

EFFECTIVENESS OF SAHACHARADI TAILAM FOURTEEN TIMES AVARTHI WITH PRE-MEDICATION IN QUALITY OF LIFE OF PARKINSON'S DISEASE AS AN ADD ON TO MODERN MEDICINEJinsa I¹, K Miharjan², Chitra P³¹Assistant professor Dept. of Kayachikitsa, Parassinikadavu Ayurveda Medical College, Kannur, Kerala, India²Retired Professor, Dept. of Kayachikitsa, Govt. Ayurveda College, Thiruvananthapuram, Kerala, India³Additional Professor Dept. of Neurology, Govt. Medical College, Thiruvananthapuram, Kerala, India**Corresponding Author:** jinsaiknr@gmail.com<https://doi.org/10.46607/iamj03p6012021>**(Published online: November 2021)****Open Access**

© International Ayurvedic Medical Journal, India 2021

Article Received: 17/09/2021 - **Peer Reviewed:** 19/11/2021 - **Accepted for Publication:** 22/11/2021

Check for updates

ABSTRACT

Parkinsons disease (PD) is an idiopathic degenerative disorder that affects mainly old age. Community-based prevalence studies from India have documented crude prevalence rates of PD from 7 to 328 per 100,000 in the overall population. The current management in PD is effective in alleviating signs and symptoms but the quality of life is not preserved. This study was undertaken to the clinical evaluation of *Sahacharadi Tailam* fourteen times *Avarthi* with premedication in improving the quality of life in Parkinson's patients. Since *Kapha* and *Vata* plays an important role in *Samprapthi* of Parkinson's disease, *Kapha Vatha Hara Chikitsa* should be effective. All types of *Sneha Dravya* are used in *Vatha Vyadhi Chikitsa* and *Taila* is more effective when *Vatha* is associated with *Kapha*. Most of the drugs in *Sahachaadi Tailam* have *Vata Kapha Hara* properties. The study design was an interventional study pre and post evaluation with a sample size of ten patients. Parkinson's disease of age group 40-70 years of both sex attending the OPD and IPD of Department of Kayachikitsa, Govt. Ayurveda College, Thiruvananthapuram was selected for the study. The patient selected for the study was subjected to *Deepana* – *Pachana* with *Gandharvahastadi Kashayam* 48 ml at 7 am & 7 pm one hour before food and *vaiswanarachoorna* 6 gm with *Kasayam* internally and *Udvarthana* with *Kolakulathadi Choorna* externally for 1-7 days, *Snehapana* with *Rasnadasamoola Gritham* starting with 25ml with increasing dosage for 3-7 days, *abhyanga* and *Ushma Sveda* with *Balatailam* and *Virechana* with *Gandharveranda Tailam* 30-45ml and *Samsarjanakrama* as a prepara-

tory phase for the administration of study drug. Then patients received *Sahacharadi Tailam* fourteen times *Avarthi* for two months. Follow up was done 15 days after the intervention. On statistical analysis, there was a significant reduction in symptoms like tremor rigidity and pain before treatment, after *Shodhana*, after intervention & after follow up assessments.

Keywords: PD, *Sahacharadi Tailam* fourteen times *Avarthi*, *Deepana- Pachana*, *Udvarthana*, *Snehapana*, *Abyanga*, *Ushma Sveda*, *Virechana*, *Samsarjana Krama*, *Kaphavatahara* and *Vata Vyadhi*.

INTRODUCTION

Ayurveda – the traditional Indian system of medicine is the knowledge of life, the unique objective of which is the achievement of optimum health which includes maintenance and promotion of health in healthy individuals and cure of illness in diseased. This can be considered as the earliest scientific reference regarding the positive concept of health which can be achieved through a blending of physical, mental, social, moral & spiritual well-being.

