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## **A Clinical study on Kayaseka with Bala Taila in the management of Pakshagata**

**Dr.Yogeshwari Biradar\*and Dr B M Channabasavanna\*\***

**N.K. Jabshetty Ayurvedic Medical College & PG Centre,Karnataka,India**

### **Abstract**

Health and ailing, pleasure and pain, ease and disease are inborn properties of human life, centuries and centuries succeeded in struggle between man and disease. The infliction of pain, either on mind or body or both is what Vyadhi means. Pakshaghata is one such Vyadhi where mind and body both are inflicted.

Pakshaghata may be co-related with the stroke phenomena, where in either left or right side of the body loses its function in different degrees. It is a disease where the vata dosha is predominantly disorganized. Vata vyadhis are considered as dushchikitsya and Pakshaghata is one among the nanatmaja Vatavyadhis and is considered as a maharogain samanya chikitsa sutra of vatavyadhi snehana & swedana helps to eliminate deterioration and stiffness of the body as a dry piece of wood could be bent as desire after it's oleation and fomentation.

As chronicity of disease increases vitiated vata having main role in samprapti can be pacified by treatment like kayaseka. Kayaseka acts as both Snehana and swedana and also the drug used for procedure is Bala taila has good vata shamana property. In the commentary of Jejjata on chikitsa sutra of pakshaghata in charaka samhita,dealt about the snehayukta swedana which can be taken in consideration as kayaseka with taila.

In the present study 15 patients were selected by simple randomized sampling procedure and treated with Kayaseka with Bala Taila for 14days. And Follow up was taken on 14<sup>th</sup> and 28<sup>th</sup> day. The overall effect of therapy was 60.83% and shown statistically highly significant.

**Keywords:** Pakshghata,stroke, Kayaseka,Abhyanga,Nadisweda, Bala Taila

## **Introduction**

Health and ailing, pleasure and pain, ease and disease are inborn properties of human life, centuries and centuries succeeded in struggle between man and disease.

Ayurveda is a rich storehouse of time tested and effective methods for the treatment of several obstinate and incurable diseases. Ayurveda has its own independent and practicable principles which can never be substituted by other systems of medicines.

An example for this is Panchakarma chikitsa that has drawn the attention of scientist worldwide. The clinical efficacy of Panchakarma procedures deserves appreciation and hence continues to attract the people, physicians and research workers worldwide.

The infliction of pain, either on mind or body or both is what Vyadhi means. Pakshaghata is one such Vyadhi where mind and body both are inflicted

Stroke is defined as ‘rapidly developing clinical signs of focal (or global) disturbance of cerebral function, with symptoms lasting 24 hrs or longer, or leading to death, with no apparent cause other than of vascular origin’. This definition includes stroke due to either cerebral infarction or intracerebral and subarachnoid hemorrhage. Stroke is responsible for a great burden of disability in the community. In developed countries, stroke is third leading cause of death ranking behind heart diseases and cancers. Approximately one person in six will die as a consequence of cerebrovascular disease. Due to the increasing life span, urbanization and changing life style, stroke is already a major public health problem in India. It is likely to assume epidemic proportion in the coming years and cause enormous strain on India’s limited health care resources.

Pakshaghata may be co-related with the stroke phenomena, where in either left or right side of the body loses its function in different degrees. It is a disease where the vata dosha is

predominantly disorganized. Vata vyadhis are considered as dushchikitsya and Pakshaghata is one among the nanatmaja Vatavyadhis and is considered as a maharoga

Hemiplegia is the most alarming to the spectator, most grievous to the patient & most battling to the physician. It is surprising that no treatment exists that has been conclusively shown reduction in the risk of disability. Despite a massive world wide effort to rectify this disease was perfectly judged by ancient physician.

The problem faced in the treatment of pakshaghata, is not of adding years to the life but rather adding life to years.

