

THE COMPARATIVE STUDY OF VIRECHANA KARMA AND BASTI KARMA IN THE MANAGEMENT OF PAKSHAGHATA W.S.R TO C.V.A

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ABSTRACT

In *Ayurvedic* text there are 80 *nanatmaj vyadhies* which are attributed to *vata dosha*, *Pakshaghata* is one of them. *Pakshaghata* is a disabling disease which is manifested as paralysis of one side of the body caused by vitiation of *vata dosha*. Hemiplegia also caused by a wide spectrum of disease processes like vascular disorders, infective disorders of brain tissue, tumours, trauma etc. *Virechana* is a process by which the vitiated *dosha* are expelled through the *adhomarga*. *Basti* therapy covers more than half of the treatment of all the disease. Considering both line of treatments, present study was planned to compare the efficacy of *Virechana & Basti* in *Pakshaghata* affected patients. For this study 60 patients satisfying the selection criteria were randomly selected from the OPD & IPD of Panchakarma Department of National Institute of Ayurved (N.I.A), Jaipur, Rajasthan, India and equally divided into three groups viz., Group A- *Virechana karma* with castor oil, Group B- *Basti karma* with *Erandmooladi Niruhana Basti* (dose 950 ml) and *Maha Masha Taila Anuvasan Basti* (lowest dose has been selected i.e.60 ml) in the form of *karma basti* for 30 days while in Group C- both *Virechana* and *basti* with *Erandamooladi Niruhana Basti* and *Maha Masha Taila Anuvasana basti* in the form of *karma basti* was administered. It is concluded from the study that Group C shows statistically highly significant result as compared to Group A and Group B.

Keywords: *Pakshaghata*, Hemiplegia, *Virechana & Basti karma*

INTRODUCTION:

Pakshaghata is a most distressing disease among *vata nanatmaja vyadhi*.¹ The pathological phenomena of *vata* playing central role in the manifestation of *Pakshaghata* are *Suddha vata prakopa*, *Anyadosha Samsirsa vata prakopa* and *dhatukshayajanya vata prakopa*.² Akin to *Pakshaghata*, Hemiplegia also caused by a wide spectrum of disease processes like vascular disorders, infective disorders of brain tissue, tumors, trauma etc. Among

these vascular accident or stroke is the commonest cause of hemiplegia.³ There are two major categories of brain damage in stroke viz-ischemia and hemorrhage, which result in the destruction of brain tissue via abnormalities in the blood supply of brain.⁴ Stroke is the clinical term for acute loss of circulation to an area of the brain, resulting in ischemia and a corresponding loss of neurologic function. Classified as either hemorrhagic or ischemic, strokes typically manifest with the sudden onset of focal neurologic deficits, such as weakness,

sensory deficit, or difficulties with language. Whereas diagnostic part of *Pakshaghata* (hemiplegia) is strong in modern science, there as no complete cure is available till today now. Here substantial reasoning for complete treatment of hemiplegia by ayurveda has to be established. In *Ayurveda* disease is treated by two methods as *Sodhan* (purification of *dosha* by specific procedures) and *shaman* (palliative) treatment.⁵ *Sodhan* eliminates excessively vitiated *doshas* out of the body and maintains homeostasis among *doshas*. *Shodhana* therapy not only cures the disease but also eliminates the causative factors where as *shaman* does palliation of *vitiated doshas* providing symptomatic relief.⁶ *Shodhana* of body is done by *panchakarma* (pentapurification) therapy viz *Vaman* (emesis), *Virechana* (purgation), *Anuvasana*, *Niruha Basti* (medicated enema) and *Nasaya Karma* (inhalation therapy).⁷ By *Virechana*, *doshas* are eliminated through the *adhomarga* from body.⁸ *Basti* is the most important constituent of the *Panchakarma* due to its multiple effects. *Basti* eradicates morbid *vata* from the root along with other *dosha* and in addition provides nutrients to the body tissue.⁹ Therefore; basti therapy covers more than half of the treatment of all the disease¹⁰ while some authors consider it as the complete remedy for all the ailments. *Basti* is considered the best remedy for morbid *Vata* but according to *Sushruta*, it can also be used in *Kaphaja* and *Pittaja* disorders by using different ingredients.¹¹ There fore, keeping this view of Charaka & Sushruta in mind, author has selected both procedures; *Virechana* & *basti*^{12,13} for the comparative study in the management of

Pakshaghata w.s.r to cerebral vascular accidents (CVA)

AIMS & OBJECTIVES

- To study the effect of *virechana karma*
- To study the effect of *Basti karma*
- To study critically about *pakshaghata* w.s.r. to CVA.
- To compare the effect of *virechana karma* and *Basti karma* in managing *pakshaghata*.

