

Review of Pakshaaghaata w.s.r. to Cerebrovascular Accidents and its Management

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Abstract

Pakshaaghaata has been classified under three types in Ayurveda i.e., *SuddhaVaataja*, *Anyadosha Samsrista* and *Kshayahetuja*. A number of disease processes in modern science manifest as *Pakshaaghaata*. Cerebrovascular accident is the commonest disease manifesting as *Pakshaaghaata*. *Virechana*, *SarvaangaAbhyanga*, *BaaspaSweda* and some herbo-miniral formulations show better result in the disease *Pakshaaghaata* due to CVA (cerebro-vascular accident). In this present review manuscript alternative Ayurvedic approach in the managing of hemiplegia is discussed in a systematic way.

Keywords

Pakshaghata, *Hemiplegia*, CVA (cerebro-vascular accident), *Vata-SleshmaDosh*, *Snehana*, *Swedan*, *MriduVirechana Karma*, *Basti karma*



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INTRODUCTION

Pakshaaghaata is a most important Vaatavyaadhi described under Vaata-NaanaatmajaVyaadhi. There are a number of disorders like vascular disorder, infective disorders of brain, tumors, degenerative disorders in brain, trauma etc in modern science which manifest them as Pakshaaghaata (Hemiplegia). It is a type of paralysis which is affecting one side of the body.

The common cause of hemiplegia is cerebro-vascular accident (stroke)¹. 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 brain². Hemiplegia also caused by a wide spectrum of disease processes like hypertensive encephalopathy, vascular disorders, infective disorders of brain tissue, tumours or abscess, trauma, internal artery occlusion etc. The prevalence of completed stroke and hemiplegia due to any cause is

56.9 per 1,00,000 and the high incidence of hemiplegia in the young has been pointed out, the prevalence rate per 1,00,000 population in 68.5 in male and 44.8 in female³.

Acharya Sushruta compared Hemiplegia with Pakshaghata due to much similarity in their symptoms, where vitiated Vata is main causative factor. Acharya Charaka clinically compared with Pakshawadha. The changing life style, bad food habits etc leads to disturb equilibrium of *Tridosha*. *Vata*, among *Tridosha* is responsible for dynamic entity of life and locomotion.

Pakshaghata has been enlisted amongst the eighty types of *NanatmajaVataVyadhies*⁴ and is considered to be prominent of *all VataVyadhies*. The pathological phenomena of *Vata* playing central role in the manifestation of *Pakshaghata* are *Suddhavataprakopa*, *AnyadoshaSamsirstavataprakopa* and *dhatukshayajanyavataprakopa*⁵.

Comparison between hemiplegia and pakshaghat⁶

S/N	Factors	Hemiplegia	Pakshaghata
1.	Etiology	Age, atherosclerosis, hemorrhage, injury to head, nutrition imbalance.	<i>Vaya, Margavarana, Dhatukshaya, Marmabhighata, AsrukSrava, RukshaAlpaAhara</i>
2.	Signs and symptoms	Loss of power and movement in half side of the body, minor sensory deficit, dysarthria, atrophy due to disease, stiffness	<i>Chestanivriti, isat karma kshaya in Ardha kaya, ardhanarishwaratachesta, vaksthamba, sirasanayushosha.</i>

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| 3. Pathology | Obstruction of cerebral arteries & Veins, ischemia develops due to depletion in glucose metabolism, it outcomes in death of nerve cells. | <i>Sanga in Vatavaha Srotas</i> |
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Nidan of Pakshaghata:

Due to excessive intake of *VataPrakopaka Ahara-Vihara* like *Shita, Ruksh, Laghu Ahara, Katu Tikta Rasa Ahara*, excessive activities, prolonged wake up at night, stress, chronic disorder, physical trauma, excessive walking or exercise, excessive loss of *Dhatu*s like blood, semen leads to *Vata Vriddhi, Vega Dharna*, heavy weight lifting⁷.

Rupa (clinical symptoms):

- *Ruja* (Ruja),
- *Vakstambha* (blurred speech),
- and *Chesta Nivruti* (loss of movements).
- Half of the human body is functionless and unconscious⁸.

Samprapti (Pathogenesis):

Morbid and aggravated *Vata* may cause restriction of the vessels and ligaments as a result of which there will be contracture, either of one hand or limb along with aching or piercing pain. This ailment is called as *Ekangroga* (monoplegia). Paralyzing one side of the body, either right or left, causes immobility of that side in association with pain and loss of speech, then element is called Pakshaghata.

