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Randomized comparative study on *Ekangavir Rasa, Vaitarana Basti, Shirobasti* in combination on Barthel Index and NIH Stroke Scale in *Pakshavadh* with special reference to Cerebral Infarction

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A B S T R A C T

Introduction: Stroke also called CVA (cerebrovascular accident) is a medical emergency. It is defined as rapid onset of focal neurological deficit, resulting from diseases of the cerebral vasculature and its contents. This disease that affects the arteries leading to and within the brain. It occurs when blood vessels that carries oxygen and nutrients to the brain is either blocked by a clot or burst. Symptoms of stroke include trouble walking, speaking and understanding as well as paralysis or numbness of the face. **Methodology:** In this study, patients were treated with combination of *Ekangavir Rasa, Vaitarana Basti* and *Shirobasti* in trial group and *Ekangavir Rasa* with *Vaitarana Basti* in control group on Barthel Index and NIH Stroke Scale of *Pakshavadh,* after that after treatment assessment was done. **Result**: 60 cases were recorded and treated. Observation & results showed significant improvement in patients. **Conclusion**: The results obtained from this study were encouraging. details are explained in full paper.

Key words: *Pakshavadh, Ekangavir Rasa, Vaitarana Basti, Shirobasti, Cerebral Infarction.*

INTRODUCTION

Stroke also called CVA, Cerebrovascular accident, it is medical emergency. It is defined as rapid onset of focal neurological deficit, resulting from diseases of the cerebral vasculature and its contents.[1] This disease that affects the arteries leading to and within the brain. It occurs when blood vessels that carries oxygen and nutrients to the brain is either blocked by a clot or burst. Symptoms of stroke include trouble walking, speaking and understanding as well as paralysis or numbness of the face.[2]

Hemiplegia is paralysis of one half of the body i.e. upper and lower limb of the same side. It may be associated with weakness of facial muscle of same side (Ipsilateral) or opposite side (contralateral) hemiplegia.[3]

According to Ayurved, stroke can be correlated with *Pakshavadh*.[4] *Charak* include it in *Madhyam Roga Marga*[5] and in *Nanatmaja Vata Vyadhi*[6] According to *Charak*[7] excessive intake *Ruksha, Shit, Alpa Anna, Ativyyay, Krodh are causes* etc. Pain, difficulty in walking and half side of the body as it affects ligament, nerve and major blood vessels leads to *Pakshavadh.*

Sushrut describe[8] *Urdhva, Adha* and *Tiryak Dhamani* in body mainly affected by *Vata* and causes dislocation of *Sandhibandh* or tingling sensation and responsible for loss of movement of affected side *Vata Pradhan*. Regarding *Sadhyasadhyatva* of *Pakshaghat*, *Sushrut* had stated that *Shuddha Vataj Pakshaghat* is *Kruchhasadhya, Kshayaj* is A*sadhya* and *Doshanubandhaj* is S*adhya.*

According to *Charak*[9] and *Ashtang Hridaya*[10] *Snehan, Svedan*, and *Virechan* are the management tools for *Pakshavadh.* Sushrut had also described *Snehan, Mridu Shodhan, Anuvasan* and treatment like *Akshepak* in *Pakshaghat*.[11]

Vishesh Chikitsa like *Mastishkya Shirobasti*, *Anutail* for *Abhyanga, Salvan Upnah*, *Bala tail* for *Anuvasan* are also advised.[12]

Charak has strongly recommended beneficial role of *Kala Bast*.[13] Importance of *Vaitarana Basti* is described by *Chakradatt* in *Niruhadhikar Adhyay*. It leads to *Karmendriyahani* means eleven I*ndriya* which are situated in *Mastishka* which are under control and *Sthana* of *Prana Vayu*. *Vikriti* of *Prana Vayu leads* to *Pakshavadh*. Its *Vikriti* because of *Avarana of Kapha* or *Pitta* and *Anonya Avarana of Vayu*. *Vayu* controls the functions of *Pitta* & *Kapha*.[14] Considering this obstructive pathology *Snehan, Svedana, Virechana and Lekhan Basti Chikitsa* can be applied to breakdown this *Samprapti*.