MATERIAL AND METHODS

- Subject** – 60 subjects satisfying the selection criteria were randomly considered for the present study & equally divided into three groups A, B & C.
- Source of Subject** – Selection of the patients was made from the O.P.D & I.P.D of Panchakarma department of National Institute of Ayurved (N.I.A), Jaipur, Rajasthan, India.
- Selection Criteria**
 - Inclusion criteria**
 - ◆ Subjects with less than 2 year chronicity of disease.
 - ◆ Subjects with age group 30-70 years.
 - ◆ Only Hemiplegia due to C.V.A.
 - Exclusion criteria**
 - ◆ Unconscious patients
 - ◆ Patients of uncontrolled diabetes
 - ◆ Age above 70 years
 - ◆ Hemiplegia due to trauma, Todd's paralysis
 - ◆ Hemiplegia due to Intracranial Infection and SOL.
 - ◆ Hysteria

◆ Associated cardiac disease like IHD and M.I

D. **Study design** – Randomized clinical trial during year 2008-2009 in Jaipur, Rajasthan.

E. **Drug Administration**

◆ Group A - In 20 patients *virechana karma* with *Eranda Thaila* (dose 60 ml) has been given after *abhyantara samyaka snehana* and *swedana*

◆ Group B - In 20 patients *Basti karma* with *Erandmooladi Niruhana*

Basti (dose 950 ml) and *maha masha taila Anuvasan Basti* (dose 60 ml) in the form of *karma basti* which has been given after *smayaka snehana* (external) and *swedana*.

◆ Group C - In 20 patients both *virechana* and *basti* (with *Erandamooladi Niruhana Basti* and *Maha masha taila Anuvasana basti* in the form of *karma basti*) have been given after *smayaka snehana* (external) and *swedana*.

2. **Assessment Criteria**

S.No.	SUBJECTIVE PARAMETERS	Objective Parameter
1.	<i>Chesta Nivritti</i>	Complete blood count (CBC)
2.	<i>Rujam</i> (Pain)	Lipid profile
3.	<i>Vakstambha</i> (Speech)	RBS
4.	<i>Achetanta</i> (Loss of sensation)	CT/ MRI (Optional in pre diagnosed patients)
5.	<i>Gouravata</i> (Heaviness)	
6.	<i>Shotha</i> (Oedema)	
7.	<i>Vibandha</i> (Constipation)	
8.	<i>Daha</i> (Burning sensation)	

OBSERVATION

S.No.	Observation	Maximum	Percentage
1.	Age	51-60yrs	39.48
2.	Religion	Hindus	76.32
3.	Sex	Male	88.16
4.	Marital Status	Married	96.06
5.	Education	Graduation	36.84
6.	Occupation	Business	40.79
7.	Socioeconomic status	Middle	68.42

8.	Dietary pattern	Vegetarian	65.78
9.	Habitat	Urban	60.52
10.	<i>Sharirka Prakrati</i>	<i>Pitta kaphaja</i>	43.42
11.	<i>Manas Prakrati</i>	<i>Rajas</i>	75.00
12.	<i>Sara</i>	<i>Twak</i>	59.21
13.	<i>Satva</i>	<i>Madhyam</i>	67.10
14.	<i>Samhanana</i>	<i>Madhyam</i>	69.73
15.	<i>Satmya</i>	<i>Madhyam</i>	63.15
16.	<i>Kosta</i>	<i>Krura</i>	52.64
17.	<i>Jathragni</i>	<i>Manda</i>	42.11
18.	<i>Vyayam Shakti</i>	<i>Avara</i>	68.42
19.	<i>Desha</i>	<i>Sadharana</i>	82.89
20.	<i>Addiction</i>	Tea/ Coffee	39.47
21.	Nature of lesion	Infarction	84.21

RESULTS - All results were statistically analyzed by applying t Test.