Parkinson's disease is named after Dr James Parkinson who was the first physician to describe the condition in 1817. He introduced the term shaking Palsy and described the affected individuals are having – "involuntary tremulous motion, with lessened muscular power, in parts not in action and even when supported; with a propensity to bend the trunk forward and to pass from a walking to a running pace; the senses and intellect being uninjured". The term paralysis Agitans appeared for the first time in 1841 in Marshall Man's textbook, Disease and derangements of the nervous system^[1]. Parkinson's disease (PD) is an idiopathic degenerative disorder that affects mainly old age^[2]. Its peak age of onset is in the early 60s (range 35–85 years), and the course of the illness ranges between 10 and 25 years. PD accounts for ~75% of all cases of parkinsonism; the remaining cases result from other neurodegenerative disorders, cerebrovascular disease, and drugs^[3]. The number of individuals with PD over the age of 50 in Europe's 5 most countries and 10 most populous nations was between 4.1 and 4.6 million in 2005 and will double to between 8.7 and 9.3 million by 2030.^[4] Community-based prevalence studies from India have documented crude prevalence rates of PD from 7 to 328 per 100,000 in the overall population.^[5]

The current management in PD is effective in alleviating signs and symptoms but the quality of life is not preserved. It is observed that patients who received *Sahacharadi Tailam* fourteen times *Avarthi* with premedication as an add on to modern medicine show encouraging results in patients of Kayachikitsa ward. But it was not scientifically validated till now. The present study is to assess the quality of life of PD patients with *Sahacharadi Tailam* fourteen times *Avarthi* with premedication as an add on to modern medicine. PD is a neurodegenerative disease, in its due course reduces the quality of living of an individual. Hence, the individual poses a burden to the family members as well as to the society. *Sahacharadi Tailam* mentioned in *Vatavyadhi Chikitsa* with indications like *Kampa* (tremor) and *Sthamba* (rigidity),^[6] which are the main symptoms in PD, could be an apt option. PD is a disorder caused by the *avarana* of *vatha* by *kapha*, the drugs of *Sahacharadi Tailam* Being *Vatakapha Samana* and *Taila* being the mode of administration could rightly arrest the progression. This could be a breakthrough in our science.

PD is a long-term disorder that needs intake of medicine for a longer period. Even though L-dopa is the conventional management, long term usage results in levodopa-induced dyskinesia^[7]. *Sahacharadi Tailam* could be an effective remedy with no side effects in long run.

MATERIALS AND METHODS

The study was an interventional study with pre and post evaluation. Patients with signs and symptoms of Parkinson's disease were selected as per the inclusion and exclusion criteria from the OPD and IPD of the Department of Kayachikitsa, Government Ayurveda College Hospital, Thiruvananthapuram. They were

subjected to detailed clinical examination using a semi-structured clinical case proforma prepared as per modern and Ayurvedic parameters. The participants were again examined by a neurologist and detailed clinical evaluations and investigations were done. The confirmed cases were selected for the study.

The setting for the study

The patients were selected, who were diagnosed as having Parkinson's disease with proper documentation from OPD and IPD of the Department of Kayachikitsa, Govt. Ayurveda College Hospital, Thiruvananthapuram. Laboratory investigations were done at the pathology lab of Govt. Ayurveda College Hospital, Thiruvananthapuram.

Study Population

Patients with Parkinson's disease aged 40-70 years attending the IPD of Department of Kayachikitsa Government Ayurveda College Thiruvananthapuram.

Sample

The sample for the clinical study included patients diagnosed as having Parkinson's disease who reported at OPD and IPD of the Department of Kayachikitsa, Govt. Ayurveda College Hospital, Thiruvananthapuram during the study period.

Inclusion Criteria

Primary idiopathic Parkinson's disease aged 40- 70 years of both sex.

Exclusion criteria

Known case of ischemic heart disease
Patients undergo treatment for cerebrovascular accidents
Other extrapyramidal signs like dystonia, chorea, athetosis and myoclonus
Atypical Parkinson's disease and secondary parkinsonism
Normal-pressure hydrocephalus
Hypothyroidism

Sample size

The total sample size was ten.

Duration of study

The duration of the study was 86- 100 days.

