

## A CLINICAL STUDY TO EVALUATE THE EFFICACY OF RAJAYAPANAYAPANA BASTI IN PAKSHAGHATA

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### ABSTRACT

*Pakshaghata* is a *Vata Nanatmaja Vikara* explained in our texts under *Vata vyadhi* context in *Brihat* and *Laghu trayie*. It exhibits *Lakshanas* like *Ruja*, *Vaksthambha*, etc. In contemporary science it can be correlated to the cerebrovascular disease. The term cerebrovascular disease refers to a group of conditions in which injury to the brain or spinal cord occurs due to vascular cause.<sup>1</sup>The stroke is one of the leading causes of death and disability in India. The estimated adjusted prevalence rate of stroke range, 84-242/100,000 in rural and 334-424/100,000 in urban based on the recent population based studies.<sup>2</sup>The incidence of cerebrovascular disease is increasing day by day because of sedentary life style, stress and change in food habits. Cerebrovascular accident is the third most common cause of death worldwide after Cancer and Ischemic heart disease and most common cause for physical disability. Hypertension is the most important risk factor. The *Panchakarma* procedures like *Abhyanga*, *Sweda* and *Basti* will be helpful to improve these conditions. In the present study 10 patients of either sex fulfilling the inclusion Criteria were selected and *Sarvanga Abhyanga* with *Moorchita taila*, *Sarvanga Shastika Shali Pinda sweda* followed by *Rajayapana Yapana Basti* in *kala Basti* pattern was adopted as a treatment modality. The assessment was done before, after treatment and after follow up using unpaired t test. The total duration of the study was 30 days. The study has given significant results in *Vakstambha*, *Padasankocha*, *Hastakankocha*, *Shula*, *Cestanivriti* with p value >0.001.

**Keywords:** *Pakshaghata*, *Rajayapanayapana Basti*, *Cerebrovascular accident*.

### INTRODUCTION

*Pakshaghata* is a condition wherein the greatly aggravated *Vata dosha*, invades the *Sareera dhamani*'s with *Sira-Snayu vishoshana*, *Vaksthamba*, causing *Sandhibandhanamokshana* and *cheshtahani* of either *vama* or *dhakshina bhaga*. *Acharya Charaka* and *Kashyapa* mentioned *Pakshaghata* under *Vata Nanatmaja Vikara* whereas, *Acharya Sushruta* mentioned *Pakshaghata* under *Astamahaghada*. Cerebrovascular dis-

eases are pathophysiological divided into those in which insufficiency of blood supply causes ischemic injury and those in which Haemorrhagic i.e. bleeding, either into the parenchyma or into space between the pial and arachnoid covering over the brain or spinal cord (sub arachnoid space). The injury may be focal (related to occlusion of a single artery), Multifocal (related to occlusion of a several artery), or diffuse.

**Objectives:** To evaluate the efficacy of *Moorchita tila taila Abhyanga, Shastikshali Pinda sweda* and *Rajayapana basti* in the management of *Pakshaghata*.

**Material and Method:**

**Source of Collection of data:** For the present clinical study, the 10 patient Presenting with signs and symptoms of *Pakshagata* and who fulfil the inclusion criteria were randomly selected from the OPD and IPD of SKAMCH&RC.

**Study design:** This is an open clinical study with pre-test and post-test design wherein 10 patients presenting with signs and symptoms of *Pakshaghata* of either sex were selected. All patients fulfilling the inclusion criteria were subjected to *Sarvanga Abhyanga, Shastika shali pinda Sweda* and *Rajayapana Basti*.

**Diagnostic criteria:**

*Chestanivutti, Vakstambha. Padankocha. Hastankocha. Shoola.*

**Inclusion Criteria:** Patient diagnosed as *Pakshaghata*, Patient present with the *Lakshanas* of *Pakshaghata*<sup>3</sup>, Patient fit for *Abhyanga* and *Shstika Shali Pinda Sweda*, Patient fit for *Bastikarma*.

