

## ROLE OF *TIKSHNA NASYA* IN *PAKSHAGHATA* - A CASE STUDY

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### ABSTRACT

*Pakshaghata* is explained in our texts under *Vata Vyadhi* context in both *Brihat* and *laghu trayies*. Even though *Pakshaghata* is a *Vata Vyadhi*, it is mentioned under *Nanatmaja Vata Vikaras* of *Charaka Samhita* and there is a *Samsarga* of *Pitta* and *Kapha* in *Pakshaghata*. It exhibits *Lakshanas* like *Ruja*, *Vaksthambha*, etc. <sup>1</sup>In contemporary science it can be correlated to the cerebrovascular condition like stroke. Stroke is a very important cause of morbidity and mortality in India. The incidence of stroke is increasing day by day because of sedentary life style and change in food habits. In 2001 it was estimated that cerebrovascular diseases (stroke) accounted for 5.5 million deaths worldwide, equivalent to 9.6% of all death. Two-thirds of these deaths occurred in people living in developing countries and 40% of the subjects were aged less than 70 years. Cerebrovascular accident is the third most common cause of death worldwide. Hypertension is the most important risk factor. India like other developing countries is in the midst of a stroke epidemic. An organised effort from both the government and private sector is needed to tackle the rising stroke burden in India. <sup>2</sup>In the initial stage of *Pakshaghata*, we can adopt *Tikshna Nasya* in the form of *Pradhamana Nasya* generally with *Tikshna* drugs like *Vidanga*, *Marica*, *Vacha* etc, which is *Akshepakavata Chikitsa* for reversing *Tandra*, *Mada*, *Murcha* and *Karmakshaya*, which is the *Pittavrita Vata* stage of disease<sup>3</sup>. Once the reversal of initial *Pittavrita* is accomplished, *Mridhu Virechana Karma*, *Swedana*, *Abhyanga* and *Basti karma* can be done for treating *Vataja* stages.

**Keywords:** *Pakshaghata*, *Tikshna Nasya*, *Cerebrovascular accident*.

### INTRODUCTION

Stroke or cerebrovascular accident, is defined as an abrupt onset of a neurological deficit that is attributed to focal vascular cause. The clinical manifestation of stroke is highly variable because of the complex anatomy of the brain and its vasculature.<sup>4</sup>Stroke is a world-wide health problem. It makes an important contribution to morbidity, mortality and disability in developed as well as developing countries.

In *Ayurveda* stroke can be correlated to *Pakshaghata* which is a *Vatavyadi* of *Nanatmaja* type. The term *Pakshaghata* literally means *Aghata* of *Paksha* (half of the body) either *Vama/Dhakshina Bhaga* of *Sharira*. As per review of *Ayurvedic* literature, it is evident that no specific etiological factor described separately for *Pakshaghata*. *Nidanans* explained for *Vata* disorders in various *Ayurvedic* literature can be

taken for *Pakshaghata* also example the *Ahara* which provoke *Vata Dosha*, *Vihara* which vitiates *Vata Dosha*, *Manasika* factors & *Abhighataja* factors vitiating *Vata Dosha* even other factors like seasonal variation, excessive Purificatory measures etc.,<sup>5</sup> which provoke *Vata Dosha* can be considered under *Nidana*. *Acharya Charaka* mentions *Avyakta Lakshana* of any *Vata Vyadhi* can be taken as *Poorva Roopa* of *Pakshaghata*.<sup>6</sup>

*Nasya* is one among *Panchakarma* which cleanses and opens the channels of the *Shiras*, thereby improving the process of *Prana* which has a direct influence on the functioning of brain. Many researches show that there is better absorption of drug in CSF through nasal route than any other routes. *Nasal* drug delivery is superior to that of oral because of hepatic first-pass metabolism and drug degradation is absent; nose-brain pathway leads to nearly immediate delivery of some nasal medications to the cerebral spinal fluid, by-passing the blood brain barrier. A variety of neuro therapeutic agents including small drug molecules, proteins, peptides, hormones and biological cells such as stem cells can be delivered by this route, thereby yielding new insights into prevention and management of different neurological disorders.<sup>7</sup>

In present article Role of *Nasya Karma* in the form of *Tikshna Nasya* is explained in the management of *Pakshaghata* especially in the initial stage of *Pakshaghata* along with other *Panchakarma* treatment employed in this case.

#### CASE DESCRIPTION:

A 57 years old male came to our hospital (29/10/2017) in semiconscious state with complaints of weakness of the right upper and lower limb of the body and face associated with slurred speech since 3 days. The Patient was diagnosed case of Cerebro-vascular Accident at Nimhans (26/10/2017).