Collection of data

The semi-structured case proforma was used as a tool for data collection in the study. The data collection was done by interrogation, physical examination and detailed examination of the nervous system, including investigations like haematological assessment.

Preparation of the drug

The study drug was taila. Drugs of good quality will be identified and brought from the market. These will be cleaned thoroughly and dried well. One part of *sahachara* along with its roots and branches, an equal quantity of *dasamoola* and half part of *satavari* are boiled in 10 times of water and decoction is reduced to one fourth the quantity. To this added the *Kalka* each of *Sevya*, *Nakha*, *Kusta*, *Hima*, *Ela*, *Sprik*, *Priyangu*, *Misi*, *Turushka*, *Nata*, *Nalika*, *Ambu*, *Silajathu*, *Lohitha*, *Nalada*, *Loha*, *Devadaru* and, *Kopana* one by 100th of *Sahachara*. To this taila is added in the quantity 3/5th of *sahachara* and an equal amount of milk and medicated oil is cooked. This *taila* is then subjected to fourteen times *Avarthana*^[8]. By doing *avarthi* of *tailam*, it helps to minimize the dose, maximize the drug delivery and is easy to administer. It also helps in better packaging and marketing. The potency of *sneha* can be enhanced by processing it with drugs repeatedly. It helps to extract active principles of drugs into fatty media more efficiently and enhance the absorption of drugs.

Method of administration

The patients eligible for the study was identified from the research settings. They were subjected to thorough clinical evaluations and selected as per the selection criteria. The patient selected for the study was subjected to *Deepana-Pachana* (for digestive and metabolic correction) internally and *Udwarthana* externally, *Snehapana* (oleation), *Swedana* (sudation) *sodhana* (purification, *virechana*-purgation), *Samsarjanakrama* as a preparatory phase for the administration of study drug.

The patients received *Sahacharadi Tailam* fourteen times *Avarthi* for two months. The medicine was given in dropper bottles with a capacity of 30ml and patients were advised to take 20 drops of medicine with 30 ml of hot water in the morning and evening one

hour before food at 7 am and 7 pm. Patients were advised to visit every 15 days. In a subsequent visit

bottle containing 30ml of study, the drug was given.

Treatment Schedule

Treatment	Medicine	Dose	Time	Duration
<i>Deepana Pachana</i>	<i>Gandharvahastadi Kashayam Vaiswanara Choorna</i>	48 ml 6 gram	7 am & 7 pm one hour before food	1-7 days
<i>Udvarthana</i>	<i>Kolakulathadi Choorna</i>	Quantity sufficient	Morning (between 8 am to 11 am)	1-7 days
<i>Snehapana</i>	<i>Rasnadasamoola Gritha</i>	Starting with 25 ml in an increasing dosage schedule per day	6 am on an empty stomach	3-7 days
<i>Abyanga- Nadisweda</i>	<i>Balatailam</i>	Quantity sufficient	Morning (between 8 am to 11 am)	3 days
<i>Virechana</i>	<i>Gandharveranda Tailam</i>	30 ml- 45 ml with 150 ml of warm milk	7 am on an empty stomach	1 day
<i>Samsarjana Krama</i>	<i>Manda, Peya, Vilepi, Akrutha & Kritha Yoosha</i>	Quantity sufficient	8 am & 8 pm	3-7 days
Study drug	<i>Shacharadi Tailam fourteen times Avarthi</i>	20 drops with 30 ml of warm water	7 am & 7 pm one hour before food	2 months

Study tools

Case proforma

Movement disorder society-Universal Parkinson's disease rating scale (MDS-UPDRS)

Lab investigation (Liver function test and Renal function test)

Dose of the study drug

The patients in the study group were given 20 drops of medicine with 30 ml of hot water in the morning and evening one hour before food at 7 am and 7 pm.

Diet

The patients were advised to follow a normal diet.

