritti*, *Vaktradavakra*, *Sirasnayuvishosa*, *Vakstambha*, *Sphoorana* of *Jihva*, and *Chetanansha*. *Vata Dosha* gets vitiated due to the indulgence of various diet and regimen then *Dosha* would accumulate in *Rikta Srotas* in the body and produces *Pakshaghata*. *Pakshaghata* can be correlated with hemiplegia. The drugs used in the treatment have the properties of *Vata-Kaphashamaka*, *Amapachaka*, *Srotoshodhak*. Ayurvedic *Chikitsa Siddhanta* includes *Nidana Parivarjana*, *Shamana Chikitsa*, *Shodhana Chikitsa* which is believed to impart radical elimination of disease causing factors and maintain the equilibrium of *doshas*.

Keywords: *Pakshaghata*, *Ayurveda*, *Dosha*, *Srotas*, *Chikitsa*.

INTRODUCTION: *Pakshaghata* is a difficult curable disease. According to ayurveda *paksha* means half part of body which may be either from head to toe or from mid of the body where we can divide in upper half and lower half and “*Aghata*” or “paralysis” denotes the impairment of *Karmendriya*, *Gyanendriyas* and *Manas*. *Gyanendriyas* are considered as part of the *Sangyavahasrotas* (sensory system) and *Karmendriya* are considered as part of the *Cheshtavahasrotas* (motor system) and *Manas* is supposed to control and guide the both, *Gyanendriya* and *Karmendriyas*¹. Acharya Charaka mentioned *Pakshaghata* under *Nanatmaja Vata Vikaras*² and Acharya Sushruta mentioned it under *Ashta Mahagada*³.

According to sign and symptoms *pakshaghata* is compared with Paralysis in modern science. The common cause of Paralysis is stroke⁴. The prevalence of stroke in India ranges from 40 – 270 per

100,000 population. Stroke sometimes referred to as a Cerebro-vascular accident (CVA), Cerebro Vascular Insult (CVI) is the loss of brain function due to disturbance in the blood supply to the brain⁵. Brain is the one of the three *Marmas* and it is mainly affected in the diseases of *Pakshaghata*⁶. Paralysis or palsy literally means to relax, implies a total or partial loss of either motion or sensation or of both in one or more or all parts of the body and also palsy is defined as loss or impairment of voluntary muscular power.

MATERIALS AND METHODS: For this conceptual study the available literatures are collected through Ayurvedic authentic text mainly Charaka Samhitha, Susrutha Samhitha, Astanga Samgraha, Astanga Hridaya, Bhava Prakasha, Madhava Nidana, Vangasena Samhitha, Bhela Samhitha and Kasyapa Samhitha, with their respective commentaries, various books, articles and online data base.

NIDANA⁷

<i>Aharajanya nidana</i>	Excess intake of <i>rukshagunaahara</i> , Intake of <i>laghu</i> and <i>shitagunaahara</i> , Excess intake of <i>katuraspradhanahara</i> Less quantity food <i>Anshana</i> and <i>alpasana</i> , <i>Atimatrabhojana</i> <i>Ajeernabhojana</i> , <i>Vishamashan</i> , <i>Adhyashana</i>
<i>Viharajanya nidana</i>	<i>Ativyavaya</i> , <i>Atiratrijagrana</i> , <i>Divashayan</i> , Suppression of <i>apanavayu</i> , <i>Ativyayam</i> , <i>Atiplavana</i> , <i>Dukhashaiyya</i> , <i>Dukhasana</i>
<i>Aagantuja nidana</i>	<i>Abhighata</i> , <i>Marmaghata</i>
<i>Manas nidana</i>	<i>Kama</i> , <i>krodh</i> , <i>bhaya</i> , <i>chinta</i> etc.
Season & time provoking <i>vata</i>	<i>Sharad ritu</i> , <i>Bhuktante</i> , <i>Jeernante</i> end of day and night
<i>Nidanarthakar</i> disease	<i>Dhatukshaya</i> , <i>Ama</i> , <i>Rogatikarshan</i> , <i>Madhumeha</i> , Hypertension Cardiac disease
Miscellaneous	<i>Atiraktamokshana</i> , <i>Vegavarodh</i> , <i>Dhupan</i> , <i>Prameha</i> or <i>madhumeha</i>

There are two major categories of brain damage in stroke viz. Ischemia and haemorrhage, which result in the destruction of brain tissue via abnormalities in the blood supply of brain⁸.