#### HISTORY:

On 25/10/17 the patient observed sudden difficulty in speech developed slurred speech while talking to

some relatives at home followed by deviation of the angle of mouth, weakness of right upper and lower limbs and inability to stand and walk. For these complaints patient was immediately taken to nearby district hospital where they referred to Nimhans hospital. Then patient was taken to Nimhans hospital on 26/10/2017 for further management but while traveling in ambulance before reaching hospital patient become unconscious. Then patient taken treatment for one day at Nimham's and went back to native. After that patient underwent folklore medication for 2 days, when condition worsened then brought to our institution for *Ayurveda* management (29/10/17), on the day of admission, the patient was in semiconscious state, drowsy, responding to deep stimulation and not responding to oral commands. His blood pressure was 130/80 mm of Hg, Temperature 98.9 Degree Fahrenheit. No past H/O of head injury, fever, Epilepsy & H/o of alcohol consumption for 25 years, smoking for 10-15 years daily. H/o of Hypertension since 2-3 months not on regular medication.

#### DIAGNOSIS:

Cerebro-vascular accident was diagnosed by history and clinical examination

#### INVESTIGATION:

CT Brain plain done at Nimhans shows Hypertrophy of precentral sulcus, right cornea radium. Diffuse cerebral Atrophy –likely age related.

#### CLINICAL EXAMINATION:

General condition: Moderate

Afebrile

BP-130/80. (On admission)

PULSE-76 b/min.

RR: 19/min.

#### TREATMENT DONE ON COURSE:

1. *Sarvanga Abhyanga* with *Moorchita tila taila*.
2. *Sarvanga bhaspa sweda*
3. *Pradhamana nasya* with *vacha choorna* and *Bhrihatvatachintamani rasa*.
4. *Sneha Nasya* with *ksheera bala taila*.

**Table 1: Intervention**

Sl. No	Date	TREATMENT	Medicine used	Dose	Frequency
1.	30/10/17 TO 01/11/17	Sarvanga Abhyanga with moor-chitha taila and bhaspa sweda, Pradhamana Nasya	Vachachoorna	3pinch on e/n	Once in a day
2.	02/11/17 TO 05/11/17	Sarvanga Abhyanga with moor-chitha taila and bhaspa sweda Pradhamana Nasya	Nasya with Swarna-yuktha Brihatvatachintamani	9 tab powderd,3 pinch in e/n	Once in a day
3.	06/11/17 to 08/11/17	Sarvanga Abhyanga with moor-chitha taila and bhaspa sweda Pradhamana Nasya	Vachachoorna	3 pinch in e/n	Once in a day
4.	09/11/17 to 13/11/17	Sarvanga Abhyanga with moor-chitha taila and bhaspa sweda Pradhamana Nasya	Nasya with Swarna-yuktha Brihatvatachintamani	9 tab powderd,3 pinch in e/n	Once in a day
5.	13/11/17 to 17/11/17	Sarvanga Abhyanga with moor-chitha taila and bhaspa sweda Pradhamana Nasya	Ksheerabala 101 taila	10 drops	Once in a day

**Table 2: Observations**

DAYS	Name	Observation
DAY1	Vachachoorna	Response to pain stimuli
DAY2	Vachachoorna	Response in the form of opening eye when called by name
DAY3	Vachachoorna	Able to give eye contact
DAY4	BVC	Pt along with eye contact recognise family people
DAY5	BVC	Pt response though vocal when called his name
DAY6	BVC	Pt response though vocal when called his name
DAY7	BVC	Pt response though vocal when called his name
DAY8	Vachachoorna	Same
DAY9	Vachachoorna	Able to answer simple questions
DAY10	Vachachoorna	Slurred speech
DAY11	B.VC	Try to sit using left limb, slurred Speech.
DAY12	BVC	Same
DAY13	BVC	Same
DAY 14	BVC	Mild improvement in alertness, speech.