Shosha of sira and snayu & chestanivrutti which are the most important event in samprapti demands a pioneer treatment of vata i.e. shehana and swedana for a longer period.

Here in the present study an attempt is made to evaluate the effect of kayaseka with Bala taila in Pakshaghata to avoid the risk of disability for longer period.

In samanya chikitsa sutra of vatavyadhi snehana and swedana helps to eliminate deterioration and stiffness of the body as a dry piece of wood could be bent as desired after its oleation and fomentation.

As chronicity of disease increases vitiated vata having main role in samprapti can be pacified by treatment like kayaseka and also the drug used for procedure i.e Bala taila has good vata shamana property. In the commentary of Jejjata on chikitsa sutra of pakshaghata in Charaka Samhita, dealt about the snehayukta swedana which can be taken in consideration as kayaseka.

### **Aims and Objectives**

1. To evaluate efficacy of kayaseka in the management of pakshaghata.

### **Material and Methods**

#### **Source of Data**

- 1) Patients are selected from college attached Hospital.
- 2) Ayurvedic Classics, Journals, magazines, seminars, conferences, digital library and web sites.

3) Materials – raw drugs are collected from the Ayurvedic pharmacy under the supervision of Dravyaguna specialist.

4) Rasashala attached to college for preparation of medicine under the supervision of Rasashastra expert.

### **Methods of Data Collection**

The study is a clinical study, hence 15 patients were selected on the basis of simple randomized sampling procedure according to inclusive criteria.

### **Inclusion Criteria**

- 1) Patients age group is 25 to 60 years irrespective of sex, religion, Socioeconomic status and occupation are taken.
- 2) Patient presenting with classical signs and symptoms of pakshaghata.
- 3) Patient who are fit for kayaseka

### **Exclusion Criteria**

- 1) Marked mental impairment and Patients having bed sores.
- 2) Acute condition before 4 months and Chronicity more than 4 years.
- 3) Lost bowel and bladder control and suffering with other severe systemic disease.
- 4) Intracranial infections such as meningitis, Space occupying lesions of brain such as Tumor, Trauma & Congenital defects.

### **Investigations**

C.T. Scan

### **Research Design**

All the 15 Patients were selected treatment of kayaseka with Balataila for 14 days.

Before starting the treatment through counseling of patient and administration of Gandharvahstadi kashaya daily for kostashudhi.

Follow Up

There will be two follow up in 2weeks interval i.e. 14<sup>th</sup> day and 28<sup>th</sup> day of the treatment

### Intervention Chart

Sl.No	Procedure	Drug	Duration
1	Kayaseka	Balataila	40-45 min for 14 days

### Methodology

The progress will be noted on the basis of assessment parameters (both subjective and objective) before and after treatment in a specially prepared case sheet.

### Parameters For Assessment

#### Subjective Parameters

- 1) Chestanivrutti (motor activity disability)
- 2) Ruja (pain)
- 3) Vakstambha
- 4) Sira snayu vishosha (emaciation)

#### Objective Parameters

- 1) Goniometric studies to measure the range of movement of limbs, joints and fingers
- 2) Lifting of arm at shoulder / leg at hip joint
- 3) Time taken for sitting from lying down
- 4) Time taken for standing from sitting
- 5) Dropping wrist / foot

6) Reflexes

7) Handgrip power by using (hand bulb) sphygmomanometer

8) Muscle tone

9) Muscle power

### **Clinical Observations**

In the present study total 15 patients of pakshaghata were recorded and assessed according to the standard Proforma. 15 patients were treated with Kayaseka(pizichil) with Bala Taila. The details recorded are being put forth here.

