



AN OBSERVATIONAL STUDY ON TREATMENT LINE OF
PAKSHAGHATA (HEMIPLEGIA)-A CASE STUDY

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ABSTRACT

Paralysis is accompanied by a loss of sensation (sensory loss) in the affected area as well as loss of motor function. Stroke is a common disorder which affects more than 15 million people worldwide. Hemiplegia is a condition similar to *Pakshaghata* in *Ayurveda Medicine*. It is one of the *Vata Vyadhis*. In *Ayurveda* avoiding etiology (*Nidhana parivarjana*) purification therapy (*Shodhana*) and neutralizing therapy (*Shamana*) used for treatment line of *Pakshaghata*. Objectives were, to find out treatment protocol for *Pakshaghata*, and to study drug preparations used in treatment line for *Pakshaghata*, in Ayurveda teaching hospital, Borella, Sri Lanka. Within 8 weeks, 21 types of preparation of drugs used as treatment. Decoctions (*Kashaya*) commonly used during treatments in *Pakshaghata*. In those preparations; *Kashaya*, *Vati*, *Kalka*, *Taila*, *Leha*, *Pattu/Mallum/Plaster* and *Choorna* were identified. In this case study after 8 weeks of treatments, it was observed more relief of cranial nerves impairments and better relief was observed in motor and sensory activities of right side of the body as grade level reduced from 3 to 1 as per the progress of the patient of *Pakshaghata*. According to observed data, study revealed that this treatment line has provided better relief in all of signs regarding to physical examinations of the subject of *Pakshaghata*. It could be recommended that statistical analysis of revealed data and efficacy of treatment line will be evaluated in further clinical study.

Key words: Case Report, *Pakshaghata*, *Vyadhi*, *Denibadiya* decoction

INTRODUCTION: *Ayurveda* is a science of life and one of the world's oldest holistic healing systems. It developed more than 3000 years ago in India, based on balance of *Thridos* with body, mind and spirit with comprehensive holistic approach for the wellbeing of human being. It has mentioned by emphasizing diet, herbal remedies, exercise, medication, breathing and physical therapies. The World Health Organization (WHO) defines stroke as rapidly developing clinical symptoms or signs of focal (at times global) disturbances of cerebral function, with symptoms lasting more than 24 hours or leading to death with no

apparent cause other than that of vascular origin. About 85% of all strokes are ischemic and the rest of 15% are hemorrhagic. In literature review, *Pakshaghata* is one of the *Vata vyadhi* and one of the eight *Maha roga* (powerful diseases). As per the definition, *Gathi* means motor and *Gandhana* means sensory functions have been considered. This disease mainly occurs due to vitiation of *Vata*. This is a nervous system related disease. It occurs in *Madyama roga marga*. These are the *Samprapthi Ghataka*, *Dosha – Vata*, may be involve *Pitta* or *Kapha Dushya – Rasa, Raktha, Mamsa, Medha* and *Majja, Upadhatu – Sira,*

Snayu, Dhamani, Agni – Vikruta, Ama – Pachakagni and Dhatvagni, Srotas – Rasavaha srotas, Rakthavaha srotas, Mamsavaha srotas, Medavaha srotas, Majjavaha srotas, Manovaha srotas, Vatavaha srotas, Srotho dushti lakshana – Sanga and Vimarga gamana, Adhisthana – Sharirika, Udbhava sthana – Pakvashaya and Roga marga – Madhyama. This is the treatment of Pakshagata- It is a complicated disease due to Vata involvement and involved Marma is Shiras (one of the Trimarma).

According to Charaka, Explained Sneha, Swedana and Virechana. According to Susruta, Explained Abhayanga, Mrudu shodhana, Anuvasana, Asthapana and Shiro vasti.

