HEMIPLEGIA & ITS MANAGEMENT THROUGH PANCHAKARMA

Choudhary Kshiteeja¹, Sharma Parul²

¹M.D. Scholar, 1st Year, Department Of Panchakarma, Rishikul Govt. P.G. Ayu. College, Haridwar, Uttarakhand, India
²M.D.(Ay.) Panchakarma, Medical Officer, Department Of Panchakarma, Rishikul Govt. P.G. Ayu. College, Haridwar, Uttrakhand, India

ABSTRACT

Hemiplegia is paralysis of either the left or right side of the body with loss of function. It is also associated with poor balance, speech deficit and loss of function which results from any injury to motor centres of the brain either due to ischemia or haemorrhage. In Ayurveda it can be clinically compared with Pakshaghata due to much resemblance in their clinical symptoms. The Treatment of Hemiplegia is focused on improving sensation, motor abilities allowing the patients to better manage their activities of daily living. In acute stage, the patient can be managed by allopathic medical science, but there are no much treatment modalities to treat the residual spasticity of a chronic patient of Hemiplegia. Hence it is the need of time to find out more effective and safe treatment for Hemiplegia (Pakshaghata). Ayurveda play an important role in such situation. As per Ayurveda classics, Acharya has described the involvement of vitiated Vata Dosha in pathogenesis of Pakshawadha Vyadhi, so Snehan, Swedan, Mridu Virechana, Basti etc. are considered the best way to treat a patient of Hemiplegia. In addition Samana Yogas are also very beneficial for promotion and preservation of health. In this present article Ayurvedic approach in the management of Hemiplegia is discussed in a scientific way.

Keywords: Hemiplegia, Pakshaghata, Ayurveda, Vata Dosha. Snehan, Swedan, Mridu Virechana, Basti.

INTRODUCTION

Hemiplegia is one of the most crippling disorders in our society. It is a type of paralysis which 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.

In Ayurveda texts according to Acharya Charaka Hemiplegia clinically compared with Pakshawadha and Acharya Sushruta compared with Pakshaghata due to much resemblance in their symptoms, where vitiated Vata is main causative factor. The changing life style, bad food habits etc leads to vitiation of Vata, chief among Tridosha and dynamic entity of life and
locomotion. One of the conditions offshoots as a consequence of vitiated Vata is Pakshaghata (Hemiplegia). Pakshaghata has been enlisted amongst the eighty types of Nanatmaja Vata Vyadhies and is considered to be prominent of all Vata Vyadhies. The pathological phenomena of vata playing vital role in the manifestation of Pakshaghata are Sudha Vata Prakopa, Anyadosha Samsirsta Vata prakopa and Dhatukshayajanya Vata Prakopa.

Comparison between hemiplegia and pakshaghata

<table>
<thead>
<tr>
<th>S. No.</th>
<th>Factors</th>
<th>Pakshaghata</th>
<th>Hemiplegia</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Etiology</td>
<td>Vaya, Margavarana, Dhatkshaya, Marmabhigahata, Asruk Srava, Ruksha Alpa Ahara</td>
<td>age, atherosclerosis, hemorrhage, injury to head, nutrition imbalance.</td>
</tr>
<tr>
<td>3.</td>
<td>Pathology</td>
<td>Sanga in Vata Vaha Siras</td>
<td>Obstruction of cerebral vessels, ischemia depletion in glucose metabolism, death of Nerve cells.</td>
</tr>
</tbody>
</table>

In Ayurveda there are specific treatments for Pakshaghata. According to Acharya Charka, Swedana (Sudation), Snehana (Oleation) and Virechana (Purgation) are the main modalities of treating pakshaghata patient. Acharya Sushruta added Abhyanga, Mridu Shodhana, Anuvasana Basti, Asthapan Basti and Shiro Basti.

MATERIALS AND METHODS
As the civilization grows advanced, there is increased stress, faulty dietary and exercise habits due to which man has become more vulnerable for neurological conditions like Hemiplegia 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. Hemiplegia can be better managed by the Ayurvedic principles.

Nidan of Pakshawadha
Nidan for Pakshaaghaata has not been described in the classics. 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.

Rupa (clinical symptoms)
Pain (Ruja), Vakstambha, and loss of movements. Half of the human body is functionless and unconscious.

