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EFFECT OF *SARASVATA CHURNA*ON PSYCHOLOGICAL STATUS IN SUBJECTS WITH *PAKSHAGHATA* / ISCHEMIC HEMISPHERIC STROKE

Vilma B Aranha[1] Dr. Aniruddha[2] Dr.VijayendraBhat[3]

[1]P G Scholar, [2]Assistant Professor, [3]Associate Professor, Department of Kayachikitsa and Manasaroga, ShriDharmasthalaManjunatheshwara College of Ayurveda, Kuthpady, Udupi. Karnataka, India

ABSTRACT

In Ayurvedic literature we find the detailed description about *vata Vyadhi* which relates its onset with *Dhatu kshaya* or *Avarana*. *Pakshaghata* is one such *vataja nanatmaja vyadhi* with symptoms of *cheshtanivrutti* in *vama* or *dakshinaparshwa* along with *ruja* and *Vaksthambha*. *Margavaranajanya Pakshaghata* with *unmade* can be correlated to vascular dementia. General *Vata vyadhi chikitsa* best attained through *Snigdha sweda*. When *avarana* pathology takes place in *shiras* it results in slurred speech, aphasia, problems with vision and decreased brain function. Orally *Sarasvata churna* is ideal with drugs of *srotoshuddhi* property. In this study, patients with *margavaranajanyaPakshaghata* / ischemic stroke were selected for the study. **Materials and methods:** It is an open label, non randomized single group with pre test and post test study design. The selected 20 patients with diagnostic criteria were subjected for treatment with *Shalipindasweda* and *Sarasvatachurna* in 3gm bd with honey for a period of 14 days. **Results:** Statistically significant results were found in *ashta vibhrama* as well as muscle strength.

Keywords: *Avaranaja Unmada*, Vascular Dementia, *Shalipinda sweda*, *SarasvataChurna*

INTRODUCTION

In general *Vata Vyadhi* may be caused due to *Margavarana* or *Dhatu Kshaya*[1]. Accumulation of *Kapha* and *Medas* within the *Rakta Marga* is a unique pathogenesis of *Margavarana*.[2] Spontaneous onset of symptoms indicative of morbidity of *Vata Dosha* in different parts of the body is the prominent manifestation of *Margavarana*. *Pakshaghata* may be a sequel of such *Margavarana* involving the *Shiromarma.* Other than the physical disability the patients who survive an episode of *Margavarana* may also face grave challenges like cognitive dysfunction and depression. This manifestation of psychological illness is described as *Margavaranaja Unmada* in the literatures. *Margavaranaja Unmada* is parallel to Vascular Dementia[3], and is the second most common form of dementia after Alzheimer's disease. Many subtypes are described till date like mild vascular cognitive Impairment, multi infarct dementia, due to lacunar lesions or due to hemorrhagic lesion. In practice there are two ways of explaining disorders of the mind; organic and psychogenic. Vascular dementia belongs to the category of organic pathology. De-

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mentia is the term applied to a diffused deteriorating manifestation, principally affecting thought and memory and secondarily feeling and conduct[4]. Cerebral atherosclerosis is the commonest cause of dementia. Therefore people with *Pakshaghata* get affected with *Smriti, buddhi, cheshta vibhrama*. There is often a history of recurrent cerebral ischemic episodes with residual abnormal physical signs. To a larger extent it is preventable and hence early detection and diagnosis are important.

Till date quite a few isolated studies have been carried out on *Pakshaghata* and *Unmada.* No study is done addressing the management of psychological illness in older patients who survive from the ischemic stroke. Hence it is required to concentrate on management of psychological illness along with rehabilitation of motor deficit in patients suffering from *Pakshaghata.* Treatment aimed at both *Margavaranaja Pakshaghata* and the associating *Unmada* is essential in such situations.Therefore the present study is intended to evaluate the efficacy of *Snigdha Shalipindasweda*[5] in conjunction with oral medication of *Sarasvata Churna*[6]. Consequently *Abhyanga* with *Mahanarayana Taila* and *Shalipinda sweda* which is *Snigdha Sveda* will aid rehabilitation of motor function, and the addition of treatment for *Margavaranaja Unmada* makes it a comprehensive management bringing more benefit to the patient. Orally *Sarasvata churna* indicated in *Unmada* has main ingredients which are *Medhya* in property.