Table no 1. Effect of therapy on Cardinal Symptoms of Group A

S. No.	Symptoms	N	Mean		Dif.	% of Relief	± SD	± SE	T	p
			BT	AT						
1.	<i>Ruja</i>	18	1.94	1.56	0.39	20.00	0.61	0.14	2.72	<0.05
2.	<i>Vakstambha</i>	20	1.50	1.25	0.25	16.67	0.55	0.12	2.03	>0.05
3.	<i>Achetanta</i>	13	1.08	0.77	0.31	28.57	0.48	0.13	2.31	<0.05
4.	<i>Guruta</i>	15	1.13	0.87	0.27	23.53	0.46	0.12	2.26	<0.05
5.	<i>Vibandha</i>	16	1.25	1.00	0.25	20.00	0.45	0.11	2.24	<0.05
6.	<i>Shotha</i>	18	1.28	1.06	0.22	17.39	0.43	0.10	2.20	<0.05
7.	<i>Daha</i>	18	1.50	1.22	0.28	18.52	0.46	0.11	2.56	<0.05
8.	<i>Shirahshula</i>	20	1.60	1.45	0.15	9.38	0.37	0.08	1.83	>0.05

Table no 2. Effect of therapy on Cardinal Symptoms of Group B

S. No.	Symptoms	N	Mean		Dif.	% of Relief	± SD	± SE	t	p
			BT	AT						
1.	<i>Ruja</i>	18	2.00	1.56	0.44	22.22	0.70	0.17	2.68	<0.05
2.	<i>Vakstambha</i>	18	1.61	1.33	0.28	17.24	0.46	0.11	2.56	<0.05
3.	<i>Achetanta</i>	14	1.14	0.79	0.36	31.25	0.50	0.13	2.69	<0.05
4.	<i>Guruta</i>	16	1.25	0.94	0.31	25.00	0.48	0.12	2.61	<0.05
5.	<i>Vibandha</i>	17	1.41	1.12	0.29	20.83	0.47	0.11	2.58	<0.05
6.	<i>Shotha</i>	14	1.43	1.21	0.21	15.00	0.43	0.11	1.88	>0.05
7.	<i>Daha</i>	20	1.50	1.20	0.30	20.00	0.47	0.11	2.85	<0.05
8.	<i>Shirahshula</i>	20	1.50	1.30	0.20	13.33	0.41	0.09	2.18	<0.05

Table no 3. Effect of therapy on Cardinal Symptoms of Group C

S. No.	Symptoms	N	Mean		Dif.	% of Relief	± SD	± SE	t	p
			BT	AT						
1.	<i>Ruja</i>	20	1.95	1.50	0.45	23.08	0.60	0.14	3.33	<0.01
2.	<i>Vakstambha</i>	20	1.75	1.40	0.35	20.00	0.59	0.13	2.67	<0.05
3.	<i>Achetanta</i>	19	1.21	0.79	0.42	34.78	0.61	0.14	3.02	<0.01
4.	<i>Guruta</i>	20	1.20	0.90	0.30	25.00	0.47	0.11	2.85	<0.05
5.	<i>Vibandha</i>	19	1.68	1.32	0.37	21.88	0.50	0.11	3.24	<0.01
6.	<i>Shotha</i>	14	1.36	1.00	0.36	26.32	0.50	0.13	2.69	<0.05
7.	<i>Daha</i>	19	1.42	1.11	0.32	22.22	0.48	0.11	2.88	<0.01
8.	<i>Shirahshula</i>	20	1.50	1.20	0.30	20.00	0.47	0.11	2.85	<0.05

Table no 4. Effect of treatment on Lipid Profile level & Blood Sugar

S. No.	Investigations	N	Mean		Dif.	% of Relief	± SD	± SE	t	p
			BT	AT						
1.	Serum Cholesterol	20	195.25	188.40	6.85	3.51	10.84	2.42	3.01	<0.05
2.	HDL	20	57.25	57.65	0.40	0.70	0.94	0.21	2.46	>0.05
3.	LDL	20	107.15	103.25	3.90	3.64	6.09	1.36	2.76	<0.05
4.	VLDL	20	30.85	31.10	0.25	0.81	0.55	0.12	2.91	>0.05

