

EFFECT OF CONVENTIONAL AYURVEDIC MANAGEMENT IN STROKE RECOVERY

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ABSTRACT

Stroke is one of the major causes of mortality and morbidity that affect mankind. In *Ayurveda* due to similarities in symptoms stroke is compared with *pakshagata*. Through the logical use of conventional Ayurvedic management the stroke survivors will remain self-dependent with improved quality of life. **Objective:** To study the effect of conventional Ayurvedic management in overall improvement of stroke patients. **Methods:** An open clinical trial was conducted in 80 stroke patients who were admitted in the IPD of VPSV Ayurveda College, Kottakkal. All were undergone conventional Ayurvedic management for stroke. Assessment was done on 1st day and after the end of treatment by using Barthel Activities of Daily Living, Stroke Specific Quality of Life and Stroke Impact Scale. **Result & Conclusion:** Statistically highly significant result with AP value $p < 0.001$ was obtained in Barthel's Activities of Daily Living, Stroke Specific Quality of Life and Stroke Impact Scale.

Keywords: Stroke, *Pakshagata*, *Ayurveda*.

INTRODUCTION

Stroke is one of the major causes of disability¹⁻². It is defined as the sudden onset of focal neurological sign of presumed vascular origin lasting more than 24 hours or causing death.³ WHO estimates per year 15 million suffer globally from stroke, in which 5 million die and another 5 million get permanently disabled.⁴ Mainly a stroke may occur either by ischaemic cause or haemorrhagic cause. The clinical distinction between these subtypes is one of the most urgent aspects of acute stroke management. Majority of the strokes are ischaemic type, caused by an interruption to the blood supply to the brain. The commonest cause of a

haemorrhagic stroke is small-vessel disease, leading to small aneurysms which bleed. The acute onset with focal weakness, speech disturbance, facial deviation, incontinence, and shoulder pain are the commonest clinical presentation of stroke. Non-cerebrovascular events such as post-ictal seizure, migraine, dementia, hypoglycaemia and vasovagal syncope are the commonest differential diagnosis of stroke.⁶

Background Study: Despite strong evidences on relief of symptoms associated with stroke, only less published clinical works are available in *Ayurveda*. Stroke is a frequently encountered health issue in the

various OPD's of VPSV Ayurveda College, Kottakkal. Both acute and chronic cases are reporting and are treating according to the symptom of patients, and many of them get some sort of relief. The role of *Ayurveda* in management of stroke is immense and it needs to be explored and well documented. With this background a study was planned with conventional Ayurvedic management in stroke recovery and its further impacts in the quality of life, which are needed to be addressed well in a Ayurvedic point of view.

Materials and Methods

Objective: To study the effect of conventional Ayurvedic management in overall improvement of stroke patient.

Settings: Patients who admitted in the IPD of VPSV Ayurveda College, Kottakkal for stroke management (diagnosed cases of stroke based on MRI of brain) were selected.

Sample size - 80

Inclusion criteria

- Stroke patients having a score of 1-5 as per modified Rankin Scale (mRS)
- Stroke patients with a chronicity of 3 days to 4 years
- Age between 30 to 80 years
- Those who are willing to give a written informed consent as a part of ethical consideration.

Precautions: Vitals like blood pressure, pulse, respiratory rate, heart rate will be monitored twice daily and if required, the patient will be referred to hospital with better facilities.

Exclusion criteria

- Aphasic patients with least communication
- Patient with post stroke psychosis and major depression

Sampling- Convenient sampling.