MODERN REVIEW: Paralysis means loss of function of one or more muscles which often caused by damage to the brain and nervous system, especially spinal cord. Other major causes are stroke, trauma with nerve injury, cerebral palsy, peripheral neuropathy, Parkinson's disease. Drugs that interfere with nerve function, such as methamphetamine, opiate drugs, benzodiazepines etc., can also cause paralysis. Among these, cerebrovascular accidents or strokes are commonest cause for hemiplegia. Poor blood flow to brain results to cell death and caused for stroke. It is two main types; Ischemic stroke – due to lack of blood supply and Hemorrhagic stroke – due to bleeding. These are the Types of strokes- Pathological background for strokes may be either ischemic or hemorrhagic. Due to disturbances of cerebral blood circulation, ischemic strokes are caused while hemorrhagic strokes result from rupture of blood vessels or an abnormal vascular structure. Approximately 80% of all strokes are Ischemic, 15% are intracerebral

hemorrhage and 5% are subarachnoid hemorrhage. The Investigations are physical examination (taking medical history of symptoms and neurological status, Neurological examination for diagnosis Computed Tomography (CT) scan.

Case Report

1. Personal data

1. Name of the patient : Mr. S. Emil Thushara
2. Address : Rajagiriya.
3. Gender : Male
4. Age : 47 years old
5. Religion : Buddhism
6. Marital Status : Married
7. Occupation : Labor
8. Ward No : 09
9. Bed No : 26
10. Bed Head Ticket No : 1985/09
11. Date of admission : 07.10.2019

2. Chief Complaint : Function loss in right upper limb and lower limb since 3 weeks.

3. Other Complaint : Difficulty in speech since 3 weeks Some kind of memory impairment since 3 weeks Urinary and fecal incontinence since 3 weeks

4. History of Chief Complaint: According to the patient suddenly occur this condition before 3 weeks.

5. Past Illness:

- Hypertension : detected
- Diabetes Mellitus : not detected
- Ischemic Heart Diseases : not detected
- Hyperlipidemia : detected
- Epilepsy : not detected
- Head Injury : not detected
- Malignancy : not detected

6. Treatment History: He has taken western treatments for this condition from National Hospital Colombo, then after two

days, he has discharged and admitted to Ayurveda National Hospital, Rajagiriya.

7.Family History: No any family member has this condition.

8.Personal History:

1.Diet: excessive intake of oily and spicy foods, instant foods and meat.

2.Sleep: sound sleep,6 hours per day, *Ratri jagaran*.

3.Exercise: excessive heavy working

4.*Desha: Sadharana desha*

5.Habit and addiction : heavy smoker

9.Examination:

1.Ashta vida pariksha

- *Nadi – Gathi* : 72 bpm
Yathi :*Samantara*
Akrithi :*Purna*
Sanhathi :*Mrudu*
- *Muthra* : catheterized
- *Mala* : day- 2 / night - 0
- *Jiwha* : symmetrical and coated
- *Shabda*: heart – normal
lungs - normal
- *Druk* : normal vision

- *Akriti*: asymmetrical, extended right leg

2.Vital Examination

- Temperature - 37 /C
- Pulse - 72 bpm
- Respiratory rate - 18 / min
- Blood Pressure - 150/90 mmHg
- Height - 155 cm
- Weight - 52 kg

Observations in clinical examination of patient were documented in detailed case perform along with treatments during total 8 weeks .

3. General / On examinations (OE)

- Physical appearance – normal
- Mental state – normal
- Nourishment – normal
- Abnormal smells – normal
- Height – 155 cm
- Weight – 52 kg
- Skin – normal
- Hands – right hand function loss and left hand normal
- Lymph nodes – normal

Table 01. Systemic examination of the patient

System	Inspection	Palpation	Percussion	Auscultation
Cardiovascular system	0	0	0	0
Respiratory system	0	0	0	0
Gastrointestinal system	0	0	0	0
Genito urinary system	0	0	0	0
central nervous system and musculoskeletal system	0	0	0	0

3 -severe disability,2-moderate disability,1-mild disability, 0-normal

Table 02. Neurological Examination Motor and Sensory examination of right side of body