After considering above facts the study was planned with Ayurvedic concepts and basic principles for contribution in management of *Pakshavadh*. Therefore question was in mind that *Ekangavir Rasa* along with *Vaitarana Basti* would be as effective as along with *Shirobasti*. Considering all above said fact the study entitled "Randomized comparative study on *Ekangavir Rasa, Vaitarana Basti, Shirobasti* in combination on Barthel Index and NIH Stroke Scale in *Pakshavadh* with special reference to cerebral Infarction.

In this study patients were diagnosed with help of CT brain, thrombotic and embolic origins of stroke were included and haemorrhagic stroke was excluded. Considering this, given line of management was applied.

MATERIALS AND METHODS

Inclusion Criteria

1. Patients having signs and symptoms of *Pakshavadh* mentioned in Ayurvedic texts.

2. Patient having muscle power grade < or = 3.

3. Patients of non progressive cerebral infarction i.e., ischemic stroke due to cerebral thrombosis.

4. Patients of *Pakshavadh* of duration not more than 5 years.

5. Patients of either sex aged between 21 years -70 year.

6. Patient willing and able to participate in the study.

7. Patients who have not participated in any research project in last 6 months.

8. Patients of *Pakshavadh* having controlled hypertension (systolic upto140 mm of Hg and diastolic up to 90 mm of Hg) and diabetes mellitus (BSL fasting up to 130 mg/dl and Post Prandial up to 180 mg/dl).

Exclusion Criteria

1. Patients of cerebral infraction due to atrial fibrillation, embolic stroke, carotid occlusion, cerebellar stroke and haemorrhagic stroke were excluded.

2. Patients having seizers, hydrocephalous, pulmonary embolism, dysphagia, M.I., cardiac arrhythmia and septicaemia were excluded.

3. Patients who have lost bowel and bladder control.

4. Comatose and unconscious patients.

5. Patients having age < 21 years and > 70 years were excluded.

6. Patients having intra cranial infection, encephalitis and meningitis etc.

7. Patient having trauma, cerebral tumour, cerebral abscess.

8. Patient with congenital heart diseases like POA, ASD, VSD and FOD.

9. Patients contraindicated for *Abhyanga* like skin diseases, infective disease etc. Were excluded.

10. Patients who were not fit for *Basti*.

11. Pregnant and lactating mothers.

12. Patients having acute progressive cerebral infarction.

Gundo JV et al. Randomized comparative study on Pakshavadh w.s.r. to Cerebral Infarction

ISSN: 2456-3110   **ORIGINAL ARTICLE**   Jan-Feb 2022

Selection of drug

1. *Ekangavira Rasa*[15]

2. *Vaitarana Basti*[16]

3. *Prasarini Taila*[17,18]

Criteria of Assessment

1. Clinical features of *Pakshavadh* as described in classics

2. Barthel Index[19]

3. NIH Stroke Scale[20]

4. Muscle Power Grade[21]

5. Muscle Tone[22]

6. Investigational Parameters

Clinical parameters

1) *Mukhvakrata*

SN	Gradation	Score
1.	Normal	0
2.	Mouth angle deviation less than 10 degrees	1
3.	Mouth angle deviation 10-20 degrees	2
4.	Mouth angle deviation more than 20 degrees.	3

2) *Ruja*

SN	Gradation	Score
1.	No power	0
2.	Present in some part of one affected extremity	1
3.	Present in one affected extremity completely	2
4.	Present in some part of both affected extremities	3
5.	Present in complete half side	4

3) *Hatpaksha*

SN	Gradations	Score
1.	Not present	0
2.	Involvement of only one extremity with good movement	1
3.	Involvement of half side with one extremity affected more than other	2
4.	Complete involvement of half side with some movement in both affected extremities	3
5.	Complete involvement of half side with fine movement	4