In the study 3.33% of total number of patients are in the age group of 21-30yrs, 20% are in the age group of 31-40 yrs, 53.33 % patients were in the age group of 41-50 yrs and 23.33% were in age group 51-60yrs, 96.67%,33.33% patients were from poor group, 43.33% patients were from middle group, 16.67% Patients were from upper middle group and 6.67% were from rich group,out of 30 patients, 20%patients were uneducated, 33.33% patients ,Out of 30 patients, 4 patients (13.33%) were Labour, 7 patients (23.33%) were doing service, 5patients (16.67%) were doing business, 9patients (30%) were doing agriculture and remaining 5 patients (16.67%) were Housewives,Among 30 patients 18patients (60%) had mixeddiet, while 12 patients (40%) had vegetarian diet,Among 15 patients only 5 Patients (16.67%) were having good sleep and 10 patients (83.33%) were having delayed and disturbed sleep.Among 15 patients 30% were having tea addictions, 23.33% were having smoking addiction, 23.33% were having alcohol addiction and 26.66% patients were having other addictions.In this study majority of the patients, 10% had Pravara Satwa, 56.67% patients had Madhyama Satwa and 33.33% patients belonging to Avara Satwa,In this study 50% patients had Madhyaa Samhana, patients (6.67%) belonging to Pravara Samhana, patients (43.33%) were of Avara Samhan,In the present study, out of 15patients, 30% patients had Vishama Agni, patients 70% had Manda Agni, , no patients were of Sama Agni and Teekshna Agni,In assessment of kosta,3.33% patients had Mruduakostha, 33.33% patients had Madhyamakostha and 63.33% patients had Krurakostha. In this study, 10% patients were Yuva, 66.67% were madhyama and 23.33%patients were vrudha,In the present study, patients having Avara Aharashakti were

56.67%,Madhyama 43.33% and no patients were Pravara Aharashakti.In this study majority of the patients, 22(73.33%) had Avara vyayam shakti , 8 patients (26.66%) had Madhyama vyayam shakti and no patients belonging to Pravara vyayam shakti,In this study ,patients having pravara satmya were30%,50% having madyama satmya and 20%havingavra satmya,In this study ,46.67% patients were found vatapittaja prakruti,23.33% patients having PittakaphajaPrakruti and 30% were found kaphavataja prakrutiIn this study,46.67% patients were found right side affected due to pakshaghata and 53.33% patients were found left side affected due to pakshaghata,In this study, 60 % patients were the chronicity of 4m-15m, 16.66% were chronicity of 16m-26m,10% were the chronicity of 27m-37m,13.33% patients were the chronicity of 38m-48m.

## Results

### Objective Parameters

Sr. No	Symptom	BT Mean $\pm$ SE	Follow up	AT Mean $\pm$ SE	Df	t-value	%	p-value	Remarks
1	Finger movement	3.26 $\pm$ 0.15	1	2.6 $\pm$ 0.19	14	4.18	20.4	<0.01	HS
			2	1.4 $\pm$ 0.21	14	9.72	57.14	<0.01	HS
2	Lifting of arm at shoulder	3.4 $\pm$ 0.13	1	2.7 $\pm$ 0.15	14	4.18	19.6	<0.01	HS
			2	1.33 $\pm$ 0.15	14	11.37	60.78	<0.01	HS
3	Lifting of leg at hip	3.33 $\pm$ 0.15	1	2.73 $\pm$ 0.15	14	4.58	18	<0.01	HS
			2	1.46 $\pm$ 0.16	14	11.29	56	<0.01	HS
4	Time taken to sit from lying position	3.53 $\pm$ 0.13	1	2.86 $\pm$ 0.16	14	4.18	18.86	<0.01	HS
			2	1.46 $\pm$ 0.16	14	13.48	58.49	<0.01	HS
5	Time taken to stand from sitting position	3.46 $\pm$ 0.13	1	2.8 $\pm$ 0.17	14	3.56	19.23	<0.01	HS
			2	1.4 $\pm$ 0.16	14	11.37	59.61	<0.01	HS
6	Muscle Tone	3.4 $\pm$ 0.16	1	3 $\pm$ 0.16	14	3.05	11.76	<0.01	HS
			2	1.46 $\pm$ 0.13	14	8.47	56.86	<0.01	HS
7	Muscle Strength	3.6 $\pm$ 0.13	1	2.86 $\pm$ 0.16	14	4.78	20.37	<0.01	HS
			2	1.33 $\pm$ 0.15	14	10.98	62.96	<0.01	HS
8	Handgrip Power	3.33 $\pm$ 0.12	1	2.73 $\pm$ 0.11	14	3.15	18	<0.01	HS
			2	1.2 $\pm$ 0.14	14	11.11	64	<0.01	HS
9	Drooping		1	2.93 $\pm$ 0.15	14	4	15.38	<0.01	HS