5.	Triglyceride	20	154.25	146.70	7.55	4.89	12.64	2.83	2.78	<0.05
6.	Blood sugar	20	147.65	146.90	0.75	0.51	1.68	0.38	1.73	>0.05

Table No. 5 Effect of treatment on Lipid Profile & Blood sugar of Group B

S. No.	Investigations	N	Mean		Dif.	% of Relief	± SD	± SE	t	P
			BT	AT						
1.	Serum Cholesterol	20	190.85	184.30	6.55	3.43	11.32	2.53	2.59	<0.05
2.	HDL	20	54.80	55.30	0.50	0.91	1.19	0.27	1.88	>0.05
3.	LDL	20	111.15	105.70	5.45	4.90	9.06	2.03	2.69	<0.05
4.	VLDL	20	28.90	28.60	0.30	1.04	0.66	0.15	2.04	>0.05
5.	Triglyceride	20	144.55	136.80	7.75	5.36	12.41	2.78	2.79	<0.05
6.	Blood sugar	20	154.60	153.55	1.05	0.68	2.37	0.53	1.98	>0.05

Table No 6.Effect of treatment on Lipid Profile & Blood sugar of Group C

S. No.	Investigations	N	Mean		Dif.	% of Relief	± SD	± SE	t	P
			BT	AT						
1.	Serum Cholesterol	20	215.85	207.60	8.25	3.82	12.26	2.74	3.01	<0.01
2.	HDL	20	54.90	54.35	0.55	1.00	1.00	0.22	2.46	<0.05
3.	LDL	20	129.30	121.10	8.20	6.34	13.27	2.97	2.76	<0.05
4.	VLDL	20	31.65	30.15	1.50	4.74	2.31	0.52	2.91	<0.01
5.	Triglyceride	20	158.50	149.60	8.90	5.62	14.31	3.20	2.78	<0.05
6.	Blood sugar	20	151.05	149.25	1.80	1.19	4.66	1.04	1.73	>0.05

Table no 7. Effect of therapy on *Chesta Nivritti* (Loss of function) of Lower extremities in Group A

S. No.	Symptoms	N	Mean		Dif.	% of Relief	± SD	± SE	t	p
			BT	AT						
1.	Ability to sit on the bed	12	1.50	1.25	0.25	16.67	0.45	0.13	1.91	>0.05
2.	Ability to stand from sitting	13	1.54	1.31	0.23	15.00	0.44	0.12	1.90	>0.05

	position									
3.	Ability to get down from bed	15	1.53	1.33	0.20	13.04	0.41	0.11	1.87	>0.05
4.	Ability to walk	16	1.44	1.25	0.19	13.04	0.40	0.10	1.86	>0.05
5.	Time required to walk 10 mtr.	14	1.57	1.36	0.21	13.64	0.43	0.11	1.88	>0.05

Table No. 8. Effect of therapy on *Chesta Nivritti* (Loss of function) of Upper extremities in Group A

S. No.	Symptoms	N	Mean		Dif.	% of Relief	± SD	± SE	t	p
			BT	AT						
1.	Strength of Grip	17	1.65	1.47	0.18	10.71	0.39	0.10	1.85	>0.05
2.	Pressing power	17	1.65	1.35	0.29	17.86	0.47	0.11	2.58	<0.05
3.	Ability to wear dress	16	1.63	1.44	0.19	11.54	0.40	0.10	1.86	>0.05
4.	Ability to handle the book	17	1.76	1.47	0.29	16.67	0.59	0.14	2.06	>0.05
5.	Ability to pick pin	17	1.65	1.47	0.18	10.71	0.39	0.10	1.85	>0.05

Table No. 9: Effect of therapy on *Chesta Nivritti* (Loss of function) of Lower extremities in Group B

S. No.	Symptoms	N	Mean		Dif.	% of Relief	± SD	± SE	t	p
			BT	AT						
1.	Ability to sit on the bed	14	1.36	1.14	0.21	15.79	0.43	0.11	1.88	>0.05
2.	Ability to stand from sitting position	14	1.50	1.14	0.36	23.81	0.50	0.13	2.69	<0.05