**Exclusion Criteria:**

Patient with epilepsy, seizures, Patient presenting with chronic respiratory disease, Patient complaints with other sever cardiac disorders, Patient in unconscious state.

**Drug and Duration-**

In the present study drugs used are *Moorchita taila, Balamoola qwatha choorna, Dashamoola qwatha Choorna, Rajayapana qwatha choorna, Rajayapana kalka Choorna, Saindava Lavana, Madhu* drugs were purchased from SKAMCH &RC pharmacy for the study. Along with above drugs Fresh *Ajja Mamsa rasa* used as *Avapadravya*.

The duration of the study was for 30 days.

**Intervention:**

*Sarvanga Abhyanag* with *Moorchita tila taila* followed by *Sarvanga Shastika Shali pinda Sweda* for 16 days as a *Purvakarma* for *Basti chikitsa*.

*Rajayapana basti* administration in *Kala Basti* pattern was follows

**Table 1:** Showing *Bastikarma* Pattern

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
A	N	A	N	A	N	A	N	A	N	A	N	A	A	A	A

**Table 2:** Showing *Basti karma* Formulation: NIRUHA:-

<i>Madhu</i>	30ml
<i>SaindavaLavana</i>	10gms
<i>Moorchita tila taila</i>	80ml
<i>Rajayapana kalka</i>	30ml
<i>Rajayapana Kwatha</i>	300ml
<i>Mamsa Rasa</i>	200ml

*Anuvasana :-Moorchita tila taila - 80 ml*

**Observations and Results:**

**Table:** 3, 4 Showing Observation on Age & Sex wise distribution of *Pakshaghata*:-

AGE	Number of patients	%
20-30	1	10%
31-40	3	30%
41-50	4	40%
51-60	2	20%

**Table: 4**

SEX	Group A	%
Male	9	90%
Female	1	10%

**Table: 5, 6** Showing Observation on Chronicity & pathology wise distribution of *Pakshaghata*:-

Chronicity	Group A	%
1 year	4	40%
< 1 year	6	60%

**Table: 6**

Pathology	Group A	%
<i>Marghavarana janya</i>	6	60%
<i>Dhatukshaya</i>	4	40%

**Table 7:** Showing observation on Effected side of *Pakshaghata*

Onset	Group -A	%
Right side of the body	03	30%
Left side of the body	07	70%
Both side	00	00

**Table 8:** Showing observation on Cause wise distribution of *Pakshaghata*

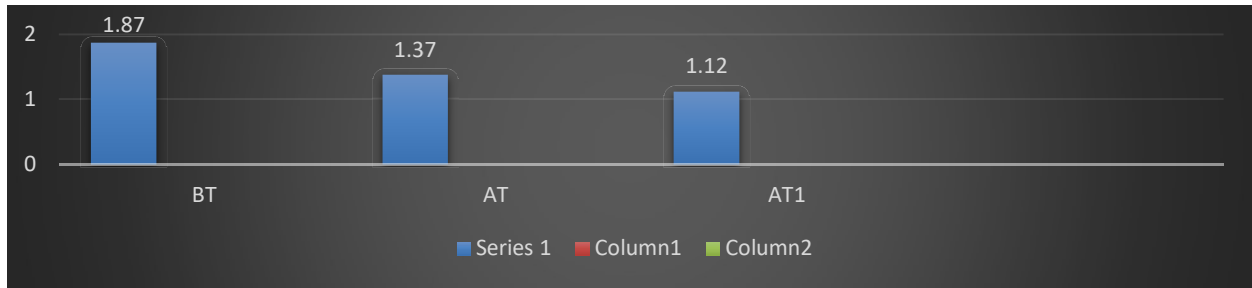
Cause	Group A	%
Hypertension	6	50%
Diabetes mellitus	01	20%
Trauma	03	30%