**Table 3: Reflex**

SL.NO	BEFORE TREATMENT				AFTER TREATMENT		
	REFLEX	RIGHT		LEFT		RIGHT	
1.	Biceps reflex	Exaggerated	+4	+2	Normal	+3	Exaggerated
2.	Triceps reflex	Exaggerated	+4	+2	Normal	+3	Exaggerated
3.	Knee reflex	Exaggerated	+3	+2	Normal	+3	Exaggerated
4.	Ankle reflex	Exaggerated	+4	+2	Normal	+4	Exaggerated
5.	Planter	Positive		+2	Normal		Positive

**Table 4:** Muscle Power

SL.NO	BEFORE TREATMENT		AFTER TREATMENT	
1.	Right upper limb	0	Right upper limb	+1
2.	Right lower limb	0	Right lower limb	+1
3.	Left upper limb	+5	Left upper limb	+5
4.	Left lower limb	+5	Left lower limb	+5

**Table 5:** Assessment scale (According to NIH Stroke scale)

Sl. No	NIH scale	Range of score	Before treatment score	After treatment score
1.a	Level of consciousness	0 to 3	3	0
1.b	LOC questions	0 to 2	2	1
1.c	LOC Commands	0 to 2	2	0
2	Best Gauze	0 to 2	2	1
3.	Visual	0 to 3	0	1
4.	Facial Palsy	0 to 3	3	1
5.	Motor Arm	0 to 4	4	3
6.	Motor Leg	0 to 4	4	3
7.	Limb Ataxia	0 to 2	0	0
8.	Sensory	0 to 2	2	0
9.	Dysarthria	0 to 2	3	2

## DISCUSSION

*Pakshaghata* is a *Vataj Nanatmaja Vyadhi* considered as *Mahavata vyadhi*. *Pakshaghata* can be correlated with Hemiplegia, which results from cerebrovascular accident-stroke. In *Charaka Siddhi Sthana* explains that *Indriya* and *Sotras* carrying *Prana* located at a distance from the head are also controlled by the latter. Affliction of those far off channels by the damage to the head shows that the head is the root of these channels<sup>8</sup>. Even same pathology is observed in cerebrovascular accident also explained in contemporary medicine. *Pakshaghata* is having different *Avastha* depends on *Dosa* involvement and *Lakshanas*. *Tandra Avstha* is one among them seen in initial stage of disease. *Tandra* is defined in *Sushruta Samhita* as non-perception of sense objects, heaviness, yawning, mental exhaustion, and behaviour as of sleepy are the features of *Tandra*. In *Teeka Acharya* specifically quotes as *Indriyaartha Asamprapthi* is taken as *Tandra Avastha*.<sup>9</sup> Even *Acharya Charaka* explained regarding *Tandra Avastha* in where he says aetiology, pathogenesis as follows-

When the *Vayu* provoked by the intake of sweet, unctuous and heavy food, by worry, fatigue and grief, and by constant suffering from chronic diseases, incites *kapha*, then this *kapha* getting lodged in the heart occludes the *Jnana*.etc. The Signs and symptoms are *Hridaya Vyakulabhava* (uncomfortable feeling in the heart), *Vakchestaindriya*, *Gowrava* (heaviness of the speech, action and functioning of senses, *Manaha Bhudhi Aprasada* (absence of clarity of the mind as well as intellect).The *Chikithsa* for *Tandra Avastha* are therapies which do *Shamana* and *Shodhana* of *Kapha*, *Vyayama*, *Rakthamokshana*, *Ahara* which are having *Katu*, *Tikta* taste.<sup>10</sup> If we try to apply the concepts explained under *Tandra* & Understanding of Case as Haemorrhagic stroke results due to the rupture of weakened blood vessels and regular intake of alcohol and smoking have high risk factor of intra cerebral haemorrhage. In this case study patient was on chronic alcoholism, smoking and uncontrolled hypertension is the contributory *Nidhana*.

In this case study Patient initially presented with and *Tandraa Avastha* (*Vaksthabdhata*, *Indriyaar-*

*thaasamprapthi*.) so treatment followed was *Teekshna Nasya* mentioned with *Vachachoorna* and *BrihatVatachintamanirasa* to remove *Avarana* and for *Vatashamanartha*.

**Why only *pradhamana nasya* adopted here??** According Acharya Charaka whenever *Margavarana* pathology by *Meda* and *Kapha* leading to *Vatakupitha* is seen then *Kshapana* in the form of *Vyayama*, *Shodhana*, *Arista*, *Gomootra*, *Virechana*, *Takra*, *Bhaya* is line of treatment. Thus *Snehana* and *Brhmana* is contraindicated as it further increases the *Vata* vitiation.<sup>11</sup> In Charaka Siddisthana, *Acharya Charaka* mentioned *Pradhamana Nasya /Choorna Nasya* as *Sarvasharira Srotroshodhaka*.<sup>12</sup> So, *Teekshnanasya* in the form of *Pradhamananasya* is beneficial & adopted in this case. *Pradhamana nasya* is kind of *Teekshnanasya* also known as *Sanjnaprabodhaka Nasya* which is very much beneficial in initial stages of *Pakshaghata* to overcome *Tandraavasta* by removing *Avarana* in the *Sanjnavahastrotras*.