Interventions

Usual treatment package throughout the treatment period were almost same and aimed *anulomana*, *vatakapahara* and *masthishka chikitsa* like *rookshana*, *snehana* / *swedana*, *virechana*, *vasti*, *nasya*, *shirodhara*, *pizhinjuthadaval* and *njavarakizhi* to reduce bias by change of medicines. There is slight flexibility in treatment regarding the total duration and selection

of procedures. Commonly opted internal medicines were *gandharvahastadi kashaya/ chiruivilwadi kashaya/ ashtavargam kashaya/ badradaarvaadi kashaya*- 60 ml twice daily, *yogaraajaguggulu* (2-0-2). For external therapy like *shirodhara*, *pizhinjuthadaval thaila* like *sacharadi/ danwantharm/ kaarpasayaadi/ mahamasha* were opted according to condition of patient. For *virechana gandarvaerandam* (30-40ml) were opted for all patients. *Nasya* was done with *kaarpasayaadi tailam* and *anutailam*. Symptomatic management of other issues was applied wherever necessary.

Assessment criteria

A detailed case sheet was prepared. Assessment of effect of therapy was done by using scales like Stroke Specific Quality of Life, Stroke Impact Scale and Barthel's Activities of Daily Living

Data collection:

Overall assessment was done on 0th day and after treatment

Observations and Results

Gender wise distribution reveals that majority of participants were male (68%) and the remaining were females. In which 62.5% were Hindus, 36.25% were Muslims and only 1% belongs to Christian community. Age wise distribution shows that 10 participants have age below 40 years, 56 participants belong to age group 40-60 years and 14 participants belongs to age group above 60 years. Duration wise distribution shows that 33% had duration below one year, 24% between 1-2 years, 25% within 2-3 years, 11% between 3-4 years, 5% between 4-5 years, and 2% above 5 years. Education wise distribution shows that 53% participants had only primary education, 25% were uneducated and only 6% were graduated. 55% were belongs to low economic group, 31% from middle family status and the remaining from upper middle. As per mRS score 15 participants have a disability score 2, 33 participants have score 3, 17 participants have score 4 and 5 participants have score 5. 50 participants were left sided paralysed and 30 were right sided paralysed. Majority of participants have cortical stroke (50%), remaining have subcortical stroke (37%), pontine stroke (9%) and midbrain (4%) stroke.

80% had ischemic stroke and 20% had haemorrhagic stroke. Agni wise distribution of patients shows that 70% had *vishamagni*, 15% had *teekshnagni*, and 15%

had *mandagni*. Koshta wise distribution shows that 59% had normal bowel and 41% had constipated bowel.

Table 1: Barthel's Activities of Daily Living

Mean BT± SD	Mean AT± SD	MD	T	P
10.96 ± 4.53	13.84 ± 4.09	2.88	8.76	P<0.001

BT- Before Treatment, AT- After Treatment, SD- Standard Deviation, MD- Mean Difference, T- Table value

Table 2: Stroke Specific Quality of Life

Item	Mean BT ± SD	Mean AT ± SD	MD	T value	P
Energy	5.39±2.46	8.46±3.00	3.07	12.49	P<0.001
Family role	6.01±2.65	8.59±3.12	2.57	10.4	P<0.001
Language	21.83±24.07	23.97± 23.53	2.14	0.59	P>0.05
Mobility	13.62±6.40	19.30±6.87	5.68	12.7	P<0.001
Mood	10.68±4.93	14.9±5.40	4.22	10.63	P<0.001
Personality	5.94±2.69	8.69±3.12	2.75	10.96	P<0.001
Self-care	9.89±5.34	13.35±5.96	3.46	9.46	P<0.001
Social roles	8.81±4.64	12.36±6.19	3.55	9.56	P<0.001
Thinking	10.43±5.04	11.45±3.60	1.02	2.33	P<0.01
UEF	8.06±4.5	11.31±5.63	3.25	10.05	P<0.001
Vision	12.68±3.15	13.11±2.66	0.43	3.23	P<0.01
Work	5.07±2.95	7.16±3.53	2.09	10.08	P<0.001
Total	127.11±50.11	152.72±46.24	25.61	5.263	P<0.001

