

HEMIPLEGIA & ITS MANAGEMENT THROUGH PANCHAKARMA**Choudhary Kshiteeja¹, Sharma Parul²**¹M.D. Scholar, 1st Year, Department Of Panchakarma, Rishikul Govt. P.G. Ayu. College, Haridwar, Uttrakhand, India²M.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 preva-

lence 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*⁴ and is considered to be prominent of all *Vata Vyadhies*. The pathological phenomena of

vata playing vital role in the manifestation of *Pakshaghata* are *Suddha Vata Prakopa*, *Anyadosha Samsirsta Vata prakopa* and *Dhatukshayajanya Vata Prakopa*⁵.

Comparison between hemiplegia and *pakshaghata*⁶

| S. No. | Factors | <i>Pakshaghata</i> | Hemiplegia |
|--------|--------------------|--|---|
| 1. | Etiology | <i>Vaya, Margavarana, Dhatu kshaya, Marmabhighata, Asruk Srava, Ruksha Alpa Ahara</i> | age, atherosclerosis, hemorrhage, injury to head, nutrition imbalance. |
| 2. | Signs and symptoms | <i>Chesta Nivriti, Isat Karma Kshaya in Ardha Kaya, Ardhanarishwarat Achesta, Vak Sthamba, Sira Sanayu Shosha.</i> | Loss of power and movement in half side of the body, minor sensory deficit, dysarthria, atrophy due to disease, stiffness |
| 3. | Pathology | <i>Sanga in Vata Vaha Siras</i> | Obstruction of cerebral vessels, ischemia depletion in glucose metabolism, death of Nerve cells. |

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* patient⁷. *Acharya Sushruta* added *Abhyanga*, *Mridu Shodhana*, *Anuvasana Basti*, *Asthapana Basti* and *Shiro Basti*⁸.

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 *Dhatu*, *Vega Dharana*, heavy weight lifting.⁹

Rupa (clinical symptoms)

Pain (*Ruja*), *Vakstambha*, and loss of movements. Half of the human body is functionless and unconscious.¹⁰

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 *Ekanag rog* (Monoplegia). If the above mentioned morbidity pervades the entire body; then ailment is called as *Sarvang Rog* (Paralysis of the entire body).^{11,12}

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 *Dhatu*, *Vega Dharana*, 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*s.

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)**- *Dashamoolkasya (kaphavatahara)*, *Gandharvahastadikashayam (Vatasamana)*, *Mahamanjishtadi kashyam*-mainly in hemorrhagic stroke because of its *Pitta Samaka* property.
- **Choorna(Powder)**- *Rasanadi Choorna* because *Rasana Vatahranam Shrestham*¹³, *Saraswatha Choorna* due to its

Medhya Property and *Branghana*, it pacify the *Vata*.

- **Bhasma(Rasa preparation)**- *VarihataVatachintamani 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*¹⁴.
- **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*¹⁵ 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*, *Asthapana Basti*, *Shiro Basti*, *Nasya*(Nasal Effusion) and *Shirodhara* (Pouring of Oil on the Head) etc are the line of treatment for *Pakshaghat*, accord-

ing to various *Ayurvedic* texts, done accordingly 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 'swasthasya-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*, *Dincharya*, *Ritucharya*) and codes of conduct (*AcharyaRasayana*) that are effective in prevention of *Pakshaghat*. Vitiated *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 *Sidhdha Ghrita* (medicated clarified butter) or *Sidhdha 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 *Sidhdha Taila* to the skin. By *Abhynga* 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 Hemi-

plegia, 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 *Snehna* 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, Soothen & 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 karrna* is the specific treatment for *Pakshaghat*. *Acharya Susruta* mentioned mild purgation (*Mridu Virechana*) 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 *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 Dosh* 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 \Rightarrow High concentration of sodium ion facilitates sugar influx \Rightarrow Increase sodium ion in mucosal membrane generate osmotic gradient \Rightarrow 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 rhythmically 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 *Shiropichu* 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 \Rightarrow olfactory blubs \Rightarrow olfactory tracts \Rightarrow 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*, *Srotra*(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

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CORRESPONDING AUTHOR

Dr. Choudhary Kshiteeja

M.D. Scholar, 1st Year,
Department Of Panchakarma,
Rishikul Govt. P.G. Ayu. College,
Haridwar, Uttrakhand, India

Email: choudharykshiteeja@gmail.com

Source of support: Nil

Conflict of interest: None Declared