Major causes- Age, Obesity, Smoking, alcohol, contraceptive pills etc., disease processes like hypertensive encephalopathy, vascular disorders, infective disorders of brain tissue, tumours or abscess, trauma, internal artery occlusion, diabetes mellitus, heart disease, dyslipidemia, coagulopathies.

RUPA:

- *Chestanivritti/Sharirardhaakarmanyata* (impairment of motor function)
- *Achetna/vichetna* (loss of consciousness)
- *Sandhibandhanvimoksha* (weakness of muscles)
- *Vakstambh* (slurring of speech)
- *Vaktradavakra* (mouth deviation)
- *Sphoorana* of *Jivha* (fasciculation of tongue)
- *Ruja* (pain)
- *Sirasnayuvishosa*: (Exaggeration of knee jerk, Exaggeration of bicep reflexes)⁹
- *Daha/Santap/Murchha*

- *Shaitya/Shotha/Gourava*¹⁰

SAMPRAPTI: In Ayurvedic texts, it is mentioned that the *Margavarodha*, *Marmabhighata*, and *Dhatukshaya* lead to the *Pakshaghata*. There is involvement of *Sira*, *Snayu* and *Dhamani* in the pathogenesis of *Pakshaghata*. *Avarodha* (obstruction) is usually due to secretion of *Kapha*, or *Aama*.¹¹ *Pakshaghata* occurs mainly due to vitiation of *Vata Dosha* and it may be associated with *Pitta* or *Kapha Dosha*¹². *Vata* is the main culprit. *Dushyas* are *Sira*, *Snayu*, *Sandhi*. These are *Upadhatu* of *Medhodhatu*. Therefore in patients of *Pakshaghata medodhatu* and *mamsadhatu shosha* takes place, so *Uttarottar dhatus* will not be nourished properly. *Asthi dhatu* are the *ashraya* of the *Vata dosha* and the vitiation of *Vata* hampers the nourishment of *asthi dhatu*, which further affect the *sandhi* also. According to Acharya Vagbhata, vitiated *Vata Dosha* affects one half of the body which causes dryness of *Sira* (veins) and *Snayu* (tendons) which leads to *Pakshaghata*. *Vama* or *Dakshina Chesh-tanivritti* is the main cardinal feature of *Pakshaghata* and this manifestation is due to the pathogenesis of *Margavarana* or

*Dhathu kshaya*¹³. Modern medical science attributes this condition as damage to brain or CNS structures caused by abnormalities of the blood supply.

TYPES:

Ekangroga: By affecting half of the body; aggravated *Vata* 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 as *Ekangroga* (Monoplegia).

SarvangRoga: If the above mentioned morbidity pervades the entire body; then ailment is called as *SarvangRoga* (Paralysis of the entire body).^{14,15} Depending on the region where the paralysis has occurred, it can be classified in the following types:-

- Monoplegia - In which only one limb, hand or leg is affected
- Hemiplegia - In which only one side of the body is affected
- Paraplegia - In which both the trunk and the legs are affected
- Quadriplegia - In which the trunk and all the four limbs are affected

SADHYATA – ASADHYATA:

- *Pakshaghata* caused due to aggravated *vayu* associated with *pitta* or *kapha* – *Sadhya*
- *Pakshaghata* caused due to aggravated *vayu* – *Krichasadhya*
- *Pakshaghata* caused due to *raktadi dhatukshaya*– *Asadhya*¹⁶
- *Vedna raheet* (painless) *Pakshaghata* – *Asadhya*¹⁷