Table 3: Stroke Impact Scale

Item	Mean BT± SD	Mean AT ±SD	MD	T	P
Strength	8.67±3.54	12.68±3.71	4.01	16.09	P<0.001
Memory	28.36±7.27	30.27±6.00	1.91	5.661	P<0.001
Emotion	22.97±5.71	28.87±6.42	5.83	11.85	P<0.001
Communication	28.49 ±8.02	30.54± 6.9	2.05	4.88	P<0.001
DAL	24.3±8.26	29.21±9.57	4.91	9.24	P<0.001
Mobility	23.73±11.14	30.24±10.39	6.51	9.23	P<0.001
HF	8.97 ±6.65	11.91±6.58	2.94	9.86	P<0.001
Social participation	15.51± 7.34	21.27± 9.19	5.76	10.67	P<0.001
Total	162.15±45.85	195.02±47.62	32.87	11.44	P<0.001

DISCUSSION

Stroke is one of the life threatening and most crippling disorders in the present scenario characterized by weakness of one half of the body due to the destruction of brain tissue via irregularities in the brain blood supply.

In *Ayurveda*, due to similarities in the symptoms *Acarya Caraka* compared stroke with *pakshawadha*

and *Acarya Susruta* compared with *pakshaghata*. The *lakshana* includes *ruja*, *vakstambha*, *ceshtahani* etc.⁷ Even though *pakshaghata* is a *vatavyadhi*, and mentioned in the *nanatmajavataja vikara* by *Caraka*⁸, it is not a *shuddhavataja* condition which was clearly mentioned by *Susruta samhita* and *Madhavanidana* i.e. *kaphanubandha* and *pittanubandha pakshaghata*.¹⁰ Also excessive blood loss is mentioned as a *vataprakopa karana* which lead to *dhatukshayajanya*

pakshaghata,⁹ which is the *nidana* for hemorrhagic stroke. The common symptoms seen in *vatika pakshagata* are *suptagatrata*, *balavarnanasha aadmana/ parikartika*, *sankoca*, *varchavibanda*, *pralapa*, *sthabdhada*, *shoka*, *kampa*, *anidra*. In *paitika pakshagata* the symptoms are *daha*, *santapa*, *moorcha* and *alpanidra* and in *kaphaja pakshagata* symptoms are *shopha*, *gurutva*, *sheetata* and *atinidra*.¹⁰

The management of stroke still stands as a challenge to different medical systems. Till date researches proves that complete cure of hemiplegia is not possible in any medical system. *Ayurveda*, the science of life has put forwarded some specific treatment modality for *pakshaghata*, but not unique to every patient. Because the individualistic approach in treatment is the speciality and uniqueness of *Ayurveda*. *Caraka* has specifically used the term “*purushampurusham veekshya*”¹¹ to highlight the importance of the individualistic therapy in somatic as well as psychic diseases. The treatments are given based on the clinical presentation and considering the *prakruthi* of patient. The mode of action of internal medicine is determined on pharmacodynamics factors as *rasa*, *guna*, *virya*, and *vipaka* along with certain specific properties called *prabhava*, which cannot be explained on these principles inherited by the drugs. These drugs in combination act as antagonist to the main morbid factors i.e. *dosha* and *dushya* to cause *samprapti vighattana* to allay the symptoms of disease. The modes of action of internal medicines used in the study were mainly *vatanulomana*, *malanulomana* and *balya*.

Pakshaghata (hemiplegia) is a disease in which *dosha* get located in *mastishka* and affect whole half of body functions. Thus, apart from improving the limb function, improvement of damaged part of the brain is necessary. The different *pancakarma* procedure fulfilling both criteria's in mode of action is used for doing treatments.

CONCLUSION

Statistically highly significant improvement was noticed on patient's activities of living. Highly significant improvement was noticed on patient's quality of life. By considering individual domain, statistically and

clinically insignificant result was obtained in language domain. overall clinically significant result was obtained on stroke impact scale.

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