Motor and Sensory	1 st two weeks		2 nd two weeks		3 rd two week		4 th two weeks	
	Upper limb	Lower Limb	Upper Limb	Lower Limb	Upper Limb	Lower Limb	Upper Limb	Lower Limb
Bulk of muscle wasting	0	0	0	0	0	0	0	0
Tone of muscle	3	3	2	3	2	2	1	1
Power	3	3	2	3	2	2	1	1
Walking abnormality	-	3	-	2	-	2	-	1

Reflexes	Biceps Reflex	3	-	2	-	2	-	1	-
	Triceps Reflex	3	-	2	-	2	-	1	-
	Knee Reflex	-	3	-	2	-	2	-	1
	Planter Reflex	-	3	-	2	-	2	-	1
Coordination	Finger nose test	1	-	1	-	1	-	0	-
	Heel shin test	-	1	-	1	-	1	-	0
Babinski's sign		-	3	-	2	-	2	-	1
Sensation	Touch	1	1	1	1	0	0	0	0
	Feeling of Pain	0	0	0	0	0	0	0	0
	Temperature	0	0	0	0	0	0	0	0
	Feeling of Pressure	0	0	0	0	0	0	0	0

3-severe disability 2-moderate disability 1-mild disability 0 - normal

Table 03. Cranial nerve examination of the patient

Cranial nerve	Type of examination	1 st two weeks	2 nd two weeks	3 rd two weeks	4 th two weeks
Olfactory nerve	Smell	0	0	0	0
Optic nerve	Vision	0	0	0	0
Oculomotor Nerve	Eye ball movement	0	0	0	0
	Ptosis	0	0	0	0
	Papillary reflex	0	0	0	0
	Accommodation	0	0	0	0
Trochlear nerve	Rotation of eye ball				
Trigeminal nerve	sensory	Scalp	0	0	0
		Face	2	2	1
Abducent nerve	Lateral movement of eye ball	0	0	0	0
Facial nerve	Facial muscle movements	2	1	0	0
	Elevation of hyoid bone	0	0	0	0
	Taste-anterior 2/3	0	0	0	0
Vestibulocochlear Nerve	Rinner's test	0	0	0	0
	Webber's test	0	0	0	0
Glossopharyngeal	Taste –posterior 1/3	0	0	0	0

Nerve	Deglutition	1	0	0	0
Vegas nerve	Swallowing	1	0	0	0
	Intestinal motility	0	0	0	0
	Cough reflex	0	0	0	0
	Cutaneous sensitivity	0	0	0	0
Accessory nerve	Movement of head and shoulder	3	2	1	0
Hypoglossal nerve	Movement of tongue	1	0	0	0

3-severe disability 2-modarete disability 1-mild disability 0-normal

Table 04. Motor speech examination of patient

Motor speech activity	1 st two weeks	2 nd two weeks	3 rd two weeks	4 th two weeks
Word out put	3	3	2	1
Phase length	3	2	2	1
Effort of speech	3	2	2	1

3-severe disability 2-modarete disability 1-mild disability 0-normal

Table 05. Table of final comparison of clinical examinations

No	Motor and Sensory	Before	After	
01	Tone of muscle	UL	3	1
		LL	3	1
	Power	UL	3	1
		LL	3	1
	Walking abnormality	3	1	
	Reflexes	Biceps	3	1
		Triceps	3	1
		Knee	3	1
		Planter	3	1
	Coordination	Finger nose test	1	1
		Heel shin test	1	0
	Sensation	UL	0	0
		LL	0	0
	Word output	3	1	
	Phase length	3	1	
	Effort of speech	3	1	
	Trigeminal nerve-Sensory	Scalp	0	0
		Face	2	1
	Accessory nerve Movement	3	1	

3-severe disability 2-modarete disability 1-mild disability 0-normal

Methodology: The research study was carried out as preliminary Observational study in the National Ayurveda Teaching