If the above mentioned morbidity pervades the entire body; then ailment is called as *Sarvang Roga* (paralysis of the entire body)^{9,10}

TREATMENT PROTOCOL

According to *Acharya Charka, Swedana* (Sudation), *Snehana* (Oleation) and *Virechana* (Purgation) are the treatment protocol while treating *Pakshaghata* (cerebral vascular accident) patient¹¹. Further Sushruta explains about the treatment of Pakshaghata are *Abhyanga, Mrudu Shodhana, Anuvasana Basti, Asthapan Basti and Shiro Basti*¹²

Hemiplegia is one of the most common neurological diseases and still stands as a challenge to different medical systems. Many research works have been done on hemiplegia in Ayurveda and modern medical science but no drug has yet been claimed to cure hemiplegia completely. In Ayurveda there are specific treatments for pakshaghata. Hemiplegia can be better managed by the Ayurvedic principles of management namely:

1. Nidana Parivarjana
2. Shodhana (Panchakarmatherapy)

3. ShamanaChikitsa.

NidanParivarjana- Avoiding the aetiological & risk factors which causes vitiation of vatadosha as like shita, ruksh , laghuahara, katu ,tikta rasa ahara, excessive activities, wake up at late night regularly , stress, chronic disorder, physical trauma, excessive walking or exercise, excessive loss of *Dhatu* ,*Vega Dharna*, heavy weight lifting etc should be avoid. *Nidana Parivarjana* stops the further progression of the disease, by restricting vitiation of Doshas. Hence main objective of treatment is to improve metabolic activities in *Dhatu* level, to rectify *Srotoavrodha* and to provide nourishment to depleted *Dhatu*.

Samana -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 VataDoshas like –

- **Kwatha/Kashayam(Decoction):-** *Dashamool kwath*, *bala-Mansyadi kwath* (*kaphavatahara*), *Mahamanjishtadi kwath* - mainly in hemorrhagic stroke because of its PittaSamaka property.
- **Choorna-** *Rasanadi Choorna*, because *Rasana Vatahranam Shrestham*¹³, *Aswagandha powder* & *Saraswat powder* due to its *Medhya*, *nuerogenic* and

Branghana properties , it pacify the Vataand correct impairment of functions and movement restrictions and relieves pain and inflammation .

- **Tablets (Vati)-MahaYoga Raja Guggulu**, *punarnavadi Guggulu*, due to *Vatahara* and *Branghana* property
 - **Herbominiral compounds (Bhasmas)-** *Ras Raj Ras*, *VarihataVatachintamaniRas* ,*EkangveerRas*, *Rajatbhashma* etc,as all are potent *Vatashamaka* and nerve stimulant due to their ingredients.
 - **Rasayana-Brahma Rasayana**, *Chyvanaprasha* and *Abhyaamalaki Rasayana* are indicated in *AvritaVata*¹⁴.
 - **Gharita&Taila(Medicated oils)-**, *Aswagandha Ghrita*, *DashamooladiGharita*, *ChitrakadiGharita*,*BaladiGharita*,*Nirghundi Taila*,*MoolakTaila*,*RasnaTaila*,*Vrishmoolad itaila*¹⁵ etc.
 - These *Ghrita&Tailas* are used as *Pana*, *Abhyanga*, *AnuvashanaBasti* etc. In all these formulations mainly *Vatahara* drugs are use and *Grita* and *Taila* have good *Vatahara* property and give nourishment to the body.
- PanchakarmaTherapy(purification therapy) –**

Panchakarma or Sodhana therapy is a unique real pathogenesis breaker therapy which re-established homeostasis and equilibrium of body

Shodhana means purification of the body by eliminating morbid *Doshas and Dushyas* from body through Panchakarma. *Acharya Charaka* described treatment protocol for *Pakshaghata Diseases in chikitsaSthana*. *Swedana* (Sweating), *Snehana* (Oleation), *Virechana* (Purgation), *Anuvasanabasti*, *Asthanabasti*, *Shirobasti*, *Nasya*(Nasal Effusion) and *Shirodhara* (Pouring of Oil on the Head) etc are the line of treatment for *Pakshaghata*(CVA), according to various Ayurvedic texts.

DISCUSSION

The disease caused by *SuddhaVaataja* condition will show gradual onset as *Vaata* has to vitiate in step by step through *Sanchaya*, *Prakopa* etc. whereas that caused by *Aavarana* will show sudden onset. So having sudden onset *Pakshaaghaata* due to CVA can be taken as *Aavaranajanya*.

Probable mode of action of therapy:-

Virechana: - It is helpful in the *Vatika* disorder where the *Vata* is obstructed by *Kapha*, *Pitta*, *Meda*&*Rakta*. So it will prove very useful in the management of

Pakshaaghaata due to cerebro-vascular accident in which there is obstruction of *Vaata with Kapha, Pitta, Rakta and Meda*. In addition to this it also clears the intellect, improves the strength of sense organ, potentiates all *Dhaatu*, increases body strength, improves *Agni* & delayed old age.