2. Barthel Index

SN	Activity	Gradation	Score
1.	Feeding	Unable	0
		Needs help cutting, spreading butter, etc. or requires modified diet	5
		Independent	10
2.	Bathing	Dependent	0
		Independent (or in shower)	5
3.	Grooming	Needs to help with personal care	0
		Independent face / hair / teeth / shaving (implements provided)	5
4.	Dressing	Dependent	0
		Needs help but can do about half unaided	5
		Independent (including buttons, zips, laces, etc.)	10
5.	Bowels	Incontinent (or needs to be given enemas)	0
		Occasional accident	5
		Continent	10
6.	Bladder	Incontinent or catheterized and unable to manage alone	0

Gundo JV et al. Randomized comparative study on Pakshavadh w.s.r. to Cerebral Infarction

ISSN: 2456-3110 **ORIGINAL ARTICLE** Jan-Feb 2022

		Occasional accident	5
		Continent	10
7.	Toilet Use	Dependent	0
		Needs some help, but can do something alone	5
		Independent (on and off, dressing, wiping)	10
8.	Transfers (bed to chair and back)	Unable, no sitting balance	0
		Major help (one or two people, physical), can sit	5
		Minor help (verbal or physical)	10
		Independent	15
9.	Mobility (on level surfaces)	Immobile or < 50 yards	0
		Wheelchair independent, including corners, > 50 yards	5
		Walks with help of one person (verbal or physical) > 50 yards	10
		Independent (but may use any aid; for example, stick) > 50 yards	15
10.	Stairs	Unable	0
		Needs help (verbal, physical, carrying aid)	5
		Independent	10

3. NIH Stroke Scale Scoring

SN	Symptoms	Gradation of symptoms	Score
1.a	Level of Consciousness (LOC) Arousal Status	Alert (or awakens easily and stays awake) Drowsy (Responds to minor steam. but falls back asleep)	0 1 2 3
		Obtunded (Responds only to deep pain or vigorous steam) Comatose (No response)	
1.b	LOC- Questions Month? Age?		0 1 2
1.c	LOC– Commands Opens/closes eyes /closes Opens hands		0 1 2
2.	Eye Movements: Horizontal eye Movements		0 1 2
3.	Visual fields: Sees objects in Four quadrants		0 1 2 3
4.	Facial: Facial movements		0 1 2 3
5.a	Motor – Left Arm Hold arm straight out from chest		0 1 2 3 4 N/A
5.b	Motor – Right Arm Hold arm straight out from chest	Normal (No drift at all) Drift (Drifts downward but NOT to bed before 10 sec.) Drifts to bed within 10 seconds Movement, but not against gravity	0 1 2 3

Gundo JV et al. Randomized comparative study on Pakshavadh w.s.r. to Cerebral Infarction

ISSN: 2456-3110　　　　**ORIGINAL ARTICLE**　　Jan-Feb 2022

		Complete paralysis (No movement at all)	4
		Amputation or joint fusion	N/A
6.a	Motor – Left leg Keep leg off bed	Normal (No drift at all)	0
		Drift (Drifts downward but NOT to bed before 5 sec.)	1
		Drifts to bed within 5 secs	2
		Movement, but not against gravity	3
		Complete paralysis (No movement at all)	4
		Amputation or joint fusion	N/A
6.b	Motor – Right leg Keep leg off bed	Normal (No drift at all)	0
		Drift (Drifts downward but NOT to bed before 5 sec.)	1
		Drifts to bed within 5 seconds	2
		Movement, but not against gravity	3
		Complete paralysis (No movement at all)	4
		Amputation or joint fusion	N/A
7.	Limb Ataxia Finger-Nose Heel-Knee-Shin	Absent (no ataxia, OR pt cannot move arm/leg)	0
		Present in one limb	1
		Present in two or more limbs	2
		(is absent if patient cannot understand or is too weak to do)	
8.	Sensory Hemisensory loss: (Test on face, arm & thigh)	Absent (no ataxia, OR pt cannot move arm/leg)	0
		Present in one limb	1
		Present in two or more limbs	2
		(is absent if patient cannot understand or is too weak to do)	