	of wrist	3.46±0.13	2	1.4±0.16	14	11.37	59.61	<0.01	HS
10	Drooping of Foot	3.46±0.13	1	2.86±0.13	14	3.67	17.3	<0.01	HS
			2	133±0.15	14	9.9	61.53	<0.01	HS

### Subjective Parameters

Sr no	Symptom	BT Mean ±SE	Follow up	AT Mean ± SE	Df	t-value	%	p-value	Remarks
1	Pain(Ruja)	3.2±0.17	1	2.6±0.16	14	3.67	18.75	<0.01	HS
			2	1±0.16	14	12.6	68.75	<0.01	HS
2	vakstambha	3.13±0.19	1	2.6±0.19	14	4	17.02	<0.01	HS
			2	1.2±0.1	14	10.6	61.70	<0.01	HS
3	chestanivrutti	3.4±0.14	1	3±0.09	14	3.05	11.76	<0.01	HS
			2	1.33±0.12	14	17.48	60.78	<0.01	HS
4	Sirasnayu vishosh	3.13±0.16	1	2.8±0.14	14	2.64	10.63	<0.01	HS
			2	1.33±0.12	14	12.43	57.44	<0.01	HS

### The overall result of the treatment

Sr. No	B.T Mean±S.E	Follow up	A.T Mean±S.E	d.f	t!.value	p.value	Remarks	Efficacy %
1	46.13±1.48	1	38.4±1.29	14	9.43	<0.01	HS	16.76
		2	18.06±0.77	14	26.53	<0.01	HS	60.83

### Discussion

Pakshaghata is one among the Vatavyadhi characterized by cheshtanivruti. But this mahagada is having much more drastic expression on human life. The tragedy of the Cerebro Vascular Accidents lies in the fact that it does not always kill rapidly. In fact it is the chief and most crippling diseases destroying body and mind alike.



The reference of the disease is found since the Vedic period. In the Vedic period the disease Pakshaghata was under the broad heading of Vata Vyadhi. Gradual clinical development of the disease Pakshaghata was observed with the passage of time. In the Samhita Kala in Charaka Samhita the general Samprapti of Pakshaghata has been mentioned as a separate disease along with its line of management. Later on the Pakshaghata has been classified considering the Doshanubandha and mentioned the characteristic symptoms of Kaphanubandha and Pittanubandha Pakshaghata in Madhava Nidana.

Chikitsa in Ayurvedic terms not only aims at the radical removal of the disease but also guides for the restoration and maintenance of normal health. Snehana swedana is the line of treatment for Pakshaghata.

As Kayaseka with oil is type of snigdha sweda, in present study Kayaseka with Balataila had taken for clinical study.

### **Discussionon Procedure**

Kayaseka is a snigdha sewda in which the warmed oilis poured all over the body for stipulated period ,in a specific manner. It has the advantage of producing snehana and svedana simultaneously.

### **Probablemode of action of Kayaseka**

Sushruta explains that out of the four Tiryak Dhamanis, each divides gradually hundred and thousand times and thus become innumerable. These cover the body like network and their openings are attached to Romakupa. Through these only Veerya of abhyanga and Kayaseka enter into the body after undergoing Paka with Bhrajaka Pitta in skin (Su.Sa.Sh.9/9 & Dal).