Assessment

Assessment of the patient was done in the following schedule:

1st assessment- Before treatment (0th day)

2nd assessment- After *sodhana* (on 12th day and may extend to a maximum of 25th day)

3rd assessment- After treatment (on 71st day and may extend to a maximum of 85th day)

4th assessment- 15 days after the completion of study drug

Follow up

Follow up was done 15 days after the completion of the study drug.

Clinical assessment

Change in following domains assessed by using MDS-UPDRS

Non-motor aspects of experiences of daily living

Motor aspects of the experience of daily living

Motor symptoms

Methods of statistical analysis

The mean standard deviation of MDS UPDRS was computed. The effectiveness of the drug was done by Wilcoxon signed-rank test. Data analysis is done using SPSS software.

RESULTS

On assessing non-motor aspects of experiences of daily living, it showed the significant result in pain and other sensation. 30 % of the patients had no pain and other sensations before treatment and it became 90% after the intervention. It showed significant results for this symptom after intervention, and it remained as such after follow up.

By assessing motor aspects of experiences of daily living, tremor causes problems with all activities (grade V: severe) before treatment and it became moderate after intervention and follow up and is seen to be significant. But there were no significant changes seen after sodhana. While comparing the result of the intervention and follow up no changes were observed. Out of the total participants, 5 patients had mild tremors and it became 2 after the intervention.

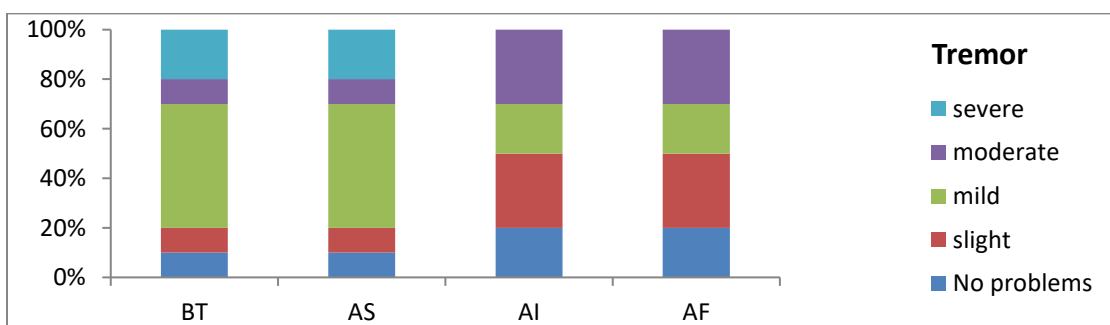
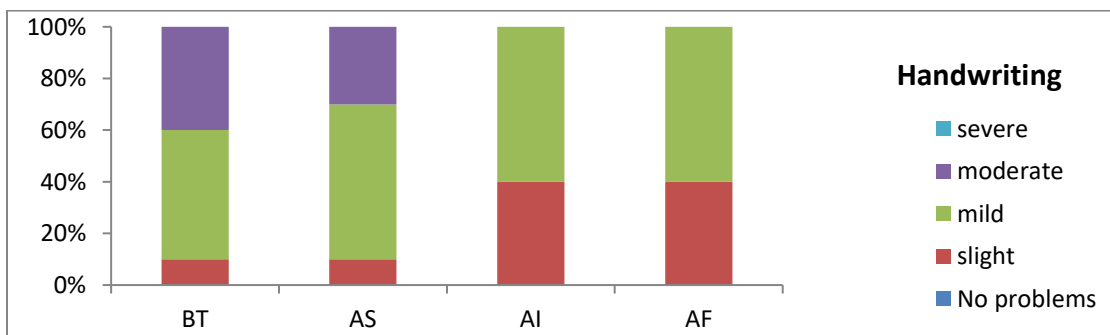
On examination, the consistency of tremor was severe in 80% of patients and it became moderate in 6 of the patients after intervention. On observing follow up results no changes were seen. It was observed that the intensity of tremor also reduced after the intervention.