9.	Language/Aphasia Repetition & Comprehension "Today is a bright sunny day"	Normal ability uses words and follow commands	0
		Mild to Moderate (Repeats / names with some difficulty)	1
		Severe Aphasia (very few words correct or understood)	2
10.	Dysarthria (slurred) Speech clarity (slurring)	Normal	0
		Mild to moderate slurred speech (some or most)	1
		Severe (unintelligible - none understandable)	2
		Intubated or another physical barrier	N/A
11.	Neglect Ignores touch or vision to one side	No abnormality	0
		Mild (either visual or tactile – partial neglect)	1
		Profound (Visual and tactile – complete neglect)	2
	Total Score		

4. Muscle Power Grade

SN	Gradation	Score
1.	No power	0
2.	Flicker of contraction only	1
3.	Movement with gravity eliminated	2
4.	Movement against gravity	3
5.	Movement against gravity and some resistance	4
6.	Normal Power	5

5. Muscle Tone

Grade	Description
0	No increase in muscle tone
1	Slight increase in muscle tone, manifested by a catch and released or by minimal resistance at the

Gundo JV et al. Randomized comparative study on Pakshavadh w.s.r. to Cerebral Infarction

ISSN: 2456-3110　　　　**ORIGINAL ARTICLE**　　　Jan-Feb 2022

		end of the range of motion when the affected part (s) is moved in flexion or extension.
1+		Slight increase in muscle tone, manifested by a catch, followed by minimal resistance throughout the remainder (less than half) of the ROM.
2		More marked increased in muscle tone through most of the ROM, but affected part (s) easily moved
3		Considerable increased in muscle tone, passive movement difficult.

6. Investigational Parameters

CBC with ESR, BSL- Fasting & Post-Prandial, Urine Routine & Microscopic, Lipid Profile

Overall Assessment of the Therapy

1.	Complete relief	100% relief in the all signs and symptoms of the patient
2.	Marked Improvement	More than 75% relief in signs and symptoms
3.	Moderate Improvement	Relief between 50% to 75% all the signs and symptoms of the patient will be considered as moderately improved.
4.	Mild Improvement	25% to 50%of relief in the signs and symptoms will be categorised as mild improved.
5.	Unchanged	Less than 25% of relief in signs and symptoms will be considered as unchanged.

6.	LAMA	Patients discontinuing treatment due to any circumstances will be included in LAMA group (Left against Medical Advice).

Study Procedure

In the present study entitled "Randomized comparative study on *Ekangavir Rasa, Vaitarana Basti, Shirobasti* in combination on Barthel Index and NIH Stroke Scale in *Pakshavadh* with special reference to Cerebral Infarction" total 60 patients of *Pakshavadha* were thoroughly studied. Patients of *Pakshavadh* attending O.P.D and I.P.D of the Kayachikitsa Department of this institute were randomly selected irrespective of age, sex, religion and socio-economical status. All these patients were diagnosed with the help of clinical features and laboratory investigations in both Ayurvedic and modern perspective. All these patients were randomly distributed into two groups namely Trial Group and Control Group by using chit method, described earlier. 30 patient of Trial Group were given *Vaitarana Basti* and *Anuvasana Basti* by *Kaal Basti Krama* for 16 days as stated by Charaka and *Shirobasti* for 15 days, along with this *Shaman Drug Ekangvir Rasa* for 30 days was given. Investigation and Assessment were done on 0 day, 16 day and final on 31st day.

Same treatment was given to Control Group but without *Shirobasti*.[23,24] All observations and results obtained in both group are described in tabular form.