**Table 9:** Showing Observation based on *Lakshanas* of *Pakshaghata*

<i>Lakshanas of Pakshaghata</i>	Group A
<i>Cheshtanivrutti</i>	<b>10</b>
<i>Sandhi bandha vimoksha</i>	<b>02</b>
<i>vakstambha/Vakkruchrata</i>	<b>7</b>
<i>Hasta pada Sankocha</i>	<b>10</b>
<i>Toda, shula</i>	<b>10</b>

**Table 10:** Showing effect of treatment on *Speech*:

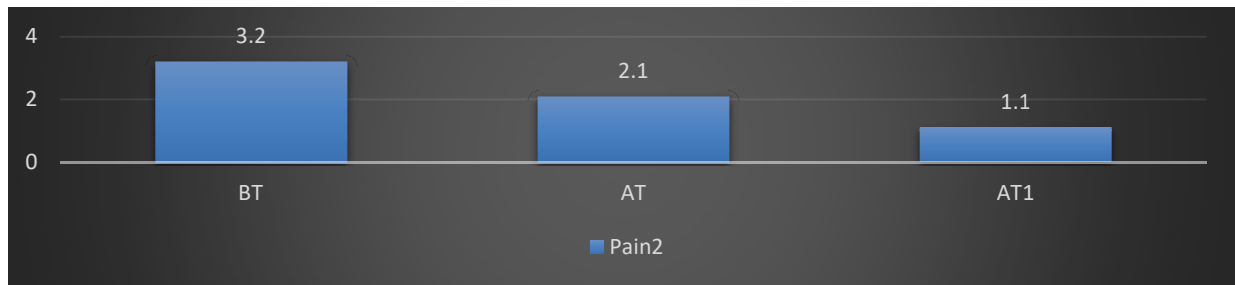
	Mean		Mean diff		Paired 't' test			
	BT	AT	SD	SE	SE	T	P	Re
BT-AT	1.87	1.37	0.5	1.76	1.76	2.82	<0.05	S
BT-AT1	1.87	1.12	0.43	0.15	0.15	4.89	<0.001	S



**Graph 1**

**Table 11: Showing effect of treatment on Pain**

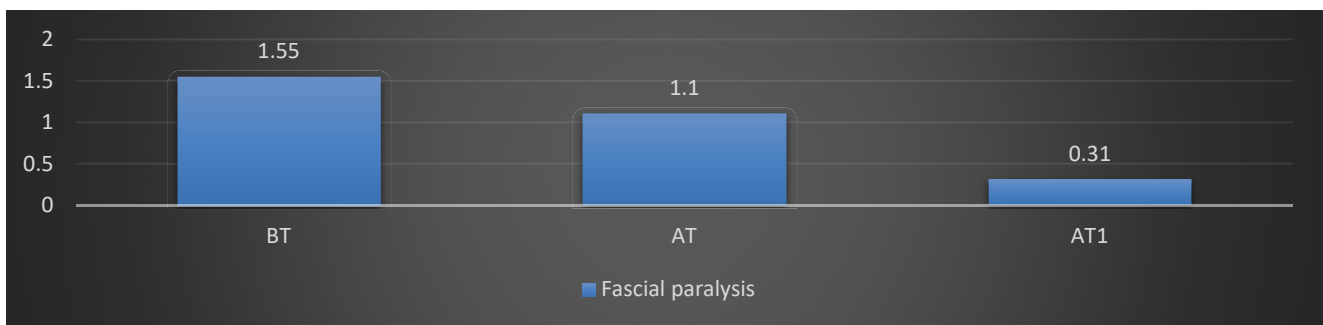
Pain	Mean		M.D	Paired t test				
	BT	AT		SD	SE	t	P	Re
BT-AT	3.2	2.1	1.1	0.3	0.2	5.5	<0.001	S
BT-AT1	3.2	1.1	2	0.63	0.4	5	<0.001	S



