



IJPPR

INTERNATIONAL JOURNAL OF PHARMACY & PHARMACEUTICAL RESEARCH
An official Publication of Human Journals

ISSN 2349-7203




Human Journals

Review Article


March 2023 Vol.:26, Issue:4

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Pakshaghata Chikitsa Vivechana – Rehabilitation in Relation to Residual Hemiplegia- A Review Article



IJPPR
INTERNATIONAL JOURNAL OF PHARMACY & PHARMACEUTICAL RESEARCH
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ISSN 2349-7203

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Submitted: 22 February 2023
Accepted: 28 February 2023
Published: 30 March 2023

Keywords: Pakshaghata, Rehabilitation, Residual Hemiplegia, Stroke.

ABSTRACT

Pakshaghata is one among Vataja Nanatamaja Vyadhi, where there is impairment in Karmendriya, Gnanendriya and Manas. Pakshaghata can be correlated with hemiplegia which represents with paralysis of one side of the body, resulted from cerebrovascular accident-stroke, a heterogeneous group of disease. The disease prevalence in India may be approximately 200 in one lakh persons. Stroke is the 3rd, most cause of death and disability worldwide. The treatment of Pakshaghata is time consuming and expensive in Contemporary medicine where management counteracts symptoms temporarily. There are no much treatment modalities to treat the residual symptoms of a chronic Hemiplegia and the management is focused on improving sensation, motor abilities allowing the patients to better manage their activities of daily living. In Ayurveda, treatment plan will be according to the avastha of disease. Hence there is need for ayurvedic approach to manage residual condition by rehabilitation with panchakarma treatment, which reestablishes the circulation and improves quality of patient's life. Hence it is the need of time to find out more effective management.



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INTRODUCTION:

Stroke is defined by the World Health Organization as “A clinical condition consisting of rapidly developing clinical signs of focal (or global in case of coma) disturbance of cerebral function lasting more than 24 hours or leading to death with no apparent cause other than a vascular origin.” [1] According to update the global burden of disease (GBD) study reported nearly 5.87 million stroke deaths globally in 2010, as compared to 4.66 million in 1990. [2] The causes are either Ischemic or Haemorrhagic Stroke. The prevalence of stroke in India shows a huge variation of 142-922/100000 across the diverse community-based studies. [3] The prevalence of stroke in India is approximately 200 per 100 000 persons. [4] Stroke can be correlated with the disease Pakshaghata described in Ayurveda. Pakshaghata is one of the Vataja Nanatmaja Vyadhis. According to Acharya Susruta, it is considered as Mahavatavyadhi, manifests due to Dhatu kshaya or Margavarana. Lakshanas of pakshaghata include chestahani (impaired motor activity), Ruja (pain), Vaksthambha (slurred speech) and Hasta pada sankocha. In some cases Sandhi Bandha vimoksha (weakness of joints), Vaktravakrata (mouth deviation), Jihvasphoorana (fasciculation of the tongue) also be presented. [4]

Table No. 1: Etiopathology of Pakshaghata and Hemiplegia

Sr. No.	Factors	Pakshaghata	Hemiplegia
1	Etiology	Vaya, Margavarana, Dhatu kshaya, Marmabhighata, AsrukSrava, RukshaAlpaAhara	age, atherosclerosis, haemorrhage, injury to head, nutrition imbalance
2	Signs and symptoms	ChestaNivriti, Isat Karma Kshaya in Ardha Kaya, ArdhanarishwaratAchesta, VakSthamba, Sira SanayuShosha	Loss of power and movement in half side of the body, minor sensory deficit, dysarthria, atrophy due to disease, stiffness
3	Pathology	Sanga in VataVahaSiras	Obstruction of cerebral vessels, ischemia depletion in glucose metabolism, death of Nerve cells

Table No. 2: Classification of Stroke: ^[4]

Ischemic Stroke	Haemorrhagic Stroke
Embolism ,Thrombosis Transient ischemic attacks (TIAs) or mini-strokes. Atherosclerosis Atrial fibrillation ,Heart attack Abnormalities of the heart valves	Most common cause -Hypertension. Less common causes-Trauma, infections, tumours, blood clotting deficiencies and abnormalities in blood vessels (Berry’s aneurism). Intra cerebral haemorrhage occurs at all ages.