#### **Method of administration:**

##### ***Poorva karma:***

*Sthanika MukhaAbyanga* with *Moorchita taila* and *Sthanika Nadi Sweda* for *Mukhapradesha*.

**Effect of *poorva karma* on *nasya***- The preoperative measures adopted in *nasya* therapy like lowering of the head elevation of the lower extremities and fomentation of the face have some role on enhancement of blood circulation in the head. By means of this facial stimulation, the cerebral capillaries dilated up to 22 percent which ultimately results in 150% blood inflow. There is also possibility of falling of arterial pressure due to vasodilatation that may encounter Cushing's reaction. This act convinces more of slush created in the intra cranial space, probably forcing more transfusion of fluids into the brain tissue.<sup>13</sup>

##### ***Pradhana karma:***

In head lowered position, the *Choorna* like *Vacha*, *Maricha* etc are blower in to nose with a tube like apparatuses (here straw used) about 3 pinch 3 times in each nostrils.

##### ***Paschat Karma:***

*Sthanika Snehana* and *Nadi Swedha*.

*Dhumapana* with *Haridrakanda*.

*Ushna jala pana*

#### **DISCUSSION ON PROBABLE MODE OF ACTION OF NASYA IN GENERAL:**

The clear description regarding the mode of action of *Nasya Karma* is available in the *Ayurveda* classics. According to Acharya Charaka, *Nasa* is the gate way of *Shira*. The drug administered through nose as *Nasya* reaches the brain and then either it eliminates the morbid *Dosha* responsible for producing the disease or nourishes the area.

Generally mode of action of any *Nasyakarma* is by following ways

1. Absorption and Transportation by simple diffusion across the nasal mucosal epithelium.
2. Lymphatic pathway.
3. Vascular pathway.
4. Olfactory pathway.

##### **Discussion on probable mode of action of *Pradhamana Nasya:***

In *Pradhamana nasya*—The drugs in *Choorna* form are bowled in the nose; it creates an immediate reflex action and irritates the nasal mucosa.

It increases the nasal secretion and thereby clears the congestion and drains the accumulated phlegm in the region. As it is highly irritant in nature, it is helpful in gaining back the consciousness in patients suffering from *Apasmara*, *Unmada*, *Mada*, *Murcha*, etc.

##### **Mode of action of *Pradhamana Nasya* in *Pakshaghata:***

In *Pakshaghata* due to *Aharajaviharaja nidhana* leading to *Avaravana* of *Vata* by *Kapha* and *Medha* causes *Vata Prakopa* that in turn leading to *Avarana* of *Sajanavahastrotras* and *Pranavahasrotras* by *Tamoguna* is the *Samprapthi* observed in *Margaavar-*

*najana Pakshaghata. Mada, Murccha, Sanjnanasha* is seen in initial stages of this disease. It is also known as *Tandraavasta*. So, in these conditions, *Pradhamana Nasya* administered helps in regaining *Sanjna* henceforth known as *Sanjnaprabhodhaka Nasya*. It is achieved through *Strotroshodhana* by clearing the *Avarana* helps in proper function of *Vata Dosha*.

#### **Role of sneha nasya in pradhamana nasya:**

Always *Pradhamana Nasya* as to be followed by *Sneha Nasya* for *Vata Shamanartha*.

#### **DISCUSSION ON RESULTS:**

In this case there is considerable improvement in level of consciousness, sensory, Dysarthria.

#### **CONCLUSION**

In the present article treatment planned is purely based on *DoshaAvasta* which helps in counteracting the symptoms step by step according to the predominant *Dosha* being presented. Ayurveda has a unique approach towards treating *Pakshaghata* in different stages after understanding *Tara-tama bhava* of *Dosha*, *Doshagati*, *Vyadhiavastha*, *Rogabala*, *Rogibala*, *kala*, *Sadhya-Asadhyata* etc. *Pradhamana Nasya* is one among those. *Pradhamana Nasya* is kind of *Tikshna Nasya* also known as *Sanjna Prabodhakanasya* which is very much beneficial in initial stages of *Pakshaghata* to overcome *TandraaVasta* by removing *Avarana* in the *Sanjnavahastrotras*. It is also helpful in preventing the complications of diseases if approached in early hour of disease and can be helpful in good prognosis of disease.

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