**Graph 2**

**Table 12: Showing effect of treatment on Facial paralysis**

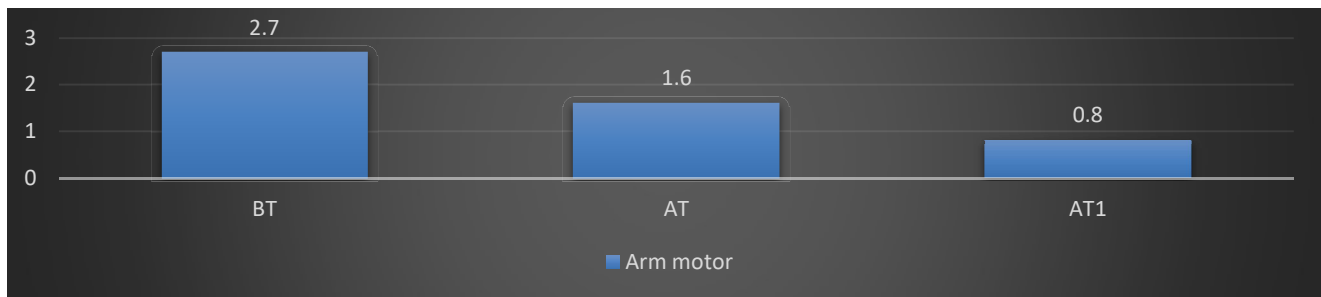
Facial Paralysis	Mean		M.D	Paired t test				
	BT	AT		SD	SE	t	P	Re
BT-AT	1.55	1.11	0.44	0.49	0.17	2.22	<0.001	S
BT-AT1	1.11	0.31	1.11	0.31	0.11	9.9	<0.001	S



**Graph 3**

**Table 13:** Showing effect of treatment on Arm motor:

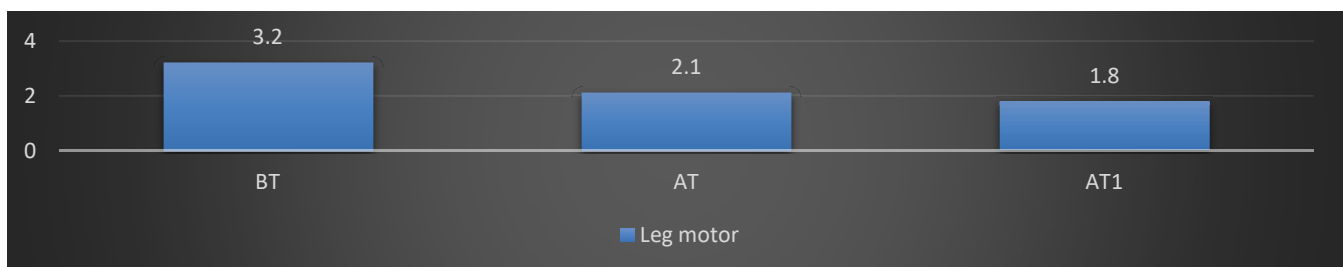
Arm motor	Mean		M.D	Paired t test				
	BT	AT		SD	SE	t	P	Re
BT-AT	2.7	1.6	1.1	0.314	0.099	11.1	<0.001	H.S
BT-AT1	2.7	0.8	1.9	0.81	0.256	6.64	<0.001	H.S



**Graph 4**

**Table 14:** Showing effect of treatment on Leg motor

Leg motor	Mean		M.D	Paired t test				
	BT	AT		SD	SE	t	P	Re
BT-AT	3.2	2.1	1.1	0.19	0.48	5.7	<0.001	S
BT-AT1	3.2	1.8	1.4	0.17	0.17	8.08	<0.001	H.S