OBSERVATIONS AND RESULT

Table 1: Showing Effect on Symptom Score of 60 Patients of *Pakshavadh*

SN	Symptoms	Trial Group				Control Group			
		BT	AT	Diff	% of Relief	BT	AT	Diff	% of Relief
1.	*Hatekpaksha*	75	46	29	38.66	68	34	34	50
2.	*Mukhavakrata*	23	11	12	52.17	17	09	08	47.05
3.	*Ruja*	76	46	30	39.47	79	41	38	48.10

ORIGINAL ARTICLE Jan-Feb 2022

Table 2: Showing Effect on Functional Parameter Score

SN	Parameter	Trial Group				Control Group			
		BT	AT	Diff	% of Relief	BT	AT	Diff	% of Relief
1.	*Barthel Index*	1920	2430	510	26.56	2425	2710	285	12.75
2.	*NIH stroke Scale*	274	172	102	37.22	208	94	114	54.80
3.	Grip Power	2245	3290	1045	46.54	2890	4360	1470	50.86

Table 3: Showing effect on Muscle Power Grade Parameter Score

SN	Parameter	Trial Group				Control Group			
		BT	AT	Diff	% of Relief	BT	AT	Diff	% of Relief
1.	RUL	120	134	11	09.16	126	138	08	06.34
2.	LPL	106	124	18	16.98	120	130	10	08.33
3.	RLL	122	133	07	05.73	135	143	11	08.14
4.	LLL	128	136	08	06.25	129	133	04	03.10

Table 4: Showing Wilcoxon Signed Rank Test on symptom score

SN	Symptoms	Groups	W	T+	T_	Median		Mean ± SD			% of Relief	Z	P
						BT	AT	BT	AT	Diff ± SD			
1.	*Hataekapaksha*	**TG**	231	231	0	2	1	2.42±0.49	1.56±0.76	0.90±0.78	36.11	226.23	<0.0001
		CG	351	351	0	2	1	2.26±0.63	1.13±0.81	1.13±0.81	98.39	346.23	<0.0001
2.	*Mukhavakrata*	**TG**	78	78	0	1	0	0.76±0.67	0.36±0.49	0.40±0.49	33.33	73.23	0.0005
		CG	28	28	0	0	0	0.56±0.67	0.300±0.46	0.26±0.52	13.33	23.23	0.0156
3.	*Ruja*	**TG**	325	325	0	2	1	2.52±1.04	1.36±0.92	1.16±0.87	41.61	320.23	<0.0001
		CG	351	351	0	2	1	2.63±0.99	1.36±1.15	1.26±0.98	44.83	346.23	<0.0001

Table 5: Showing Mann Whitney Test on symptom score of 60 Patients of *Pakshavadh*

SN	Symptom	U'(U1)	U stat (U2)	T1 (sum of Rank TG)	T2 (Sum of Rank CG)	Median		Mean ± SD of TG	Mean ±SD of CG	Z	P
						TG	CG				
1.	*Hataekapaksha*	519	381	846	984	1	1	0.83±0.79	1.06±0.86	1.013	0.30
2.	*Mukhavakrata*	540	360	1005	825	0	0	0.40±0.59	0.20±0.40	1.32	0.17
3.	*Ruja*	445	424	880	899	1	1	1.10±0.90	1.06±8.06	0.37	0.87

Gundo JV et al. Randomized comparative study on Pakshavadh w.s.r. to Cerebral Infarction

ISSN: 2456-3110   **ORIGINAL ARTICLE**   Jan-Feb 2022

Table 6: Showing Wilcoxon Signed Rank Test on Parameters of Assessment

SN	Symptoms	Groups	W	T+	T_	Median		Mean ± SD			% of Relief	Z	P
						BT	AT	BT	AT	Diff ± SD			
1.	Barthel Index	**TG**	-406	0	-406	65	85	64±20.26	81±17	-17 ± 13.94	18.33	-410.77	<0.0001
		CG	-231	0	-231	82	95	80.83±15.14	90.33±15.30	-9.5 ±8.93	-12.55	-235.7	<0.0001
2.	NIH Stroke Scale	TG	444	454	-10.15	8	5	9.13±5.29	5.66±3.60	3.46±3.30	36.51	439.23	<0.0001
		CG	406	406	0	6.5	2	6.93±3.24	3.13±2.96	3.80±2.69	55.991	401.23	<0.0001
3.	Grip Power	**TG**	-231	0	-231	81.57	120	83.14±79.52	113.4±99.49	-38.40±34.72	33.59	-235.77	<0.0001
		CG	-276	0	-276	80	145	96.33±85.52	145.33±99.81	-49.00 ±53.06	28.38	-280.77	<0.0001