3.	Ability to get down from bed	16	1.44	1.13	0.31	21.74	0.48	0.12	2.61	<0.05
4.	Ability to walk	16	1.44	1.25	0.19	13.04	0.40	0.10	1.86	>0.05
5.	Time required to walk 10 mtr.	16	1.44	1.13	0.31	21.74	0.48	0.12	2.61	<0.05

Table No. 10: Effect of therapy on *Chesta Nivritti* (Loss of function) of Upper extremities in Group B

S. No.	Symptoms	N	Mean		Dif.	% of Relief	± SD	± SE	t	p
			BT	AT						
1.	Strength of Grip	17	1.53	1.24	0.29	19.23	0.47	0.11	2.58	<0.05
2.	Pressing power	18	1.50	1.22	0.28	18.52	0.46	0.11	2.56	<0.05
3.	Ability to wear dress	17	1.59	1.41	0.18	11.11	0.39	0.10	1.85	>0.05
4.	Ability to handle the book	18	1.56	1.28	0.28	17.86	0.46	0.11	2.56	<0.05
5.	Ability to pick pin	18	1.56	1.39	0.17	10.71	0.38	0.09	1.84	>0.05

Table No. 11: Effect of therapy on *Chesta Nivritti* (Loss of function) of Lower extremities in Group C

S. No.	Symptoms	N	Mean		Dif.	% of Relief	± SD	± SE	t	p
			BT	AT						
1.	Ability to sit on the bed	17	1.59	1.29	0.29	18.52	0.47	0.11	2.58	<0.05
2.	Ability to stand from sitting position	18	1.28	0.89	0.39	30.43	0.61	0.14	2.72	<0.05
3.	Ability to get down from bed	19	1.42	1.11	0.32	22.22	0.48	0.11	2.88	<0.01
4.	Ability to walk	18	1.50	1.11	0.39	25.93	0.61	0.14	2.72	<0.05
5.	Time required	19	1.63	1.26	0.37	22.58	0.60	0.14	2.69	<0.05

to walk 10 mtr.										
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Table No. 12: Effect of therapy on *Chesta Nivritti* (Loss of function) of Upper extremities in Group C

S. No.	Symptoms	N	Mean		Dif.	% of Relief	± SD	± SE	t	p
			BT	AT						
1.	Strength of Grip	17	1.94	1.53	0.41	21.21	0.62	0.15	2.75	<0.05
2.	Pressing power	18	1.72	1.39	0.33	19.35	0.59	0.14	2.38	<0.05
3.	Ability to wear dress	20	1.65	1.45	0.20	12.12	0.52	0.12	1.71	>0.05
4.	Ability to handle the book	17	1.65	1.35	0.29	17.86	0.47	0.11	2.58	<0.05
5.	Ability to pick pin	17	1.59	1.41	0.18	11.11	0.39	0.10	1.85	>0.05

Table no. 13 Comparative effect of therapies on Tone (Hand)

S. No.	Groups	N	Mean		Dif.	% of Relief	± SD	± SE	t	p
			BT	AT						
1.	A	19	0.63	0.37	0.26	41.67	0.45	0.10	2.54	<0.05
2.	B	17	0.71	0.35	0.35	50.00	0.49	0.12	2.95	<0.05
3.	C	16	0.81	0.38	0.44	53.85	0.63	0.16	2.78	<0.05

Table No.14 Comparative effect of therapies on Tone (Leg)

S. No.	Groups	N	Mean		Dif.	% of Relief	± SD	± SE	t	p
			BT	AT						
1.	A	16	0.44	0.25	0.19	42.86	0.40	0.10	1.86	>0.05
2.	B	17	0.41	0.18	0.24	57.14	0.44	0.11	2.22	<0.05
3.	C	18	0.61	0.33	0.28	45.45	0.46	0.11	2.56	<0.05

Table No. 15 Overall effect of therapies in percentage

S. No.	Overall effect of therapy	Group A	Group B	Group C
1.	Complete Remission	0%	5%	10%
2.	Marked Improvement	20%	20%	50%