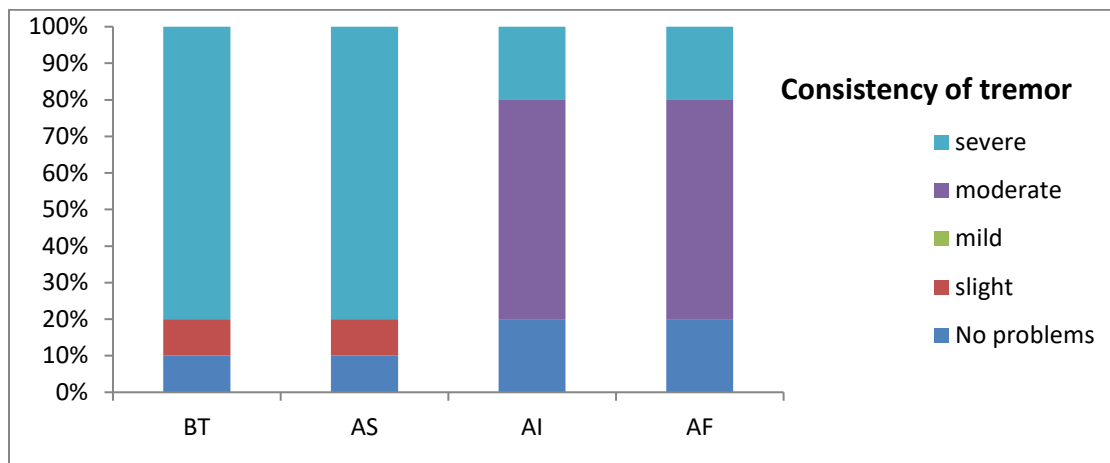
There was a significant result seen in rigidity after sodhana, after intervention and after follow up to that with before treatment. ie. 60% of patients had slight rigidity (rigidity only detected with activation manoeuvre) in the right upper extremity before treatment and it was absent after sodhana. It remained the same after intervention & after follow up. On comparing the results after *Sodhana* and after the intervention, after intervention and follow up, no signifi-

cant changes were seen. Similar changes were observed in other extremities.

There were significant results seen in handwriting also. 40% of patients had moderate difficulty in handwriting; it became 30% after sodhana and 0% after intervention and after follow up. When assessing patients after shodhana, the study is not significant. After intervention and after follow up to that with before treatment, it is found to be significant.

On analysing each symptom, there were statistically significant results were seen in pain, tremor, handwriting and rigidity. But bradykinesia, sleep disturbances neuropsychiatric symptoms like depression, anxiety, apathy, autonomic symptoms like urinary problems, constipation, salivation etc. showed statistically no significant results. It was observed in 2 patients that there was an improvement in drug-induced dyskinesia after sodhana and after the intervention. After follow up the dyskinesia remained the same as before treatment. Subjective changes were seen in gait disturbances. After the intervention, the period of levodopa increased. On analysing there was no progression of any symptoms in the entire study period even though Parkinson's disease is a progressive neurodegenerative disease.





DISCUSSION

Parkinson's disease is an idiopathic disorder and is one of the major neurodegenerative disorders that affect mainly the old age group^[9]. It is a progressive disorder that gradually disables the patient. Worldwide, based on the available prevalence studies, there are likely to be more than 6 million people with Parkinson's disease^[10]. The present study was designed to evaluate the effectiveness of sahacharadi tailam fourteen times avarthi with premedication in improving the Quality of Life of patients with Parkinson's disease as an add on to modern medicine.

Demographic data

Among 10 patients, 70 % of them were in the age group 60-70 yrs, followed by 30% in 50-60yrs, showing the greater prevalence of the disease in older ages. Among total patients 60 % were male and 40% were female. As far as marital status is considered, 80% of the patients were married and 20% were widowed. This might be due to the fact that all of the patients who participated in the present study were above 40 yrs of age.

It is observed that in this study, 30% of patients have completed primary education only, 30 % has completed SSLC, 20% has completed higher secondary and 20% of them were graduate. Among 10 patients 50% of patients belong to a middle class, 40% were in the lower class and 10% were in the upper class.