Hospital, ward 09, Borella, Sri Lanka and conducted 8 weeks (07th Oct – 09th Dec) time duration. The patient fulfilled

inclusion criteria was enrolled in this case study, aged 47years old hemiplegic male patient was selected disease on set within 2 years of time duration under inclusion criteria of the study. The clinical examination and investigations done by the researcher under the guidance of physicians of ward no. 09 were observed and all the data were compiled and reviewed based on available clinical examinations. Consent was obtained with provided Consent Form from the patient. Data was entered in separate sheet with protecting confidentiality using code system for personal information. Confidentiality of gathered data was maintained alone with period of survey only. After completing study all details

and data were disposed. The detailed medical history was taken and physical examination was done weekly wise in detail according to both *Ayurveda* and modern clinical methods. Referred relevant authentic textbooks and gathered literature and used web sites related to study.

4. Treatment Protocol/plan:

Avoiding *Nidhana parivarjana*, *Shodhana*, and *Shamana* was given as a line of treatment. 21 types of preparation of drugs used as treatment. Decoctions (*Kashaya*) commonly used during treatments in *Pakshaghata*. In those preparations; *Kashaya* , *Vati* , *Kalka*, *Taila*, *Leha* ,*Pattu/Mallum/Plaster* and *Choorna* were identified .

1. *Kashaya*

Name	Dose	Duration
<i>Denibadiya</i>	½ pata BD	07 th Oct - 9 th Nov
<i>Sulupaha Olindakola</i>	½ pata BD	21 th Oct -9 th Dec
<i>Danthimuladiya</i>	½ pata BD	10 th Nov -19 th Nov
<i>Ghandarva Hasthiadiya</i>	½ pata BD	19 th Nov -9 th Dec

2. *Kwatha*

Name	Dose	Duration
-	-	-

3. *Vati*

Name	Dose	Duration
<i>Chandraprabha</i>	2 BD	7 th Oct-19 th Oct
<i>Kaishoora guggulu</i>	2 BD	17 th Oct -9 th Nov
<i>Yogaraja guggulu</i>	2 BD	10 th Oct -9 th Dec

4. *Kalka*

Name	Dose	Duration
<i>Chandra kalka</i>	2.5 g BD	7 th Oct -9 th Nov
<i>Vata roga kalka</i>	2.5 g BD	20 th Oct -9 th Nov

5. *Thaila*

Name	Dose	Duration
<i>Divyanganadi</i>	1/8 oz	12 th Oct -13 th Oct
<i>Kolasleshma</i> + Ginger juice	1/8 oz	15 th Oct- 9 th Nov
<i>Nirgundiyadi</i>	3 oz	15 th Oct -9 th Nov
<i>Sarvavishadi</i> + <i>Nilyadi</i>	1/4 oz	18 th Oct -9 th Dec

<i>Thila + sahindalunu</i>	1oz + 1/4 tsp	11 th Nov -9 th Dec
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6. Leha

Name	Dose	Duration
<i>Kaluduru tippili + Pomegranate juice + Nasnaran juice</i>	-	7 th Oct -9 th Nov

7. Pattu/Mallum/Plaster

Name	Site	Duration
<i>Aba plaster</i>	Right cheek	7 th Oct – 9 th Nov

8. Choorna

Name	Dose	Duration
<i>S.Sena</i>	5 g	7 th Oct -19 th Oct
<i>I.Ustakadoos</i>	5 g	17 th Oct -19 th Oct
<i>Thripala</i>	5 g	26 th Oct -9 th Dec
<i>Madukadi</i>	5 g	6 th Nov-9 th Nov
<i>Sudarshana</i>	5 g	10 th oct

9. Bahira Karma

Name	Ingredients	Site	Duration
<i>Nikadi Tawilla</i>	<i>Nika kola, Pawatta kola, Beheth Erandu kola, Sudulunu</i>	<i>Hastha , Padaabyanga</i>	15 th Oct -9 th Oct
<i>Pancha walkala boild water</i>	<i>Nuga, Bo, Palol, Diul,Jala vethasa</i>	Body ,Head	18 th Oct -9 th Dec
<i>Madukadi lepa</i>		Head	4 th Nov-9 th Nov
<i>Shirodhara</i>	<i>Nilyadi oil -1bottle+ Nirundiyadi oil -1bottle</i>	Head	4 th Nov -9 th Nov
<i>Pishichil 1-3</i>	<i>Nirgundi oil – 1 bottle + Siddhartha oil – 1/2 bottle</i>	Body	22 th Nov-30 th Nov
<i>Pishichil 4-7</i>	<i>Buthakeshi oil 1 bottle + Siddhartha oil 1/2 bottle</i>	Body	22 th Nov -30 th Nov