Samprapti (Pathogenesis)
When vitiated Vata 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 as Pakshaghata. 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 Ekang rog (Monoplegia). If the above mentioned morbidity pervades the entire body; then ailment is called as Sarvang Rog (Paralysis of the entire body).

Management of Pakshaghata (Hemiplegia)
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. Shamana Chikitsa
3. Shodhana (Panchakarma therapy)

**Nidan Parivarjana** - Avoiding the aetiological & risk factors which causes vitiation of Vata Dosha as like 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 etc should be avoid. Nidan 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 Vata Dosha as like –

- **Kashayam (Decoction)** - Dashamoolkasaya (kaphavatahara), Gandharvahastadikashayam (Vatasamana), Mahamanjishthadi kashyam-mainly in hemorrhagic stroke because of its Pitta Samaka property.
- **Choorna (Powder)** - Rasanaadi Choorna because Rasana Vataharam Shrestham, Saraswatha Choorna due to its Medhya Property and Branghana, it pacify the Vata.

- **Bhasma (Rasa preparation)** - Varihata Vatachintamani Ras, Ekangveer Ras, Rajat Bhashma etc, as all are potent vata Shamak and nerve stimulant due to their ingredients.

- **Vati (Tablet)** - Yoga Raja Guggulu, Punarnavadi guggulu, ShivaGulika due to Vatahara and Branghana property.

- **Asava and Arista (Syrup)** - Kumaryasavam, Lavangasavam Aswagandharishtam, Balarishtam, Dasamoolarishtam etc. All these Asava and Arista are useful in Hemiplegia because Ushna Veerya property and Vatahara drugs are use in these formulations.

- **Rasayana (Immunomodulating drugs)** - Chyvanaprasha and Abhyamalaki Rasayana are indicated in Avrita Vata.

- **Ghrita and tailam (Ghee and Oils)** - Dashamooladi Gharita, Chitrakadi Gharita, Baladi Gharita, Nirghundi Taila, Moolak Taila, Hswpanchmooladi Taila, Shacharadi Taila, swandranstha taila, Rasna Taila, Vrishmooladi taila etc. These Tailas are used as Pana, Abhyanga, 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.

**Sodhana (Panchakarma Therapy)** - Shodhana means purification of the body by eliminating morbid Doshas and Dushyas from body through Panchakarma. As it is already discussed that Swedana (Sudation), Snehana (Oleation), Virechana (Purgation), Anuvasana Basti, Asthapanavasana Basti, Shiro Basti, Nasya (Nasal Effusion) and Shirodhara (Pouring of Oil on the Head) etc are the line of treatment for Pakshaghata, accord-
ing to various Ayurvedic texts, done according to the patient’s requirement and severity. Brunghana Chikitsa, Vatahara Chikitsa and Marma Chikitsa are also indicated.

**DISCUSSION**

In present era, today’s life style has led to increases the incidence of many diseases like Hemiplegia. Ayurveda because of its most powerful aspect of ‘swasthasyas-wasthyarakshanam’ has a big role to play in prevention of many disease as well as vatic disorder. Ayurvedic principles of diet and living pattern (Ahara-vihara, Din-charya, Ritucharya) and codes of conduct (AcharaRasayana) that are effective in prevention of Pakshaghat. Vitiates Vata is pathological basis for this condition described in Ayurveda texts.

**Probable mode of action of various therapies of Shodhan-**

- **Snehana and Swedana in Hemiplegia**- Snehana (oleation therapy) and Swedana (fomentation therapy) is considered as pretreatment (Purvakarma) of Panchakarma. In Hemiplegia Snehana can be done internally or externally. Internal Snehana involves taking Siddhda Ghrita (medicated clarified butter) or Siddhda Taila (medicated edible oil) especially by Vata Samaka drugs use in Hemiplegia, these Ghrita or Taila orally to lubricate the body system, reduce dryness, and aid in removing impurities. External Snehana involves a prescribed body massage with the application of Siddhda Taila to the skin. By Abhyanga the power of muscle is increase, stiffness remove and muscle tone also improves. The oil is often pre-medicated with herbs for specific conditions. In condition of Hemiplegia it mainly the oil is medicated with Vatahara drugs. In Hemiplegia, a portion of the brain is damaged due to lack of blood supply and nutrition. For the repair of the damaged tissue nutrition plays a very important role. The Snehana is mainly affecting the protein and fat metabolism of the body. 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 protein. So in such condition we are administering Snehana with the presumption that the Snehana due to its similarity of constitution with the nerve fibre may be help in repair the structural degeneration and restore the lost function.

