



ROLE OF AYURVEDA IN THE MANAGEMENT OF PAKSHAGHATA (HEMIPLEGIA) W. S. R. TO CEREBRO VASCULAR ACCIDENTS

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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 cause of pakshaghata is prakupit vayu. The pathological phenomenon of vata is playing central role in manifestation of pakshaghata are suddha vataprakopa, Anyadoshsamsirsta vataprakopa and Dhatukshyajanya vataprakopa.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 article Ayurvedic management of Hemiplegia(Pakshaghata) is discussed in scientific way.

KEYWORDS: Hemiplegia, Pakshaghata, Ayurveda, Snehan, Swedan, Basti.

INTRODUCTION

Hemiplegia is one of the most crippling disorders in our society.It is a type of paralysis which (stroke).^[1] There are two major catagories 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]

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]

Pakshaghata is a most important vaatavyadhi described under vaata-naanaatmaja vyaadhi. There are a number of disorders like vascular disorders, infective disorders of brain, tumours, degenerative disorders in brain, trauma etc in modern science which manifest them as pakshaaghaata (Hemiplegia). It is type of paralysis which is affecting one side of the body.

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 phenomenon of vata playing vital role in the manifestation of pakshaghata and suddha vata prakopa, anyadosha Samsirsta vata prakopa and Dhatukshyajanya Vata Prakopa.^[5]

Comparison between hemiplegia and pakshaghata^[6]

S. No.	Factors	Pakshaghata	Hemiplegia
1.	Etiology	Vaya, Margavarana, Dhaturkshaya, Marmabhighata, Asruksrava, Ruksha Alpa Ahara	Age, atherosclerosis, haemorrhage, injury to head, nutrition imbalance.
2.	Signs and Symptoms	Chesta Nivriti, Isat Karma Kshaya in Ardha Kaya, Ardhanarishwarat Achesta, Vakstamha, Sira sanayu shosha.	Loss of power and movement on half side of the body, minor sensory deficit, dysarthria, atrophy due to disease, stiffness.
3.	Pathology	Sanga in Vata Vaha Siras	Obstruction of cerebral vessels, ischemia depletion in glucose metabolism, death of Nerve cells.

In Ayurveda there is specific treatments for Pakshaghata. According to Acharya Charaka, Swedana (sudation), Snehana (Oleation) and Virechana (purgation) are the main modalities of treating Pakshaghata patient.^[7] Acharya Sushruta added Abhyanga, Mridu Shodhana, Anuvasana Basti, Asthapana Basti and Shiro Basti.^[8]

Types of stroke

1. **Ischemic stroke** – It is caused by a blood clot that blocks or plugs a blood vessel in the brain.
2. **Hemorrhagic Stroke** – It is caused by a blood vessel that breaks and bleeds into the brain. There is one more kind called “mini strokes” or “Transient ischemic attacks(TIA)”. It occurs when the blood supply to the brain is briefly interrupted.

Causes of ischemic stroke

- Atherosclerosis
- Thrombosis
- Embolism
- Atrial fibrillation
- Heart attack
- Abnormalities of the heart valves

Causes of Haemorrhagic Stroke

- Hypertension
- Intercerebral haemorrhage include trauma
- Infections
- Tumours
- Blood clotting deficiencies
- Abnormalities in blood vessels.

Types of Pakshavadhya

- Vataj
- Pittanubandhi
- Kaphanubandhi

Nidan of pakshavadhya

Due to excessive intake of vata prakopaka 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 like blood, semen leads to Vata Vriddhi, Vega Dharma, heavy weight lifting.^[9]

Rupa (Clinical symptoms)

- Ruja
- Vakstambha (blurred speech)
- And Chesta Nivriti (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 Ekangrog (Monoplegia). If the above mentioned morbidity pervades the entire body; then ailment is called as sarvang Rog (paralysis of entire body).^[11,12]

Treatment (Protocol)

According to Acharya Charaka, Swedana (Sudation), Snehana (Oleation) and Virechana (purgation) are the treatment protocol while treating pakshaghata (cerebral vascular accident) patient.^[13] Further Sushruta explains about the treatment of pakshaghata are Abhyanga, Mrudushodhana, Anuvasana Basti, Asthapana Basti and Shiro Basti.^[14]