Table No. 3: Classification of Pakshaghata: ^[4]

Aetiological classification	Clinical classification	Prognostic
1. Dhatu Kshayajanya 2. Margavaranjanya 3. EkangaVata (monoplegia) 4. SarvangVata (quadriplegia)	1. Pakshaghata-Ardita 2. Ardhang Vata	1. Sadhya- Sanyukta Doshaja 2. Krichcha Sadhya- ShuddhaVataj

Flow chart - Samprapti of pakshaghata in relation to Residual Hemiplegia



Chikitsa:

According to various Ayurvedic texts, Management is planned accordingly to the patient's requirement and Severity where in Brunghana Chikitsa, Vatahara Chikitsa and Marma Chikitsa are explained.

Charaka Samhita: Swedan, Snehana and Virechana as treatment modality for Pakshaghata. Acharya Jejjata & Gangadhara interprets this as Snehayukta Swedana (snehadharasweda) and Snehayukta Virechana (with erandataila, tilwakaghrita). Susrutha Samhita: Initially, Snehana and Swedana are to be provided, and then followed by Mrudu Vamana and Virechana. Thereafter Anuvasana and Asthapana Basti should be administred. Mastishkya, Shirobasti, Abhyanga, Salavanaupnahasveda, Anuvasana by Bala Taila are the specific measures described and also karnapoorana, Nasya are indicated. Vridda Vagbhata followed Sushruta opinion along with that use of Kukkuti Rasayana Kalpa advocated as per Doshasangraha.

LaghuVagbhata followed Charaka treatment method and advocated Snehana and Snehayukta Virechana.

Rehabilitation with panchakarma therapy:

Snehana:

Due to its similarity of constitution with the nerve fibres may be help in repair the structural degeneration and restore the lost function. Snehana is contra indicated in early acute stage due to marmabhighata, hence it should be adopted when the recovery phase begins in residual hemiplegia

1. Abhyanga: Increases power of muscle, reduces stiffness and improves muscle tone. It normalise the Vata Dosha, relieves pain in body. ^[5] Abhyanga is said to be Vata Kapha Shamaka, provides nutrition to the body and also strengthens the muscles. Dhatu Kshaya is found in Pakshaghata so Abhyanga with these different Tailas will be of great help in combatting the Dhatukshaya. Impediment of speech is one of the symptoms of Pakshaghata, Mordhini Taila is found to be effective in combatting this symptom as Swarbalam is one of the characteristic features of Mordhini Taila. ^[6]

2. Shirodhara: Neuromuscular relaxation and nourishment enhances the release of serotonin. Relieving of stress mind and body.

3. Nasya: Nasya is the gate of shiras. 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 is indicated repeatedly to restore the consciousness. ^[7] Sneha Dhoomapana and Nasya beneficial in Pakshaghata to give the nourishment. The drug administrated through nose reaches to the brain (Shringataka Marma) by which is a Sira Marma so by Nasya drug spread in the Murdha reaches at a junctional place of brain. ^[4] When medicine reaches Shringataka Marma (which is siramarama), it spereads in Murdha, removes the vitiated/morbid dosha, so in Hemiplegia Nasya acts as Shamana, Shodhana and Brumhana. (e.g, Anu taila, Ksheerabala 101, Karpasthyaditaila, Mahamashataila). When there is involvement of facial palsy, ardhitachikitsa is adopted, which includes navananasya. Conditions where nasya can be adopted: Facial palsy, Contralateral hemiplegia, Ipsilateral hemiplegia etc.

Swedana:

Swedana also best for Vata disorder and it relieves from stiffness of muscle and brings about normal functioning of the blood vessels, muscles and tendons. In case of spasticity, swedana helps in relaxation the flexed muscles. In flaccidity, swedana improves tone of the muscle. [8]

Nadisweda: With vataharadravya (Eg: dashamoola, erandapatra, nirgundi etc.)

Pinda sweda

1. Flaccid condition: Godumapindasweda, Shastikashalipindasweda, yavapinda
2. Spasticity condition: Mamsapindasweda, tilapindasweda, mashapindasweda, kulatta
3. Severe spasticity: Pizzichil (sarvangatailaparisheka)

Virechana:

Pakshagata is also said to be a disease of majjavahasrotas. Majja dhatu and pitta are said to be from same origin 'Ya Eva Pittadharakalasa Eva Majjadhara kala'. [4] Therefore treatment for majja, virechana is best treatment for pitta. In majjadushti "kaaleshuddhi" (timely purification) is advised as the treatment. Thus Virechana is proved to be effective in Pakshaghata due to CVA. The adhishtana of pakshaghata is masthishka or mastulunga. Mastulunga is considered as the "avileenaghratakaramastakamajja". Dalhana says pittadhara and majjadharakala are same. The treatment advised for pittadharakalavikriti is virechana. Mridu Sanshodhanaa has been mentioned in treatment of Margavarna. [9] Hence in margavaranjanya Pakshaghata Mridu Sanshodhanaa, i.e., Virechana can be advocated. Vagbhata has mentioned Mridu Sanshodhanaa (Virechana) in the general line of treatment of vata, which can also be adopted for Pakshaghata. Vatavaydhi like Pakshaghata, increased Rukshaguna of vata causes Rukshata & Parushata in srotas which is the key point in samprapti of Pakshaghata. So to compensate Ruksha Guna of vata, we used snehana in the form of Basti, Nasya, Shirodhara and Snehayukta Virechana is beneficial. Virechana is beneficial in Pakshaghata in Margavarana Samprapti.

Nitya virechana: Regularly to monitor hypertension when Stroke associated with hypertension and in apanavayudushti. Classicalvirechana: in balawanrogi, and in recovered patient, where dushti of rakta dhatu upadhatu:sirakandara is there. [8]

Basti:

Basti is one of the best treatments for vatavyadhi. Basti eradicates vitiated vata dosha from the root having multiple effects. It also provides nutrition to the body tissue. In kevalavatajanyapakshaghata, Basti is the best line of treatment. Acharya Charaka has stressed on Srotoshudhhi, Vatanulomana and Rasayana in general management of Avarana. Basti achieves both the goals i.e., Vatanulomana and Srotoshudhhi and also treatment of choice for Madhyamamargarogachikitsa. When patient is not fit for virechana karma, snehana, swedana Basti is the line of treatment adopted. Basti with Vataharadravya does Vatanulomana and Srotoshudhhi. Basti with Brumhanadravya, improves strength, power of the patient. Basti can be given in the form of Rajayapanabasti, which helps to improve the muscle power, strength, and acts as Balya. The nutritive substance of drugs absorbs from mucosa layer of gut, and toxic material of body flush out from rectal or intestinal mucosal layer. ^[8]

Nirama condition: ^[4]

- Rajayapana Basti
- DashamoolaKsheera Basti
- Matra Basti



Ama Condition: ^[4]

- Lekhana Basti
- Choorna Basti

DISCUSSION:

Residual Hemiplegia is a condition caused by brain damage that leads to paralysis of one side of the body caused by stroke, which damages the corticospinal tracts in one hemisphere of the brain due to Obstruction of cerebral vessels, ischemia, depletion in glucose metabolism, death of Nerve cells. The Treatment of Hemiplegia is focused on improving sensation, motor abilities allowing the patients for better management of their daily activities. The disease can be managed by contemporary medical science, but there are no much treatment modalities to treat the residual symptoms of chronic Hemiplegia. Thus, there is need of Ayurveda science which helps to manage the condition with the help of panchakarma. Earliest intervention with

niravaranasamprapti of vata may regain most of the disability. Early management and rehabilitation therapy helps for better prognosis and to minimize the residual effects of Stroke in relation to Pakshaghata. Understanding the disease with careful analysis of Avastha of Vyadhi, giving prime importance to the Dosha- Dooshya Samoorchana and underlying Avarana, necessary treatment modalities are adopted at appropriate time with logical use of internal and external medicines.

Snehana due to its similarity of constitution with the nerve fibres, help in repair the structural degeneration and restore the lost function. Snehana is contraindicated in early acute stagedue to marmabhighata, hence it should be adopted when the recovery phase begins in residual hemiplegia.

In Ischemic Stroke there is a disruption in the blood flow to the brain. Fomentation therapy increases the blood flow to the brain by the process of vasodilatation which is brought by inhibiting the sympathetic centres in the posterior thalamus which causes the vasoconstriction thus helping in margavarana.

In Cerebro vascular accidents there is vitiation of Pitta, Rakta, Kapha and medas in association with Vata which leads to sirasnayu (upadhatu of rakta) vishoshana. Hence Virechana is adopted due to Pitta – Rakta Ashraya – Ashrayi bhava. Thus, removes avarana of vata.




Enteric nervous system is the network of nerve fibres located in gastrointestinal tract, also called Gut brain. ENS works in synergism with central nervous system. Hence stimulation of ENS with Basti Karma may lead to stimulation of CNS.

The drugs administered through nose stimulates the higher centres of the brain through the olfactory nerve pathway which is connected to the hypothalamus and limbic system. Hence the nasal drug administration will ultimately have an effect on the functions of CNS.

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