Due to Brunghana property of Snehana Dravya, it normalise the Vata Dosha, relieve pain in body, Soothens & enables the nerve to function properly. Swedana follows the completion of Snehana and involves heat therapy. Swedana also best for Vata disorder and it relieves from stiffness of muscle and bringing about normal functioning of the blood vessels, muscles and tendons.

- **Virechna in Hemiplegia**- According to Acharya Charka, Virechan karra is the specific treatment for Pakshaghat. Acharya Susruta mentioned mild purgation (Mridu Virechana) in Pakshaghata which does Vatamulomana. 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 Vata Vyaadhi 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 Aavarana of Vata so that Vayu performs its functions normally. Virechana has 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 Rakta Dusti could be Virechana as Rakt is similar to Pitta. Therefore by maintaining Prakriti of Rakta Dhatu, the Sira Snayu etc. will also be nourished and will do their normal function.

- **Basti in Hemiplegia**- All the Acharyas 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 Vata Dosha 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 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 Madhyama Marga and to protect Marmas. The place of action of drug is (Pakvasaya) gut.

First sodium ion in Saindhava actively absorb from colon⇒ High concentration of sodium ion facilitates sugar influx⇒ Increase sodium ion in mucosal membrane generate osmotic gradient⇒ Water follows this osmotic gradients thus passive absorption of water take place Free fatty acid is easily absorbed by passive diffusion in the colon. It can be understood that how lipid and water soluble portions absorbed from the colon. According to modern pharmacokinetics, it is also proved that rectal drugs administration might exceed the oral value due to partial avoidance of hepatic first pass metabolism. So in Hemiplegia when we give Basti by Vatahara and Branghana drugs, the nutritive substance of drugs absorb from mucosa layer of gut, and toxic material of body flush out from rectal or intestinal mucosal layer.

- **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 Murdha Taila which means keeping the medicated oil on the head region for neuromuscular relaxation and nourishment. Sushruta has specifically mentioned Shiro Basti in Pakshaghata because he postulated that Vatahara Taila 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 *Vata Dosha* in *Shira* which helps in relaxing the nervous system and balancing the *Prana Vayu* 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 *Shirotopichu* with *Vata Samaka* drugs are very effective.

- **Nasya**—Many types of *Nasyas* indicated in *Pakshaghata* according to *Avastha* of the disease by different types of *Nasya Yogas*. *Avapeedana Nasya* indicated in unconscious patients and *Pradhamana Nasya* are 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 (*Shringataka Marma*) 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 ⟷ olfactory blubs ⟷ olfactory tracts ⟷ 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 *Shringataka Marma* which is a *Sira Marma* so by *Nasya* drug spread in the *Murdha* reaches at a junctional place of *Netra*, *Srotar*(ear), *Kantha*(throat), *Siramukhas*(opening of the vessels) etc and remove the morbid *Dosha*, so in Hemiplegia *Nasya* is very effective because of *Samana*, *Shodhana* and *Bhranghana* property.

**CONCLUSION**

Though Hemiplegia (*Pakshaghata*) is difficult to manage, but if proper treatment is given at appropriate time with logical use of internal and external medicines, good results are obtained and patient remain self dependant. The other rehabilitation therapy besides *Panchakarma*, as occupational therapy, vocational therapy etc. should also be incorporated for its complete management.

**REFERENCES**

1. Davidson’s Principle & Practice of Medicine by Nicholas A. Boon, Nicki R. Colledge, Brian R. walker and John A. A. hunter, Chuchill Livingstone El-
2. Ibid 1 p.1200.


13. Ibid4 (Chapter 25/40, Sutra Sthan),


15. Ibid7(Chapter 28, Chikitsa Sthan).

CORRESPONDING AUTHOR
Dr. Choudhary Kshiteeja
M.D. Scholar, 1st Year, Department Of Panchakarma, Rishikul Govt. P.G. Ayu. College, Haridwar, Utrakhland, India
Email: choudharykshiteeja@gmail.com

Source of support: Nil
Conflict of interest: None Declared