**Graph 5**

## DISCUSSION

### Discussion on disease:

*Pakshaghata* is a *Vatananatmaja Vikhara* characterised by the loss of function and mobility of half of the body either *Vamabhaga* or *dhakshina bhagha*. According to *Charaka Acharya*, *Pakshaghata* is considered as involvement of half of the body along with facial involvement whereas *Acharya Sushrutha* considers only involvement of half of the body. In classics specific *Nidana* for *Pakshaghata* has not been explained separately. However the general *Nidana* of *Vatavyadhi* can be taken as the *Nidana* of *Pakshaghata*.<sup>4</sup> *Acharya Charaka* opines that *Vayu* beholds either right or left side of the body, dries up the *Sira* and *Snayu* of respective affected area and producing loss of movements, along with *Ruja* and *Vakstambh*. In *Sushruta Samhitha*, the *Samprapthi*

of *Pakshaghata* is explained as exaggerated *Vata* travels through the *Urdhvaga*, *adhoga* and *tiryaka dhamanis*, loosens the *Sandhi bandha* and leads to *shareerardha akarmanyata* and *achetana*. In contemporary Science it is explained under Cerebrovascular Accident (Stroke). There are two major categories of brain damage in stroke – Ischemia and Haemorrhage, which result in the destruction of brain tissue via abnormalities in the brain’s blood supply.<sup>6</sup>

### Discussion on procedure:

#### A. *Snehana & Swedana*:

The *Samanya Chikitsa sutra* of *Pakshaghata* is *Snehana Swedana samyutam Pakshaghate Virechanam*. In the study under *Snehana* and *Swedhan*, *sarvanga Abhyanga*, *Sarvanga Shastika Shali pinda Sweda* used. The main part of *Abhyanga* procedure is the

mechanical stimulation more precisely the pressure application. It reduces the motor neuron hyperexcitability. In this way *Abhyanga* acts through the above properties of *Sneha*, because all the properties are opposite to *Vatadosha*. *Abhyanga* is considered to be useful treatment in provoked *Vatadosha*. *Shastika Shali pinda Sweda* is *Snigdha*, *Balya*, *Rasayana* and *Vatahara*, Further *Swedana* cleans and opens up the channels of *srotas* thus facilitates more nourishment and free movement of *Vatadosha*.

#### B. *Basti Chikitsa*:

*Acharya Charaka* has considered, *Basti Chikitsa* as *Ardhachikitsa*, while some authors consider it as *Sampoorna Chikitsa*.<sup>7</sup> In the *Samprapthi* of *Pakshaghata*, *Vata* is the *Pradhana dosha* involved in the disease *Pakshaghata* and *Basti Chikitsa* is regarded as prime line of treatment for *Vata dosha*. So, *Basti chikitsa* can be adopted depending on the avastha of the *Pakshaghata*. *Basti* is not only best for *Vata* disorders it also equally effective in correcting the morbid *Pitta*, *Kapha* and *Rakta*. - *Bastivarte cha pitta cha kapha cha raktham va shasyate*.

The *Basti* which maintain the lifespan for a longer period (*Ayu sthapana*) is considered as *Yapana Basti*. *Acharya Charaka* describes that *Yapana Basti* can be given in all seasons irrespective of *kala or Ritu*. It is also considered as *Ubhayarthakari* as it acts as both *Shodhana* and *Shaman*. *Yapana basti* is *Sadhyobalajanana* and *Rasayana*. In other reference like *Astanga samgraha* specifically used the word *Rajayapana basti* and also considered as *Sresta Yapana Basti*.<sup>8</sup> It is generally indicated in *Swasta*, *Atura*, *Vruddha*, *Naarinam*, *aprajathanaam*, *Sarva Roga Prashamanartha*, *Shukra mamsa bala-pradaarta*.

In *Charaka Samhita* even we find the reference regarding *Basti karma* indicated in conditions like for person whose limbs have become stiff and contracted, who suffer from lameness, who are afflicted with fracture and dislocations, in those limbs are afflicted by the movement of different types of aggravation of *vata*.<sup>8</sup> In *Astanga Sangraha* while explaining the *Pradhanyata* of *Basti*, *Acharya Vagbhta* explained that *Basti* is mainly for *Vatapradhaneshu*, *Shigram brumhana kariyam* hence forth in disease like *Pakshaghta* which is a kind of *Apatarpanajanya Vyadhi*, for *Brimhanartha* and *Vata Shamanartha*, in the present study *Basti Chikitsa* was adopted in the present study. As the *Pakshaghata Vyadi* is involving *Madhyama Rogamargha*, *Marmastya vyadhi* so, *Kala Basti* pattern is adopted in the study.