Among 10 patients 20% of patients were manual labourers, 20% were housewives, and 10% of them

were businessmen. Half of the patients were retired government employees. It includes policemen, clerks and teachers. Among total patients 90% were Hindu, and 10% were Muslim. It is observed that in this clinical study 60% of the patients were from a rural area and 40 % of them were from urban areas.

In this study, 80% of patients have no addictions, and 10% of patients were alcoholics and 10% of them were smokers. It is observed that in this study, 40% of the patients were *Vatapitha Prakrithi*, 40% were *Vatakapha Prakrithi* and 20% were *Kaphapitha Prakrithi*.

Data related to Parkinson's disease

Among total patients, 50% of them have their symptoms with chronicity of 1-2 years, 20% with chronicity between 3-4 years and 30% with chronicity of 4 years and above.

Among 10 patients all of them were presented with bradykinesia, 90% have tremors as presenting complaint, 80% have gait disturbances and 40% of patients have pain and other sensations. The most prominent relieving factor reported by the patients were sleep (70%) followed by muscular exertion (30%). The most prominent aggravating factor reported by the patients were emotions (80%) followed by rest in 40% and crowded areas in 30% of patients.

Among 10 patients 60 % of patients have both constipation and urinary problems, 20% have excessive salivation and 10% of patients suffer from paroxysmal sweating. Most of the patients reported depres-

sion (70%) followed by anxiety in 60% of patients and cognitive dysfunction in 10% of patients.

Outcome variable

Parkinson's disease (PD) is the most common form of progressive neurodegenerative disorders characterized by bradykinesia (a paucity and slowness of movement), rest tremor, muscular rigidity, short shuffling gait, and flexed posture.

On assessing non-motor aspects of experiences of daily living, it showed the significant result in pain and other sensation. 30 % of the patients had no pain and other sensations before treatment and it became 90% after the intervention. It showed significant results for this symptom after intervention, and it remained as such after follow up. No significant results were seen in other symptoms like depression, anxiety, urinary problems etc.

By assessing motor aspects of experiences of daily living, tremor causes problems with all activities (grade V: severe) before treatment and it became moderate after intervention and follow up and is seen to be significant. But there were no significant changes seen after *Sodhana*. While comparing the result of the intervention and follow up no changes were observed. Out of the total participants, 5 patients had mild tremors and it became 2 after the intervention.

On examination, the consistency of tremor was severe in 80% of patients and it became moderate in 6 of the patients after intervention. On observing follow up results no changes were seen. It was observed that the intensity of tremor also reduced after the intervention.

There was a significant result seen in rigidity after *sodhana*, after intervention and after follow up to that with before treatment. ie. 60% of patients had slight rigidity (rigidity only detected with activation manoeuvre) in the right upper extremity before treatment and it was absent after *sodhana*. It remained the same after intervention & after follow up. On comparing the results after *Sodhana* and after the intervention, after intervention and follow up, no significant changes were seen. Similar changes were observed in other extremities.

There were significant results seen in handwriting also. 40% of patients had moderate difficulty in handwriting; it became 30% after *sodhana* and 0% after intervention and after follow up. When assessing patients after *Shodhana*, the study is not significant. After intervention and after follow up to that with before treatment, it is found to be significant.

On analysing each symptom, there were statistically significant results were seen in pain, tremor, handwriting and rigidity. But bradykinesia, sleep disturbances neuropsychiatric symptoms like depression, anxiety, apathy, autonomic symptoms like urinary problems, constipation, salivation etc. showed statistically no significant results.

It was observed in 2 patients that there was an improvement in drug-induced dyskinesia after *sodhana* and after the intervention. After follow up the dyskinesia remained the same as before treatment. Subjective changes were seen in gait disturbances. After the intervention, the period of *Levodopa* increased. On analysing there was no progression of any symptoms in the entire study period even though Parkinson's disease is a progressive neurodegenerative disease.