OBJECTIVES:

- To evaluate the effect on motor deficit in patients of *Pakshaghata* with *Unmada,* treated with *Snigdha Shali Pinda sweda* and *Sarasvata churna*
- To evaluate the effect on psychological state in patients of *Pakshaghata* with *Unmada* treated with *Snigdha Shali Pindasweda* and *Sarasvata Churna.*

MATERIALS AND METHODS:

- Study design: Clinical study with pre test and post test design.
- A minimum of 20 patients diagnosed as *Margavaranaja Pakshaghata* with *Unmada*- ischemic stroke with vascular dementia fulfilling the diagnostic and inclusion criteria was taken for study from IPD/OPD of Shri Dharmasthala Manjunatheshwara Ayurveda Hospital - Udupi, irrespective of sex, caste and creed.

Diagnostic Criteria:

- Patients suffering from *Unmada.*
- Patients fulfilling ICD-10 Research Guideline Diagnostic criteria for Vascular Dementia. Such as:-
- Unequal distribution of deficit in higher cognitive function.
- Clinical evidence of focal brain damage.
- Reduced ability to recall past experiences.
- Deterioration in judgment and thinking.
- Emotional liability.
- Irritability

Inclusion Criteria:

1. Age above 50 years and older.
2. Montgomery Asberg Depression Rating scale.
3. Mild Dementia.

Exclusion Criteria:

1. Moderately sever to sever dementia.
2. Greater than mild to moderate aphasia.
3. Psychotic Depression.
4. Suicidal intent or plan.
5. Dementia in Alzheimer's Dementia.
6. Dementia in Huntington's disease
7. Dementia in Parkinson's disease.

8. Vascular dementia without Hemiplegia.

Investigations:

- Blood investigation (if required) to exclude other systemic disorders.
- CT Brain (Plain/Contrast)

INTERVENTION:

1. External treatment: *Abhyanga* with *Mahanarayana Taila* and *Shalipinda Sweda* each 30 minutes during morning hours for 14 days.

2. Oral medication: *Sarasvata churna* in a dose of 3 gm twice before food along with

10 ml of honey for 14 days.

Follow Up:

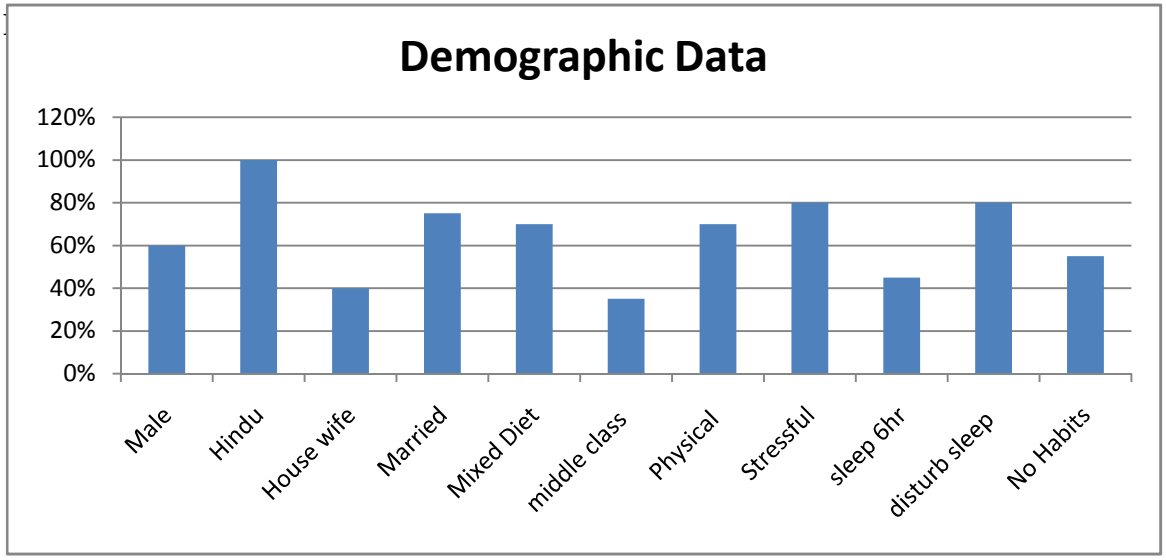
- All patients were followed 14 days after treatment.

Assessment Criteria:

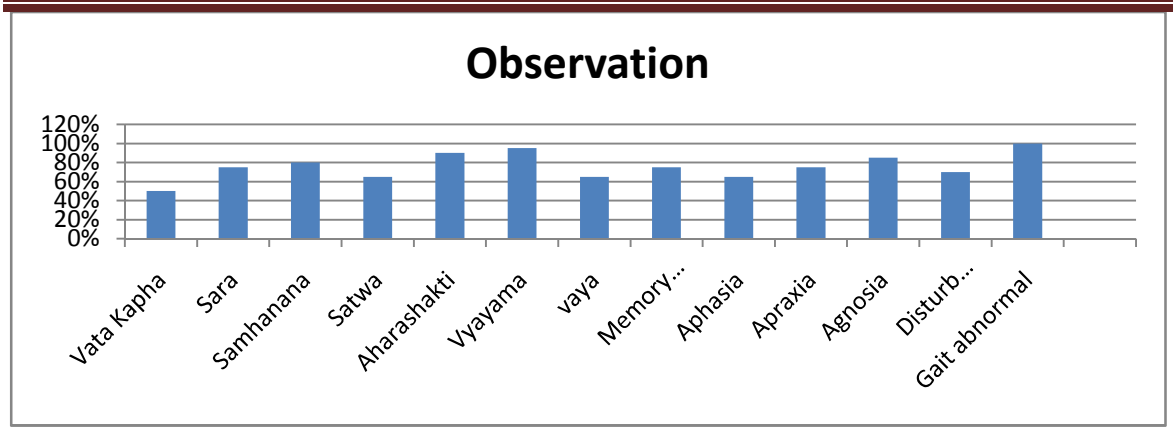
- National institute of health stroke Scale.
- Montgomery Asberg Depression Rating Scale.

OBSERVATION AND RESULTS:

The present study is a single blind with Pre and Post test design wherein the effect of treatment on different parameters were assessed initially before treatment, and 14 days after treatment. Paired‘t’ test was used to compare the results.



The above chart explains maximum incidences of demographic data along with observations among 20 patients of *Avaranaja unmada*. 60% patients were males, 100% belonging to Hindu religion. 40% were House wives, 75% were married, 70% were of mixed diet, 35% were of middle socio economic status, 70% had physical work, 80% had stressful life, 45% were sleeping for 6 hours, 80% had disturbed sleep, 55% had no any habits.



Among 20 patients, 50% were of *Vata-KaphaPrakrati*, 75% *madhyama Sara*, 80% *MadhyamaSamhanana*, 65% *MadhyamaSatwa*, 90% *madhyamaAharashakti*, 95% *Avaravyayama Shakti*, 65% *Vriddha Vaya*, 75% had memory impairment, 65% had Aphasia, 75% had Apraxia,85% had Agnosia, 70% had disturbed executive function, 100% had gait abnormality.

Results:-

Patients were assessed before and after completion of treatment in terms of different assessment parameters and they were recorded in proforma. To all these assessable parameters statistical tests were applied to check the level of significance by using Paired't'.

Table 1: Effect on *Manovibhrama*:

Mean		Difference in means	Percentage Improvement	Paired 't' test			
BT	AT			S D	S E M	t	P
5.650	3.563	2.150	38.05%	2.007	0.449	4.790	<0.001

Table 2: Effect of treatment on *Buddhi vibhrama:*

Mean		Difference in means	Percentage Improvement	Paired 't' test			
BT	AT	2.200	34.64%	S D	S E M	t	P
6.350	4.150			3.412	0.763	2.884	<0.010

Table 3: Effect on *Samjnajnana Vibhrama*

Mean		Difference in means	Percentage Improvement	Paired 't' test			
BT	AT	1.500	32.96%	S D	S E M	t	P
4.550	3.050			1.732	0.387	3.873	<0.001

Table 4: Effect on *SmratiVibhrama*

Mean		Difference in means	Percentage Improvement	Paired 't' test			
BT	AT	1.150	22.77%	S D	S E M	t	P
5.050	3.900			1.565	0.350	3.286	<0.004

Table 5: Effect on *Bhakti Vibhrama*

Mean	Difference in means	Percentage Improvement	Paired 't' test

BT	AT			S D	S E M	t	P
3.350	2.650	0.700	20.89%	1.174	0.263	2.666	<0.015

Table 6: Effect on *Sheela Vibhrama*

Mean		Difference in means	Percentage Improvement	Paired 't' test			
BT	AT	1.300	34.46%	S D	S E M	t	P
4.900	3.600			1.689	0.378	3.442	<0.003

Table 7: Effect on *Cheshta Vibhrama*

Mean		Difference in means	Percentage Improvement	Paired 't' test			
BT	AT			S D	S E M	t	P
3.950	3.300	0.650	16.45%	1.268	0.284	2.292	<0.033

Table 8: Effect on *Achara Vibhrama*

Mean		Difference in means	Percentage Improvement	Paired 't' test			
BT	AT	0.350	13.72%	S D	S E M	t	P
2.550	2.200			0.933	0.209	1.677	0.050

Table 9: Effect on National Institution of Health Stroke Scale

Mean		Difference in means	Percentage Improvement	Paired 't' test			
BT	AT			S D	S E M	t	P
16.550	12.600	3.950	23.86 %	3.120	0.698	5.662	<0.001