INVESTIGATION¹⁸

1. Baseline investigation
 - Full blood count, ESR
 - Blood sugar and urea, creatinine
 - Serum electrolytes and proteins
 - x-ray chest

- ECG and ECHO
 - Carotid Doppler
 - Lumbar puncture
2. Special investigation (especially in young people)
 - Antinuclear antibody for SLE, Rheumatoid arthritis
 - Antibodies to double stranded DNA (SLE)
 - Anticardiolipin antibodies (SLE)
 - Serum cholesterol
 3. CT Scan

UPADRAVA¹⁹

- Oedema(Shoth)
- Loss of tactile sensation(*supta twacha*)
- Fracture tremor
- Flatulence
- Pain

TREATMENT: The line of treatment mentioned by Acharya Charaka for *Pakshaghata* as “**Swedanamsnehasamyuktampakshagha te Virechanam**”²⁰. The drugs used in the treatment have the properties of :

- *Vata-Kaphashamaka*
- *Amapachaka*
- *Srotoshodhaka*

As a result of these properties, vitiated channels become purified when treated with these drugs. Drugs should have properties of *NadiBalakaraka* and *NadiUttejaka*. According to Ayurveda pharmacodynamic properties of drugs which have ability to pacify vitiated *vata*, *pitta* and *kapha* dosha are as follows :

- *VataDosha* - *Madhura Rasa, SnigdhaGuna, UshnaVeerya* and *MadhuraVipaka* should be used.
- *Kapha Dosha* - *Tikta, Katu, Kashaya Rasa, Laghu Guna, Ruksha Guna, UshnaVeerya* and *KatuVipaka*.

- *Pitta Dosha - Madhura Rasa, SnigdhaGuna, SheetaVeerya and MadhuraVipaka*²¹.

Pakshaghata can be better managed by the ayurvedic principles of management namely:

1. *NidanaParivarjana*²²
2. *ShamanaChikitsa*²³
3. *Shodhana Chikitsa*²⁴

Nidan Parivarjan: This is to avoid the aetiological & risk factors which causes vitiation of *Vata dosha* as like *Shita, Ruksh*,

Laghu ahara, Katu, Tikta rasa ahara, excessive activities, *ratri jaagran, chinta*, chronic disorder, physical trauma, excessive walking or exercise, excessive loss of *Dhatus, Vega dharana*, heavy weight lifting etc should be avoided.²⁵

Shamana Chikitsa: The principle of Shaman therapy is to normalize and maintain the equilibrium of all the *Doshas*. As per Ayurvedic text many Ayurvedic formulations have been given to pacify the *Vata Dosha* as like²⁶:

<i>Bhasma</i>	<i>Brihata vatachintamani rasa Ekangveer rasa Rasraj rasa, Yogendra rasa Rajat bhashma</i>	<i>vatashamak</i> and nerve stimulant due to their ingredients
<i>Churna</i>	<i>Ashwagandha churna, Rasanadi churna Saraswatha churna</i>	<i>Medhya</i> and <i>Bringhana</i> Property
<i>Kashaya</i>	<i>Rasnasaptak kwath Maharasnadi kwath Dashamoolkashaya Mahamanjishtadikashyam-</i>	Mainly in hemorrhagic stroke because of its <i>Pitta Shamaka</i> property
<i>Tail</i>	<i>Bala tail:Mahamash tail Maha narayan tail Ashwandha tail</i>	<i>Vatashamaka</i> Lubricates and softens the <i>doshas</i>
<i>Ghrita</i>	<i>Dashamooladi ghrita Chitrakadi ghrita</i>	<i>Vatashamaka</i> Improves strength
<i>Vati</i>	<i>Yoga Raja guggulu, Trodasang guggulu Punarnavadi guggulu Kaishor guggula Simhanand guggula</i>	<i>Vatahara</i> and <i>Bringhana</i> property
<i>Asava and Arista</i>	<i>Dasamoolarishta, Balarishta Aswagandharishta</i>	<i>UshnaVeerya</i> and <i>Vatahara</i>
<i>Rasayana</i>	<i>Chyvanaprasha, Shilajatu Abhyaamalaki rasayana</i>	In <i>Avrita vata</i>