RESULTS AND DISCUSSION: Total 8 types of preparations of drugs *Kasaya, Kwatha, Vati, Kalka, Thaila, Leha, Pattu/mallum/plaster, Churna* were used in treatment line for the subject within 8

weeks duration and these drugs were listed out. In clinical examination all the observations of results of physical examination were tabled as follows.

Table 06 – Detailed classification of different types of used preparations of drugs

Name of preparation of drugs	Type of Preparation of drugs with Ayurvedic term	Route of Administration	Usage of drugs (days) within two months				Total Days of administration of drugs
			1 st two weeks of admission	2 nd two week of admission	3 rd two weeks of admission	4 th two weeks of admission	

Denibadiya	Kashaya	Oral	14	14	6	0	34
Suluphaha olinda kola	Kashaya	Oral	0	14	14	14	42
Danti muladiya	Kashaya	Oral	0	0	9	0	9
Ghandarva hastiyadhi	Kashaya	Oral	0	0	7	14	21
Chandrapra bha	Vati	Oral	13	0	0	0	13
Kaishoora	Guggulu	Oral	14	10	0	0	24
Yogaraja	Guggulu	Oral	0	1	14	14	29
Chandra	Kalka	Oral	14	14	6	0	34
Vata Roga	Kalka	Oral	0	0	5	14	19
Divyangana di	Oil	External application	1	0	0	0	1
Kolasleshma	Oil	External application	14	12	0	0	26
Nirgundyadi	Oil	External application	6	14	14	14	48
Sarvavishadi ya	Oil	External application	3	14	14	14	45
Thala	Oil	External application	10	14	14	14	52
Kaluduru tippili	Leha	Oral	14	14	6	0	34
Aba	Palasthar a or Alepa	External application	14	14	6	0	34
S.Sena	Choorna	Oral	13	0	0	0	13
I.Ustakadoo s	Choorna	Oral	2	0	0	0	2
Thripala	Choorna	Oral	0	9	14	14	37
Madukadi	Choorna	Oral	0	3	0	0	3
Sudarshana	Choorna	Oral	1	0	0	0	1

Table 07. Classification of different types of used preparation of drugs

No	Types of preparation of drugs	Number of used types of preparation of drugs	Percentage of used types of preparation of drugs %
01	Kashaya	4	19.04
02	Kwatha	0	00.00
03	Vati	3	14.28
04	Kalka	2	09.52
05	Thaila	5	23.80
06	Leha	1	04.76
07	Pattu/Mallun/Plaster	1	04.76
08	Choorna	5	23.80