Table10: Effect on Montgomery Asberg Depression Rating Scale

Mean		Difference in means	Percentage Improvement	Paired 't' test			
BT	AT			S D	S E M	t	P
44.400	36.100	8.300	18.69%	6.088	1.361	6.097	<0.001

Assessment criteria for Pakshaghata:

Table10: Effect on *Cheshta Nivrutti*

Mean		Difference in means	Percentage Improvement	Paired 't' test			
BT	AT	0.500	18.51%	S D	S E M	t	P
2.700	2.200			0.607	0.136	3.684	=0.002

Table11: Effect on *Vaksthambha*

Mean		Difference in means	Percentage Improvement	Paired 't' test			
BT	AT	0.450	19.14%	S D	S E M	t	P
2.350	1.900			0.605	0.135	3.327	=0.004

Table12: Effect on *Ruja*

Mean	Difference	Percentage	Paired 't' test

		in means	Improvement				
BT	AT	0.450	17.64%	S D	S E M	t	P
2.550	2.100			0.510	0.114	3.943	<0.004

Table13: Effect on *Achetana*

Mean		Difference in means	Percentage Improvement	Paired 't' test			
BT	AT	0.650	24.52%	S D	S E M	t	P
2.650	2.000			0.813	0.182	3.577	=0.002

Table 14: Effect on *Sira snayu Shotha*

Mean		Difference in means	Percentage Improvement	Paired 't' test			
BT	AT	0.300	18.18%	S D	S E M	t	P
1.650	1.300			0.350	0.489	3.199	=0.005

Table 15: Effect on *Sandhi bandha Vimoksha*

Mean		Difference in means	Percentage Improvement	Paired 't' test			
BT	AT	0.400	19.51%	S D	S E M	t	P
2.050	1.650			0.400	0.598	2.990	=0.008

Table 16: Effect on *Hastha Pada Sankocha*:

Mean		Difference in means	Percentage Improvement	Paired 't' test			
BT	AT	0.650	27.08%	S D	S E M	t	P
2.400	1.750			0.587	0.131	4.951	<0.001

Table 17: Effect on *Shaithilya*

Mean		Difference in means	Percentage Improvement	Paired 't' test			
BT	AT	0.450	18.75%	S D	S E M	t	P
2.400	1.950			0.510	0.114	3.943	<0.001

Table 18: Effect on *Shotha*

Mean		Difference in means	Percentage Improvement	Paired 't' test			
BT	AT	0.400	21.62%	S D	S E M	t	P
1.850	1.450			0.598	0.134	2.990	=0.008

Table 19: Effect on Activity revealing Functional Ability

Mean		Difference in means	Percentage Improvement	Paired 't' test			
BT	AT	9.500	81.13%	S D	S E M	t	P
50.37	40.87			3.423	1.210	7.851	<0.001

DISCUSSION

Sarasvata Churna: mainly contains *Medhyarasayana-Vacha, Shankapushpi, Ashwagandha, Brahmi. Rasayana- Pippali, Ajamoda, Shunti, Maricha. Vyavayi-saindhavalavana*along with *raktashodha-kadravyaKushta* and *Patha.Brahmi- Sheetavirya, medhya* reduces *tikshna* property

of *Vacha*. *Vacha*- elevates the mood, increases cognitive ability, acts on *Samjnavaha srotas*. *Ashwagandha*- reduces stress, anxiety, reduces neuro-degeneration and promotes regeneration. *Shankapushpi & Brahmi- medhya*, nourishes brain tissues. *Pippali, Ajamoda, Jeeraka, Shunti, Maricha-Agnivardhaka*, over all nourishment of body tissue including brain, thus corrects *Avarana. Kushta* & *Patha*- purify the blood, pacify tridosha, thereby improve vegetative function. *Sarasvata churna*- acts at various level in a holistic way to improve mental ability, cognition and acts as a good antidepressant.

Mode of action of *Shalipinda sweda*:-By its main properties of *-ushna, sukshma, guru, snigdha, sthira* and *tridoshagna*,it acts on *pakshaghata* due to *margavarana* characterized by *cheshtahani, ruja, vaksthambha&hastha-padasankocha* improved after the course of *shalipindasweda*. It has nourishing property. *Kapha* and *meda dosha* get liquefied, relieves pain, stiffness and weakness of the muscles.

CONCLUSION

The present study to assess the effect of *Shalipinda sweda* and *Sarasvata Churna* in Ischemic stroke with Vascular Dementia, revealed that there are statistically significant results (p=<0.001) obtained in majority of the parameters assessed in 20 patients with a total duration of study as 30 days.

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CORRESPONDING AUTHOR

Dr. Vilma .B. Aranha
3rd year PG Scholar
Dept. Of ManasaRoga
SDMCA Udupi, Karnataka, India
Email: srwilmaaranha@gmail.com

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