Probable mode of action of the drug

In PD, there is significant vatha kopa along with vitiation of kapha. It is well evident from the *Lakshana* that the pathology is considered to be *Avarana*. But it can't be brought under a single *avarana*. So, a combination of *avarana* is imposed in the pathology of PD. Since *Kapha* and *Vata* plays an important role in *Samprapthi* of Parkinson's disease, *Kapha Vatha Hara Chikitsa* should be effective. All types of *Sneha Dravya* are used in *Vatha Vyadhi Chikitsa* and *Taila* is more effective when vatha is associated with kapha^[11].

In *Sahacharadi Tailam*, most of the drugs are *Kaphavatha Samana*. Most of the drugs have *Katu Vipaka*, *Ushna Virya*, and *Laghu Ruksha Guna*.^[12] These properties are important in removing *Avarana*. In *Sahachardi Taila*, 6 drugs have brimhana property, 4 drugs have rasayana property and 2 drugs have medhya property^[13]. Since PD is a neurodegenerative disease medhya, rasayana and brimhana properties play an important role.

CONCLUSION

- When the Clinical features of Parkinson's disease were analyzed on the basis of Ayurvedic Principles, involvement of *Vatha* and *Kapha Dusthi* is observed. From the *Lakshana* and *Upasaya* of the disease, the role of avarana in the samprapthi is clear. The kaphavarana occurs over vatha mainly vyana and udana.
- The rookshana and Snehana prayoga administered according to the avastha yields good relief from rigidity.
- Statistical analysis from a clinical trial showed that there is improvement in pain, rigidity, handwriting and tremor.
- There was no progression of any symptoms were observed in the entire study period even though it was a progressive neurodegenerative disease.
- It was observed that there were significant results seen in reducing drug-induced dyskinesia.
- On analyzing data before and after follow up, it can be concluded that the trial drug with premedication is effective in improving the QOL with respect to pain, tremor, handwriting and rigidity of patients with Parkinson's disease.

REFERENCES

1. Principles of Neurology, Raymond's D. Adams, Maurice Victor and Allan. H. Rooper – 7th edition (2003) Mc. Grow – Hill Co. Inc.
2. Textbook of Neuropathology 3rd edition by Richard. L. Davies, David. M. Robert Son was published by Williams Wilkins.
3. Harrison's Principles of Internal Medicine 15th edition by Eugene Braunwald, Anthony. S. Fauci, Kasper, Hauser, Longo and Sameson, Published by Mc. Graw hill.
4. Brains disease of the nervous system Michael Donaghy 11th edition published by Oxford University Press.
5. Neurology and Neurosurgery illustrated, Churchill living stone, published by Timothy Horne.
6. Asthanga Hridaya with Sarvanga Sundara teeka by Bhisagacharya Hari Sastri paradakara vaidya, published by Chaukamba orientalia.
7. Guide to Clinical Neurology by J.P. Mohr and J.C. Gautier 7th edition by Churchill Living Stone.

8. Asthanga Hridaya with Sarvanga Sundara teeka by Bhisagacharya Hari Sastri paradakara vaidya, published by Chaukamba orientalia.
9. Davidson's Principles and Practice of medicine 21st edition edited by Nicki R. Colledge, Brian R. Walker and Stuart H. Ralston.
10. Neurological practice – An Indian perspective by Noshir and Wadia, I edition.
11. Asthanga Hridaya English Commentary by K.R. Srikantha Murthy – Krishnadas academy (1991).
12. Asthanga Hridaya English Commentary by K.R. Srikantha Murthy – Krishnadas academy (1991).
13. Indian Meteria Medica by Nadkarni A.K. and K.M. Nadkarni, popular prakashan, Mumbai.

Source of Support: Nil

Conflict of Interest: None Declared

How to cite this URL: Jinsa I et al: Effectiveness Of Sahacharadi Tailam Fourteen Times Avarthi With Pre-Medication In Quality Of Life Of Parkinson's Disease As An Add On To Modern Medicine. International Ayurvedic Medical Journal {online} 2021 {cited November 2021} Available from: http://www.iamj.in/posts/images/upload/3171_3178.pdf