SarvaangaAbhyanga: - Being *Kapha-Vaatahara, Shramahara, Pustikara, Urjaa-Varna-Balaprada*, it proves its effectiveness in *Pakshaaghaata* due to CVA. In addition to this it also increases circulation, especially to nerve endings and tones up muscle inducing strength in weak muscles, helps in improvement in elimination of impurities from the body and helps in increasing in mental alertness

***Basti*(herbal enema therapy)** - All the *Acharyas*(*ayurvedic stalwarts*) have appreciated *Basti* as a unique form of treatment modality for *Vata* and other *Doshas* too because it expels the vitiated *Doshas* rapidly as well as it nourishes the body. The main cause of hemiplegia is vitiated *Vata* and in *Ayurveda* text the choice of treatment of *Vatadosha* is *Basti* and on the other hand *Aavarana* is main causative factor in the pathophysiology of *Pakshaghata*. Thus, breaking this process of *Aavarana* needs foremost consideration in its

management. *Charaka* has stressed on *Srotoshudhhi*, *Vatanulomana* and *Rasayana* in general management of *Avarana*. *Basti* achieves both the goals i.e. *Vatanulomana* and *Srotoshudhhi*. *Basti* is treatment of choice for *MadhyamaMarga* and to protect *Marmas*. The place of action of drug is (*pakvasaya*) gut.

Shirodhara and Shiropichu- *Shirodhara* is an important therapeutic measure in *Ayurvedic* system of medicine, in this therapy pouring any liquid on the forehead from a specific height and for a specific period continuously and rhythmically allowing the liquid to run through the scalp and into the hair. This is a subtype of *Murdhataila* which means keeping the medicated oil on the head region for neuromuscular relaxation and nourishment.

Sushruta has specifically mentioned *ShiroBasti* in *Pakshaghata* because he postulated that *VataharaTaila* directly strikes to the site of the lesion of *Mashtishka*. *Shirodhara* is a purifying and rejuvenating therapy designed to eliminate toxins and mental exhaustion as well as relieve stress and any ill effects on the central nervous system and relieves mental exhaustion as well as pacifies the aggravated *VataDosha* in *Shira* which helps in relaxing

the nervous system and balancing the *PranaVayu* around the head.

When a stream of liquid is poured on center point of head then a specific sensation of touch is produced. The feeling of this contact is like a stone drop in a pole which extends outwards which produces wave, this effect lead a person to a state of concentration. The state of concentration is enhancing the release of serotonin which is responsible for pleasant and relieving of stress, and the mind and body also.

Due to continuous pouring of liquid nerve ending of autonomic nervous system are stimulated, the produced chemical substances like acetylcholine. Small doses of acetylcholine cause fall of blood pressure and larger doses activate central nervous system. Hemiplegia is a neurological disorder so *Shirodhara* and *Shiropichu* with *VataSamaka* drugs are very effective.

Nasya-Many types of *Nasyas* indicated in *Pakshaghata* according to *Avastha* of the disease by different types of *NasyaYogas*. *AvapeedanaNasya* indicated in unconscious patients and *Pradhamana Nasya* is indicated repeatedly to restore the consciousness. *Sneha Dhoomapana* and *Nasya* beneficial in *Pakshaghata* to give the nourishment to the

brain. According to *Charak,Nasa* is the portal gateway of Shiras.

The drug administrated through nose reaches to the brain (ShringatakaMarma) by;

A) Diffusion –lipid soluble substance through the lipid bilayer of plasma membrane. **B)Neurological pathway** – olfactory receptor stimulated, nerve impulse travel through olfactory nerve to olfactory blubs than olfactory tract to limbic system, olfactory cortex and also related with amygdaloidal complex, hypothalamus, epithalaums and other important structure of the brain so the drugs administrated , stimulate the high centre of the brain and show action on regulation of endocrine and nervous system function.

C) Vascular pathway- Nasal venous blood drains in to the facial vein and ophthalmic vein also. The facial vein has no valves so it freely communicates with intracranial circulation so the drug administrated through Nasya absorb into the meninges and intracranial organ and eliminates the morbid *Dosha* which responsible for the disease. When drug administrated through nostril reaches ShringatakaMarma which is a *SiraMarma* so by Nasya drug spread in the *Murdha* reaches at a junctional place of

Netra, Srotra(ear), Kantha(throat), Sira mukhas(opening of the vessels) etc and remove the morbid Dosha, So in hemiplegia Nasya is very effective because of Samana, Shodhana and Bhranghna property.

CONCLUSION

Pakshaaghaata due to CVA results from *Aavarana* of *Vaata* with *Pitta, Rakta, Kapha* and *Meda*.

Virechana followed by *SarvaangaAbhyanga* and herbo-minralcompounds showed significant improvement in Distal motor function, Motor function of arm, Motor function of leg, *Vaakgraha*, Increased muscle tone (*Sankocha*), Muscle power and Exaggerated reflex.

It also significantly improves the activities of daily living of patients like Sitting from lying down, Standing from sitting, Walking down stair, Increase in walking capacity and Hand grip power. The associated symptoms like Tiredness, Pain, *Gaurava, Vivandha, Sotha, Bhrama, Shaitya and Shirashula* also shows significant improvement.

SarvaangaAbhyanga, BaaspaSweda withoutVirechana also showed significant

improvement in above mentioned symptoms of *Pakshaaghaata*.

Looking to the chronicity and deep seated nature of the disease longer duration of therapies may be required to obtain better results.

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