3.	Moderate Improvement	45%	55%	30%
4.	No Improvement	35%	20%	10%

DISCUSSION

Group A: Group A, statistically significant ($P < 0.05$) result found in *Ruja*, *Achetanta*, *Guruta*, *Vivandha*, *Shotha* and *Daha*, while statistically insignificant ($P > 0.05$) results were observed in *Vakstambha*. (**Table No.1**). Improvement in *Chesta Nivritti* of lower extremities was statistically insignificant (> 0.05). Improvement in *Chesta Nivritti* of upper extremities in pressing power, was statistically significant ($P < 0.05$), while remaining upper extremities were statistically insignificant (> 0.05). (**Table No.4&5**). Improvement in tone of upper Limb (hand) was statistically significant ($P < 0.05$), while in Lower limb (Leg) it was statistically insignificant ($P > 0.05$). (**Table No.13&14**) Improvement in serum cholesterol, LDL, & Triglyceride were statistically significant ($P < 0.05$). (**Table No.10**). In this group, no patient showed complete remission, 20% patients were markedly improved, moderate improvement is found in 45% patients and no improvement was observed in 35% of patients. (**Table No.15**)

Group B: Group B statistically significant ($P < 0.05$) result found in *Ruja*, *Vakstambha*, *Achetanta*, *Guruta*, *Vibandha*, *Daha* and *Shirashula*, while statistically insignificant ($P > 0.05$) result was observed in *shotha*. (**Table No.2**). In *Chesta Nivritti* of lower extremities, statistically significant ($P < 0.05$) results were found in ability to stand from sitting position, ability to get down from bed and time required to walk 10 meter, while statistically insignificant ($P > 0.05$) results

were observed in ability to sit on the bed ability to walk. (**Table No.6**). In *Chesta Nivritti* of upper extremities, statistically significant ($P < 0.05$) results were found in Strength of grip, Pressing power and Ability to handle the book, while statistically insignificant ($P > 0.05$) results were observed in ability to wear dress and pick up a pin. (**Table No.7**). Improvement in tone (upper limb) was statistically highly significant ($P < 0.01$) and statistically significant ($P < 0.05$) was found in lower limb. (**Table No.13&14**) Improvement in Serum cholesterol LDL and triglyceride were statistically significant ($P < 0.05$). (**Table No.11**). In this group 5% patients showed complete remission 20% patients were markedly improved, moderate improvement was found in 55% patients and No improvement was observed in 20% of patients. (**Table No.15**)

Group C: Group C statistically highly significant ($P < 0.01$) result found in *Ruja*, *Achetanta* *Vibandha* and *Daha*, while statistically significant ($P < 0.05$) results were observed in *Vakstambha*, *Guruta*, *Shotha* and *Shirahshula*. (**Table No.3**). Improvement in *Chesta Nivritti* of lower extremities were statistically highly significant ($P < 0.01$) in ability to get down from bed, while statistically significant ($P < 0.05$) result were observed in ability to sit on the bed. (**Table No.8**). Improvement in *Chesta Nivritti* of upper extremities in strength of grip, pressing power and ability to handle the book were statistically significant ($P < 0.05$), and statistically insignificant ($P > 0.05$) results were observed in Ability to wear dress and Ability to pick

pin. (Table No.9). Improvement in tone were statistically significant ($p < 0.05$). Improvement in serum cholesterol and VLDL were highly significant ($P < 0.01$). (Table No.13&14) Significant ($P < 0.05$) changes observed in HDL, LDL and Triglyceride. (Table No.12). In this group, 10% patients showed complete Remission. 50% patients were markedly improved, moderate improvement found in 30% patient and No improvement was observed in 10% of patients. (Table No.15)

CONCLUSION

It is concluded by above study that Group A and Group B show satisfactory results but comparatively Group C shows higher percentage of relief. So, the total effect of therapies shows that in comparison to Group A and Group B, Group C shows better results which could be due to the cumulative effect of *Virechana & Basti karma*. Present work concludes with the meaning that combined use of *Virechana & Basti karma* will be more beneficial and effective, so it is advisable to use both therapies together (respectively) in the management of *Pakshaghata*.

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