The role of *Basti* in *Pakshaghata* is *Marmapari-palanartha* as explained by *Acharya charaka* in *trimarmiyasiddhi chikitsa adhyaya - Utpanarvighatascha marmani paripalanam*. Here *Marma* can be understood as *Srira marama*. In condition like *Pakshaghata*, it is important to improve the quality of life. Mode of action of *Rajayapana Basti* on *Pakshaghata* can understood by the following similes as *Basti* drugs and procedure may sensitize the whole body by vigorous action of *Vayu* through all the *Siras* present in the body.

Mode of action: *Basti* drugs in *Pakvashaya* act on whole body in a same way as sun, which though placed in the sky, causes evaporation of water on the earth. The *Virya* of collective *Bastidravaya* is first taken up by *Apana Vayu*, i.e. it acts or influences the *gunas* of *Apana Vayu* with which it comes in contact first. Consequently the *Samana Vayu* is also affected followed by *Vyana*, *Prana* and *Udana*. By the *Gunas* of *Basti Dravya*, the vitiated *Vayu* regain their normal state and supports the body. They also bring vitiated *Pitta* and *Kapha* in their normal state, and the five types of *Vayu* nourish their respective *Sharira-Bhuta Guna*. The *Virya* of *Dravya* are propagated by the *Vyana* in *Tiryak* or lateral direction, by the *Apana* in downward direction and in upward direction by *Prana*, just as water pipes carry water to the different parts of the field similarly the “*Harini*” (Channels) carry the *Gunas* of the *Basti Dravya* to every part the body, hence a *Basti* which is appropriate will with the help of *Vata*, *Pitta* and *Kapha* through the *Sira* will spread in all body and cures even the most difficult disease.

#### Discussion on observations and Results:

Among 10 patients 80% people belongs between age group 20-50 i.e. 1 (10%) belongs to 20-31,3 (30%) belongs to 31-40,4 (40%) belongs to 41-50 and 2 (20%) belongs to 51-60. Research articles revealed that incidence of increasing stroke at younger age, stroke incidence rates in those 20-54 years age were significantly increased in both black and white.<sup>9</sup> In the study majority of the people 9 (90%) were male and 1(10%) were female. The literature regarding gender –specific aspects of cerebrovascular diseases is quite sparse. It is well documented that the incidence of stroke is higher in males than in female in all age group.<sup>10</sup>

In the study 6(60%) belongs to Chronicity period more than 1 year and 4 (40%) were below 1 year. The earlier stroke patients start their rehabilitation treatment, the better results they can attain, the re-

covery from stroke occurs within 3 months after the onset of stroke. Similarly neurological and functional recovery happens within 6 months in acute and sub acute stage. But after 1 year recovery chances are very less. The majority of patients found with *lakshans* like *Chestanivrutti*, *Vakstambha*, *Padasanchocha*, *Hastasankocha*, *Shoola* given significant result.

In the study after *Parihara kala* posted for Physiotherapy found to be beneficial in improving the condition of the patient. Main principle of physiotherapy treatment is to normalize the tone, increase coordination between different groups of muscle and to strengthen weak muscle which is achieved through positioning, training of movements, balance, gait Training etc

## CONCLUSION

The overall result notes that the effect of *Sarvanga Abhyanga*, *Shastika Shali pinda Sweda* with *Rajayapana basti* is helpful in reducing the *Lakshanas* of *Pakshaghata*, joint deformity, prevention of contractures and thereby facilitating for early achievement in areas of ADL by improving muscle tone, gain in muscle strength, and proper nourishment of *dhatus*. Physiotherapy can be rehabilitation of stroke patients is represented by various approaches. In further study can be employed with physiotherapy rehabilitation program to test the combined effect. The present study need to try on larger sample for better understanding of efficacy of both procedures.

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