Table 7: Showing Mann Whitney Test on Assessment Score of 60 Patients of *Pakshavadh*

SN	Symptom	U'(U1)	U stat (U2)	T1 (sum of Rank TG	T2 (Sum Of Rank CG	Median		Mean ± SD of TG	Mean ± SD of CG	Z	P
						TG	CG				
1.	Barthel Index	543	297	732	978	15	10	15.17±16.71	9.31**±9.03**	1.36	0.056
2.	NIH stroke scale	493	372	841	928	2	3	3.40±3.34	3.58±2.47	1.14	0.3786
3.	Grip power	510	389	854	975	30	40	34.16±35.38	49±53.06	0.89	0.3741

Table 8: Showing Wilcox on Signed Rank Test on Assessment Score on Muscle Power Grade

SN	MPG	Groups	W	T+	T_	Median		Mean ± SD			% of Relief	Z	P
						BT	AT	BT	AT	Diff ± SD			
1.	RUL	**TG**	-36	0	-36	4	5	4.06±1.34	4.46±0.76	0.40±0.84	-3.49	-40.77	0.0078
		CG	-36	0	-36	5	5	4.20±1.32	4.60±0.72	-0.40 ±0.77	-5.55	-40.77	0.0078

Gundo JV et al. Randomized comparative study on Pakshavadh w.s.r. to Cerebral Infarction

ISSN: 2456-3110 **ORIGINAL ARTICLE** Jan-Feb 2022

2.	LUL	TG	-78	0	-78	4	5	3.53±1.64	4.13±1.36	-0.60±0.98	-9.46	-82.77	0.0005
		CG	-28	0	-28	4	4	4.00±1.71	4.33±0.84	-0.33 ±0.80	-1.5	-32.77	0.0156
3.	RLL	TG	-36	0	-36	4	5	4.06±1.18	4.43±0.80	-0.36±0.83	21.26	-40.77	0.0078
		CG	-21	0	-21	5	5	4.50±0.73	4.76±0.50	-0.26±0.54	5.833	-25.77	0.0313
4.	LLL	TG	-36	0	-36	4.26	5	4.26±0.89	4.54±0.67	-0.28±0.51	-8.06	-40.77	0.0078
		CG	-6	0	-6	4	4	4.30±0.59	4.43±0.56	-0.133±0.43	-3.88	-10.77	0.2500

Table 9: Showing Mann Whitney Test on Muscle Power Grade Score

SN	MPG	U'(U1)	U stat (U2)	T1 (sum of Rank TG)	T2 (Sum Of Rank CG)	Median		Mean ± SD of TG	Mean ±SD of CG	Z	P
						TG	CG				
1.	RUL	460	409	874	895	0	0	-0.38±0.84	-0.20±0.77	0.59	0.6959
2.	LUL	496	373	838	931	0	0	-0.60±1.003	-0.34±0.81	1.13	0.3436
3.	RLL	443	427	908	862	0	0	0.23±0.50	0.34±1.01	0.33	0.9060
4.	LLL	476	393	858	911	0	0	-0.23±0.56	-0.12±0.44	0.83	0.5173