Vagbhata while explaining the functions of Bhrajaka Pitta narrated that Bhrajaka Pitta is responsible for the Pacana of drugs used in Abhyanga and Kayaseka (A.Hr.12:14 & Aru, A.Sa.20).

The primary barrier to absorption of exogenous substances through the skin is stratum corneum. Rate of absorption is directly proportional to concentration of drug in vehicle, partition co-efficient, diffusion co-efficient and thickness of the stratum corneum.

Absorption depends upon lipid solubility of the drug since the epidermis as a lipid barrier.

The vasodilation due to sweda improves the circulation to the skin and peshi, snayu ,kanadara as well as oxidizes the malas located in tissue. This procedure removes the strotavarodha at sthansnshtaya i.e.at the affected sira snayu kandas in pakshaghata,thereby it improves the movement of vyana vata and improves the motor activity of limbs.

Since the procedure Kayaseka is snigdha sweda, it pacifies vata by snehana and ushna guna which is the prime factor in pathogenesis of pakshaghata.

Thus with the above references it can be said that drugs used in Svedana procedure get absorbed through the Romakupa and produce action according to the property of the medicine used.

## **Discussion**

### **Effect of Therapy on Subjective and Objective Parameters**

**Effect on Finger movement:** The effect of therapy was observed 57.14% among the 15 patients of (Kayaseka).

**Effect on Lifting of arm at shoulder:** The effect of therapy was observed 60.78% among the 15 patients .

**Effect on Lifting of leg at hip:** The effect of therapy was observed 56% improvement.

**Effect on Timetaken to sit from lying position:** The effect of therapy was observed as 58.49% improvement. .

**Effect on Timetaken stand from sitting position:** The effect of therapy was observed as 59.64% improvement.

**Effect on Muscle Tone:** The effect of therapy was observed as 56.86% improvement,

**Effect on Muscle Strength:** The effect of therapy was observed as 62.96% improvement.

**Effect on Handgrip power:** The effect of therapy was observed as 64% improvement.

**Effect on Drooping of wrist:** The effect of therapy was observed as 59.61% improvement.

**Effect on Drooping of Foot:** The effect of therapy was observed as 61.53% improvement.

**Effect on Ruja:** The effect of therapy was observed as 68.75% improvement,.

**Effect on Vakstambha:** The effect of therapy was observed as 61.7% .

**Effect on Chestanirutti:** The effect of therapy was observed as 60.78% improvement,.

**Effect on Sirasnayu Vishosha:** The effect of therapy was observed as 57.44% improvement.

In the present study reflexes were taken for assessment of effect of drug during the case trial but there was no remarkable change in reflexes hence excluded from study.

The result is highly significant in both subjective and objective parameters.

### **Overall Effect of Therapy**

Overall effect of therapy was 60.83% ,the effect is statistically highly significant ,so this therapy indicates better results.

### **Conclusion**

In this clinical study the following conclusions were done after observing the data base concept and a scientific discussion.

1. Pakshaghata is one among the Vatavyadhi characterized by cheshtanivruti and Pakshaghata has been classified considering the Doshanubandha i.e Kaphanubandha and pittanubandha.

2. Kayaseka is an effective therapeutic procedure and is considered as snehayukta sweda.

4. Majority of the patients were found addicted to alcohol and smoking .

5. Kayaseka shows highly significant results on Pakshaghta, on all the symptoms.

6. Kayaseka shows 60.83% results

Hence it is concluded that Kayaseka procedure is shows better results in pakshaghata.

7. Further studies required large scale of patients and highly equipped Research centers to assess and get better therapeuticeffect for global acceptance of Ayurvedic therapies.

**\*. Asst.Prof, Dept of Panchakarma,NKJAMC & PG Centre,Bidar,Karnataka**

**\*\* . Assisociate Prof, Dept of Panchakarma,NKJAMC & PG Centre,Bidar,Karnataka**

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