Samshodhana Chikitsa: *Samshodhan chikitsa* envisages *Panchakarma* treatment which is basically a Bio-cleansing regimen intended to eliminate the toxic elements from the body and thereby enhances the immunity of the body. In *Pakshaghata*

there is obstruction of *vata* with *kapha, pitta, rakta* and *meda*. In addition to this it also clears the intellect, improves the strength of sense organs, improves potential of all *Dhatus*, increases body strength, improves *Agni*, and delayed old age²⁷.

Snehana: *Snehana* stands for lubrication of body systems by administration of *ghrita* or tail. *Snehana* includes *Abhyantara Snehana* and *Bahya Snehana*²⁸ which can be done in *Pakshagata*. Internal *snehana* involves taking *siddha ghrita* or *taila* especially by *vatashamaka* drugs, these are used orally to lubricate the body system, soften the doshas, improves digestion, reduce dryness, regularize bowel, aid in removing impurities and improves strength and complexion. External *Snehana* or *Abhyanga* can be defined as the procedure of application of *sneha Dravya* over the body with mild pressure. It improves strength, alleviates *vata*, the power of muscle increases, removes stiffness, improves muscle tone, provides stimulation to nerves and improves sensory motor integration.

In Hemiplegia, a portion of the brain is damaged due to lack of blood supply and nutrition. The protein and fat metabolism of the body is mainly affected by *Snehana*. The nervous tissues are closely connected with the fat and protein metabolism (as they themselves contain high level of lipoproteins). Myelin is a lipid rich substance of the cell membrane of Schwann cells that coils to form the myelin sheath around the axon of myelinated nerve fibres. Myelin sheath electrically insulates the axon of a neuron and increases the speed of nerve impulse conduction. The myelin sheath consist principally the myelin lipids, which are composed mainly of cerebrosides, free cholesterol and sphingomyelin together with protein²⁹. So we consider to administer *Snehana* with the assumption that the *Snehana* due to its similarity of constitution with the nerve fibre must be helpful in repairing the structural degenerative changes and restore the lost function. Due to *Bringhana* property of *Snehana dravya*,

it normalise the *Vata dosha*, relieve pain in body, soothers and enables the nerve to function properly³⁰.

Swedana: *Swedana* is a process to induce sweating artificially in a patient who has already undergone *snehana*. *Swedana* liquefies the dearranged *Doshas*/metabolic wastes and facilitate to bring them to *kostha*, where they can be expelled out by subsequent *Panchakarma* procedures. The medicines which produce *sweda* are generally having properties like *ushna*, *tikshna*, *sara*, *snigdha*, *sukshma*, *sthira* etc. It is best for *Vatik* disorders and this relieves stiffness of muscle and brings about normal functioning of the blood vessels, muscles and tendons³¹.

Virechana: This process cleans the channels by the removal of accumulated waste products, undigested material and toxins mainly from the gut, which have moved here by *swedana*. It enhances the appetite, power of digestion and absorption of food. According to Acharya Charka, *Virechan karma* is the specific treatment for *Pakshaghata*. Acharya Susruta mentioned mild purgation (*MriduVirechana*) in *Pakshaghata* which does *Vatanulomana*. *Pakshaghata* occurring due to Cerebro-Vascular accident has major role of *Pitta*, *Rakta*, *Kapha* and *Meda* in association with *Vata*. *Virechana* is the line of treatment for *VataVyadhi* condition where *Vata* is associated with *Kapha*, *Pitta*, *Rakta* and *Meda*. So *Virechana* can prove to be very effective in *Pakshaghata* due to CVA. *Virechana* removes the *Avarana* of *Vata* so that *Vayu* performs its functions normally. *Virechana* has been also recommended for the diseases of *Raktavaha Srotas*. In modern medical science, the osmotic purgative are used e.g. Mannitol, which reduces the cerebral oedema. The same concept is there to follow *Virechana*.