Table 10: Showing Effect on Wilcox on Signed Rank Test on Investigation Score

SN	Symptoms	Groups	W	T+	T_	Median		Mean ± SD			% of Relief	Z	P
						BT	AT	BT	AT	Diff ± SD			
1.	HB %	TG	34	220	186	12	13	12.19±2.85	13.10±3.03	0.19±1.38	9.37	215.23	0.7067
		CG	52	201	149	13	13	12.91±2.15	12.45±3.85	0.54±3.07	7.38	196.23	0.5165
2.	TLC	TG	34	220	186	12	13	12.19±2.85	13.10±3.03	0.19±1.38	16.77	215.23	0.7067
		CG	30	247	297	6900	700	6520±2766	6403±2328	117±1505	16.38	242.23	0.7655
3.	LDL	TG	351	351	0	128	120	131±57	116±43.69	14.63±37.49	7.00	346.23	<0.0008
		CG	287	306	19	135	128	143±29.26	135±26.80	8.66±24.12	5.18	301.23	0.0001
4.	HDL	TG	26	139	113	40	40	36.26±20.33	36.76±17.40	0.49±10.19	19.71	134.23	0.6845
		CG	119	186	67	42	40	43±9.12	40±8.81	2.83±9.54	6.44	181.23	0.0534
5.	BSL (F)	TG	41	197	238	92	91	92.70±25.50	93.27±22.17	0.56±13.23	0.88	192.23	0.6653
		CG	200	317	117	97	98	107±27.86	99.56±19.96	8.16±18.95	13.13	312.23	0.0313

Gundo JV et al. Randomized comparative study on Pakshavadh w.s.r. to Cerebral Infarction

ISSN: 2456-3110   **ORIGINAL ARTICLE**   Jan-Feb 2022

6.	BSL(PP)	**TG**	124	279	155	111	111	127±49.98	114±28.50	12.86±41.28	2.08	274.23	0.1825
		CG	169	302	133	122	116	129±36.96	114±23.86	14.40±33.12	7.41	297.23	0.069

Table 11: Showing Effect of Therapy by Paired t-Test on Haematological Parameter

SN	Parameter	Groups	Mean ± SD		Mean of Diff. ± SD	SED	t	P
			BT	AT				
1.	ESR	TG	28.83±**20.2**	18.03±**13.23**	10.18±**14.55**	2.65	4.065	0.0003
		CG	28.63±21.40	19.03±17.89	9.60±10.46	1.91	5.025	<0.0001
2.	TC	TG	186±71	156±35.05	29.90±67.82	12.38	2.41	0.0223
		CG	183±65.14	155±30.47	27.66±52.86	9.65	2.86	0.0077
3.	TG	TG	141±64.96	149±59.63	13.39±49.19	9.13	1.46	0.1534
		CG	143±74.67	122±53.33	21.23±44.42	8.11	2.61	0.0129

Table 12: Showing Overall Assessment on Total 60 Patients of *Pakshavadh*

SN	Overall Assessment	Trial Group		Control Group	
		No. of Patients	Percentage %	No. of Patient s	Percentage %
1.	Complete remission	00	00	00	00
2.	Moderate improvement	00	00	00	00
3.	Marked Improvement	00	00	00	00
4.	Mild Improvement	14	46.66	06	20
5.	Unchanged	16	53.33	24	80
6.	LAMA	00	00	00	00

DISCUSSION

Vayu the most vital *Dosha* has an important role in living being as it acts as *Pranadayak* and *Chetanakaraka*. Life of all individuals or general physiology of body depends upon *Vayu* because it has *Gati*. Under the influence of *Vayu*; *Kapha* and *Pitta* gets activated and works normally and properly. If *Vayu* increases or obstructed by *Vikrit Kapha*, *Pitta*, *Dhatu*, *Mala* or *Paraspar Avarana* of *Vata* this leads to manifestation of *Vata Vyadhi*. *Pakshavadh* as explained by Charak is one of the diseases of *Madhyam Roga Marga* and it is suppressed to be a *Kashtasadhya Vyadhi*.

