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 Samriska 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–SleshmaDosha, Snehana, Swedan, MriduVirechana Karma, Basti karma
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 brain\(^2\). 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 female\(^3\).

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 \(\text{Vata}\), among Tridosha \(\text{Vata}\) 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

- \(\text{Suddhavataprakopa} \)
- \(\text{AnyadoshaSamsirstapatrapkopa} \)
- \(\text{dhatukshayajanyavatrapkopa} \)

### Comparison between hemiplegia and pakshaghat\(^6\)

<table>
<thead>
<tr>
<th>S/N</th>
<th>Factors</th>
<th>Hemiplegia</th>
<th>Pakshaghata</th>
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<tbody>
<tr>
<td>1.</td>
<td>Etiology</td>
<td>Age, atherosclerosis, hemorrhage, injury to head, nutrition imbalance.</td>
<td>(\text{Vaya, Margavarana, Dhatukshaya, Marmabhighata, AsrukSrava, RukshaAlpaAhara} )</td>
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<td>2.</td>
<td>Signs and symptoms</td>
<td>Loss of power and movement in half side of the body, minor sensory deficit, dysarthria, atrophy due to disease, stiffness</td>
<td>(\text{Chestanivriti, isat karma kshaya in Ardha kaya, ardhahariishwara chatteresta, vaksthamba, sirasanayushosha} )</td>
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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.

**Nidan of Pakshaghata:**
Due to excessive intake of VataPrakopakaAhara-Vihara like Shita, Ruksh, LaghuAhara, KatuTitikaRasaAhara, excessive activities, prolonged wake up at night, stress, chronic disorder, physical trauma, excessive walking or exercise, excessive loss of Dhatu like blood, semen leads to VataVriddhi, VegaDharna, heavy weight lifting.

**Rupa (clinical symptoms):**
- Ruja (Ruja),
- Vakstambha (blurred speech),
- and ChestaNivruti (loss of movements).
- Half of the human body is functionless and unconscious.

**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 SarvangRoga (paralysis of the entire body).

**TREATMENT PROTOCOL**
According to Acharya Charka, Swedana (Sudation), Snehana (Oleation) and Virechana (Purgation) are the treatment protocol while treating Pakshaghata (cerebral vascular accident) patient. Further Sushruta explains about the treatment of Pakshaghata are Abhyanga, MruduShodhana, AnuvasanaBasti, Asthapanabasti and ShiroBasti.

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. NidanaParivarjana
2. Shodhana (Panchakarmatherapy)

**Nidan Parivarjana** - 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 Dhatus, 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 *Dhatus*.

**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 VataDoshaas like –

- **Kwatha/Kashayam** *(Decoction)*:-
  *Dashamool kwath, bala-Mansyadi kwath (kaphavatahara,)*, *Mahamanjishtadi kwath* - mainly in hemorrhagic stroke because of its PittaSamakaproperty.

- **Choorna** - *Rasanadi Choorna*, because *Rasana Vatahranam Shrestham*¹³, *Aswagandha powder* & *Saraswat powder* due to its Medhya, nuerogenic and Branghana properties, it pacify the Vata and correct impairment of functions and movement restrictions and relieves pain and inflammation.

- **Tablets** *(Vati)*- *Maha Yoga Raja Guggulu, punarnavadi Guggulu*, due to *Vatahara* and *Branghana* property.

- **Herbominiral compounds** *(Bhasmas)* - *Ras* *Ras, Varihata Vatchintamani Ras, Ekangveer Ras, Rajatbhashma etc*, as all are potent *Vatashamaka* and nerve stimulant due to their ingredients.

- **Rasayana-Brahma Rasayana, Chyvanaprasha and Abhyaamalaki Rasayana** are indicated in *Avrita Vata*¹⁴.

- **Gharita&Taila** *(Medicated oils)*-, *Aswagandha Ghrita, Dashamooladi Gharita, Chitrakadi Gharita, Baladi Gharita, Nirghundi Taila, Moolak Taila, Rasna Taila, Vrishmoolad itaila*¹⁵ etc.

- These *Ghrita&Tailas* are used as Pana, Abhyaanga, Anuvashana Basti etc. In all these formulations mainly *Vatahara* drugs are use and Grita and Taila have good *Vatahara* property and give nourishment to the body.

**Panchakarma Therapy** *(purification therapy)* –

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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, Asthapanabasti, 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 proof 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-Balapradra, it proofs 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 Avarana is main causative factor in the pathophysiology of Pakshaghata. Thus, breaking this process of Avarana needs foremost consideration in its
management. *Charaka* has stressed on *Srotoshudhi, Vatanulomana* and *Rasayana* in general management of *Avarana. Basti* achieves both the goals i.e. *Vatanulomana* and *Srotoshudhi. 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 rythmatically 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 canter 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 amygdaloideal 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-minral compounds 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 without Virechana 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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