Besides it, the pathogenesis of *Pakshaghata* says the *Sira-Snayu-Vishoshan* which are the *Updhatu* of *Rakta*. The treatment of *RaktaDusti* could be *Virechana* as *Rakta* is similar to *Pitta*.

Therefore by maintaining *Prakriti* of *Rakta dhatu*, the *sira snayu* etc. will also be nourished and will do their normal function³².

PATHYA-APATHYA³³

Pathya:

Ahara	
<i>Drava varga</i>	<i>Yush, vasa, majja, mamnsrasa, gomutra, dhanyamla</i>
<i>Anna varga</i>	One year old <i>shashtikshali, godhuma, navin tail, kulthi mash</i>
<i>Shakavarga</i>	<i>Shigru, patola, vartaka, rasona</i>
<i>Dugdhavarga</i>	<i>Dadhikurchika, ghrita, dugdha</i>
<i>Phalavarga</i>	<i>Badara, pakwatal, draksha, dadim, amlarasyuktaphala</i>
<i>Mamsavarga</i>	Varieties of <i>gramyaanupa, audak, jangalmamsa</i>
Vihara	<i>Asana, upanaha, swedana, avagahana, basti, mardan, nirvatsthan, sukhoshnaparishek, shirobasti, nasya, agnitaapsevan, brahmacharya, snigdha ushna lepa.</i> Live in place which has good sunlight, but devoid of direct wind Use of silk woollen clothes and soft bedding Use of <i>keshar, agar, tejpatra, ela</i> , etc.

Apathya

Ahara	Diet with <i>katu, tikta, kashaya, ras</i> and <i>ruksha</i> and <i>shita</i> properties
<i>Dravyavarg</i>	<i>Lake and river water, shitambu</i>
<i>Anna varg</i>	<i>Tarundhhanya, viruddhaanna, shushkamamsa</i>
Others	<i>Nishpavabeeja, bimbi, kasheruk, kordusha, kuruvinda, yava, karir, jambu, kramuka, talphala, asthi-majja, shaluk, tinduk, patrashak</i>
Vihara	<i>Ativyayam, Ativyavaya, Atibhramana, Vegavidharana, Chhardi, Shrama Anashana, Atigaja, Ashwa, Yanasevan, Raktamokshana, Chinta</i>

DISCUSSION: In present era, today's life style has led to increase the incidence of many *vata vikaras* like *Pakshaghata*. Ayurveda because of its most powerful aspect of 'swasthasyaswasthyarakshanam' has a big role to play in prevention of many disease as well as *Vata vyadhis*. Ayurvedic principles of *Ahara-vihara, Dincharya, Ritucharya* and *Achara Rasayana* are effective in prevention of *Pakshaghata*.

CONCLUSION: Though *Pakshaghata* is difficult to manage, but if proper treatment is given at appropriate time with logical use of *shaman* and *shodhana chikitsa*, good results are obtained. *Samshaman*

consist of conservative treatment while *sanshodhana* is a bio-cleansing regimen. *Snehana* corrects the *shuskadhatus* that are the root cause for the vitiation of *vata* and imparts strength to the body and *agni*. *Swedana* relieves all types of *Vata* symptoms and smoothens the body part. *Virechana* does *Vatanulomana* and removes *Avarana* of *Vata*. Repetitive uses of these three *karmas* are essential for the total control of *Vata* and restoration of normal functions as chances for recurrence of the disease so treated are remote. In this present article Ayurvedic approach in the management of *Pakshaghata* is discussed in a scientific way.

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Declared

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