There are various causes responsible for *Pakshavadh*. A chronic habit of tobacco chewing, alcohol consumption, cigarette smoking and betal nuts

chewing are increasing day by day. This causes atherosclerotic changes or decreased oxygen supply to blood vessels or create toxicity to the blood leads to formation of thrombus, clot, emboli or increased in pressure on blood vessels may also leads to haemorrhage. All these factors causes increased arterial pressure leads to hypertension. According to modern science treatment for stroke consist of diuretics that will be further helpful to minimize released pressure on blood vessels of brain. Anti-platelet and Anti-coagulant to dissolve clot are also given adventurously. Also, in some patients oxygen supply may require in acute conditions or it can also be given for other causes like Asthama and Vascular diseases. Only primary treatment is given and patient left with physical disability and patient turn towards Ayurveda for further management. And side effect of modern drugs also observed in some days. Considering this fact *Vaitarana Basti*, *Anuvasana Basti* with *Prasarini Tail*, *Ekangvir Rasa* and *Shirobasti* was taken in the study.

CONCLUSION

Combination of this Ayurvedic treatment definitely reduced symptoms of *Pakshavadh* and had beneficial role on Barthel Index and NIH Stroke Scale of *Pakshavadh* with special reference to cerebral infarction.

REFERENCES

1. YP Munjal: 2012: 9th edition API Textbook of medicine: Jaypee Brothers medical publishers

2. www.stroke.org

3. S.P. Mehta: 2017: P.J. Practical Medicine: 20th Edition Mumbai.

4. Tripathi R: 2011: Charak Samhita C.S. 28/53,54: Choukhamba Sanskrit Prakashan: Varanasi.

5. Tripathi R: 2011: Charak Samhita C.S. 11/48: Choukhamba Sanskrit Prakashan: Varanasi.

6. Tripathi R: 2011: Charak Samhita C.S. 20/11: Choukhamba Sanskrit Prakashan: Varanasi.

7. Tripathi R: 2011: Charak Samhita C.C. 20/11: Choukhamba Sanskrit Prakashan   Varanasi.

8. Sharma A: 2013: Sushrut Samhita S.C.28/53,55: Choukhamba Sanskrit Prakashan   Varanasi.

9. Tripathi R: 2011: Charak Samhita C.N. 1/63: Choukham Sanskrit Prakashan: Varanasi.

10. Tripathi B: 2014: Ashtang Hridayam A.H.C.21/43: Choukhamba Sanskrit Prakashan: Varanasi.

11. Sharma A: 2013: Sushrut Samhita S.C.5/18: Choukhamba Sanskrit Prakashan: Varanasi.

12. Sharma A: 2013: Sushrut Samhita S.C.5/19: Choukhamba Sanskrit Prakashan: Varanasi.

13. Tripathi R: 2011: Charak Samhita C.Si. 1/47: Choukham Sanskrit Prakashan: Varanasi.

14. Tripathi B: 2013: Shargadhara Samhita of Sharngadhara PurvaKhanda S.P. 5/25: Chaukhambha Subharti Prakashan: Varanasi

15. Navare K: 2000: Nighanturatnakar: Vol II: Vatavyadhiadhyaya

16. Chakrapanidatta: 2013: I.Tripathi: Niruhadhikar 32: Chaukhambha orientalia: Varanasi

17. Sharma P.:2012: Dravyagunvigyan: Chaukhamba orientaliya: Varanasi

18. Tripathi D.: 2013: Yogaratnakar, Vatavyadhiadhyaya 258-266: Chaukhambha Sanskrit Sansthan: Varanasi

19. https://en.m.wikipedia.org/wiki/Barthel_Scale

20. https://en.m.wikipedia.org/wiki/National Institute_of_Health_Stroke_Scale

21. S.P. Mehta: 2017: P.J. Practical Medicine: 20th Edition Mumbai: page 290

22. S.P. Mehta: 2017: P.J. Practical Medicine: 20th Edition Mumbai: page 282,283

23. Tripathi B.: 2013: Shargadhara Samhita of Sharngadhara, UttarKhanda 11/121-122: Chaukhambha Subharti Prakashan: Varanasi

24. Tripathi B.: 2014: Ashtang Hridayam, Uttartantra 22/23: Choukhamba Sanskrit Prakashana: Varanasi