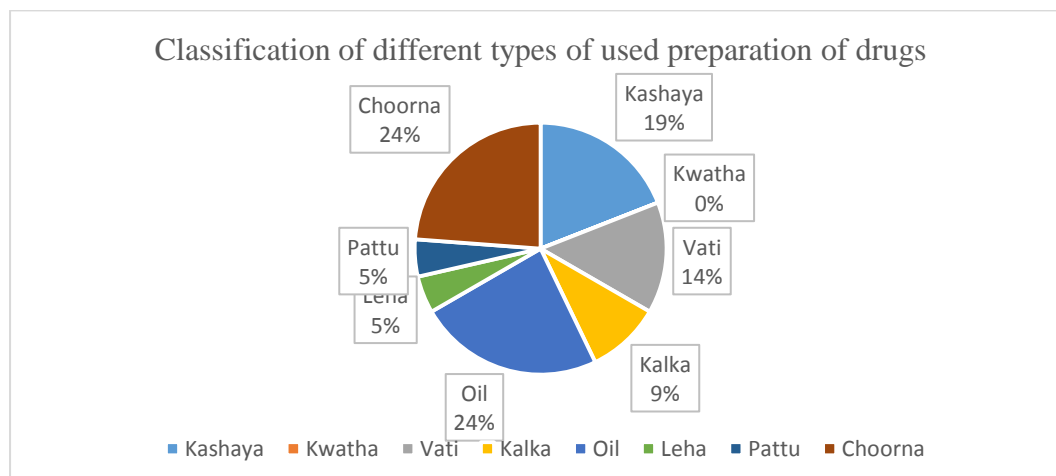


Figure 01 - Classification of different types of used preparation of drugs

Observations in clinical examinations of patient were documented in detailed case Performa along with treatments during total 8 weeks. The results of General examinations (OE) were as follows;

Physical appearance – normal, Mental state – normal, Nourishment – normal, Abnormal smells – not detected, Height – 155 cm, Weight – 52 kg, Skin – normal, Hands – right hand function loss and left hand normal, Lymph nodes – normal

CONCLUSION

It could be concluded that according to study, total 21 types of preparations of drugs were used as treatment line of *Pakshaghata* within duration of 8 weeks. Among these preparations; 4 types of *Kashaya* (19.04%) , 0 type of *Kwatha* (0%) , 3 types of *Vati* (14.28%) , 2 types of *Kalka* (09.52%) , 5 types of *Thaila*, 1 type of *Leha* (04.76%) 1 type of *Pattu / Mallum/ Plaster* (04.76%) and 5 types of *Choorna* (23.80%) were included and used. *Denibadiya kashaya* has given for the patient for *Shodhana* treatment in the 1st, 2nd and 3rd couple of weeks. *Sulupaha olindakola kashaya* has given in 2nd, 3rd and 4th couple of weeks for *Shamana* treatment. *Dantimuladiya kashaya* has given in 3rd two weeks and *Ghandarva*

hashtiyadiya kashaya 3rd and 4th couple of weeks for *Shamana* and *Tharpana* treatment .Treatments like *Kaluduru tippili leha*, *thaila*, *aba* plaster were used as localized symptomatic treatments.

After 8 weeks treatments, it was observed more relief of cranial nerves impairments and better relief was observed in motor and sensory activities of right side of the body. (grade level reduced from 3 to 1).According to data, study revealed that treatments has provided better relief in all of Signs and related to physical examinations done by researcher of the subject of *Pakshaghata*.

REFERENCES

1. Iliyakeruma A. Vatika Prakarana/ Deshiya Beheth Guli Kalka Potha. Panadura, Sri-Lanka: Moden Press; 1879.
2. Kumarasinghe A.,Madhava Nidana, Puva adhyaya, Sinhala Translation, Department of official Language; 1996.P. 65-70
3. Sharma P.V, Susruta Samhita. Vol II, Nidana sthana. Chaukhamba Visvabharati, Varanasi, 1st Edition; 2013. P. 3-25
4. Kumarasinghe A.,Charaka samhita,Vol III, Chikitsa sthana. Sinhala Translation, Department of official Language; 1996. P. 584-642
5. Sharma P.V, *Susruta Samhita*, Vol II, Chikitsa sthana. Chaukhamba

- Visvabharati, Varanasi, 1st Edition; 2013. P. 303-311
6. <https://www.who.int/health-topics/traditional-complementary-and-integrative-medicine> 10.05.2020 at 18.00 PM
7. <https://www.afro.who.int/health-topics/traditional-medicine> 01.06.2020 at 17.00 PM
8. <https://www.instituteofayurveda.org/plants/plantsdetail.phpi=285&s=Familyname> 02.06.2020 at 13.00 PM
9. <https://www.fapeosupela.blogspot.com> 03.06.2020 at 14.00 PM
10. <https://emedicine.medscape.com/article/1916852-overview> 10.06.2020 at 13.00 PM

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