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
3. Shamana chikitsa

Nidana parivarjana

Avoiding the aetiological & risk factors which causes vitiation of vatadosha as like shita, ruksh, laghuahara, katu tikta rasa ahara, excessive, wake up at late night regularly, stress, chronic disorders, physical trauma, excessive walking or exercise, excessive loss of Dhatu,

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 vata Dosha as like:

- **Kashayam (Decoction)**
Dashamoolkasaya (kaphavatahara), Gandharvaha styadikashayam (vatasamana), Mahamanjisthadi kashyam-mainly in hemorrhagic stroke because of its pitta samaka property.
- **Choorana (powder)**
Rasnadi choorna because Rasana vatahranam shrestham.^[15] saraswatha choorna due to its Medhya property and Branghana, it pacify the vata.
- **Bhasma (Rasa preparation)**
Brihatvaatchintamani ras, Ekangveer Ras, Rajat Bhasma etc, as all are potent vata shamak and nerve stimulant due to their ingredients.
- **Vati (Tablet)**
Yoga Raja Guggulu, Punarnavadi guggulu, Shiva Gutika due to vatahara and Branghana property.
- **Asava and Arista (Syrup)**
Aswagandharishtha, 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)**
Chyanaprasha and Abhyaamalaki Rasayana are indicated in Avrita vata^[15]
- **Ghrita and tailam (Ghee and Oils)**
Dashamooladi Ghrita, Chitrakadi ghrita, Nirghundi Taila Moolak Taila, Sahacharadi Taila, Rasna Taila Vrishmooladi Taila^[16] etc. These Tailas are used as pana, Abhyanga, Anuvashana Basti etc. In all these formulations mainly Vatahara drugs are use and Ghrita and Taila have good Vatahara property and give nourishment to the body.

Shodhana

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 chikitsastana. Swedana (sweating), snehana (oleation), Virechana (purgation), Anuvasanbasti, Asthapanbasti, 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 suddha vaataja 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 pakshaghata due to CVA can be taken as Aavaranajanya.

Probable mode of action of therapy

Virechana

Pakshaghata due to cerebro-vascular accident in which there is obstruction of vaata with Kapha, pitta, Rakta and Meda. In addition to this it also clear the intellect, improves the strength of sense organ, potentiates all Dhatus, increases body strength, improves Agni & delayed old age.

Sarvaanga Abhyanga

Being Kapha-vaatahara, shramahara, pustikara, Urjaavarna- Balaprada, it proves its effectiveness in pakshaghata due to CVA. In addition to this it also increases circulation. especially to nerve ending 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

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 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 srotoshuddhi, vatanulomana and srotoshudhhi. Basti is treatment of choice for Madhyaama Marga 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 automatic 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. Avapeedana Nasya indicated in unconscious patients and pradhmana 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, Nasya is the portal gateway of shiras.

The drug administered through nose reaches to the brain (shringataka Marma) by.

Diffusion

Lipid soluble substances through the lipid bilayer of plasma membrane.

Neurological pathway

Olfactory receptor stimulated, nerve impulse travel through olfactory nerve to olfactory bulbs than olfactory tract to limbic system, olfactory cortex and also related with amygdaloid complex, hypothalamus, epithalamus and other important structure of the brain so the drugs administered, stimulate the high centre of the brain and show action on regulation of endocrine and nervous system function.

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 administered through Nasya absorb into the meninges and intracranial organ and eliminates the morbid Doshas which responsible for the disease. When drug administered 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), sira mukhas (opening of the vessels) etc and remove the morbid Doshas, so in

hemiplegia Nasya is very effective because of Samana, Shodhana and Bhraughna property.

CONCLUSION

Pakshaaghaata due to CVA results from Aavarana of vaata with pitta, Rakta, Kapha and Meda.

Virechana followed by Sarvaanga Abhyanga and herbominral 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 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.

Sarvaanga Abhyanga, Baaspa Sweda without Virechana also showed significant improvement in above mentioned symptoms of pakshaghaata.

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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