PIJAR
Parveshana International Journal of Ayuredic Reserach
www.pijar.org
ISSN:2456:4354

A COMPARITIVE CLINICAL STUDY TO EVALUATE THE EFFICACY OF *MASHA SAINDAVA TAILA* AND *KARAPASASTHYADI TAILA NASYA* IN THE MANAGEMENT OF MANYASTHAMBA w.s.r TO CERVICAL SPONDYLOSIS

Vinu Sugathan[1], Karthikeya Prasad[2]
[1]PG Scholar, [2]Professor, Department of P.G studies in Panchakarma, Karnataka Ayurveda Medical College and Hospital, Mangalore, D.K District, Karnataka, India

DOI: https://doi.org/10.47071/pijar.2020.v05i06.004

ABSTRACT

Introduction: In the present era of modernization and fast life everybody is busy and living a stressful life. Advancement of busy professional and social life, improper sitting posture in office, continuous work in one posture and over exertion, jerking movements during travelling and sports and other sternous activities – all these factors create undue pressure and stress injury to the spine play an important role in producing disease like Cervical spondylosis. Nasya karma is considered as a prime line of treatment in *urdhwa jathru vikaras*. The disease Cervical spondylosis is primarily affecting the neck.

Design: Comparative Clinical Study in which the data collected before study is compared with data collected after study.

Source of Data: 2 groups of 20 patients each suffering from Manyasthambha of either sex in age limit between 20-60 years were selected from the OPD and IPD of the Department of Panchakarma, Karnataka Ayurveda Medical College and Hospital, Integrated AYUSH Hospital of District Wenlock , Hospital Mangalore and from Medical camps conducted for the same.

Intervention: GROUP A: 20 patients were administered with Masha *saindava thaila Nasya* 8 *bindus* in each nostril once a day for seven days. **GROUP B:** 20 patients were administered with *Karpasthasyadi thailam Nasya* 8 *bindus* in each nostril once a day for seven days.

Observation: Both the group showed significant improvement in the parameters of *Ruk, Graha*, Cervical spine movements and Muscle strength.

Result: Comparative analysis of overall effect of treatments in both the groups showed that the treatment is equally significant in Group A when compared to Group B. Group A overall result is 58.72% and Group B overall result is 60.88%.

Conclusion: *Mashasaindava Taila Nasya* is equally effective as *Karpasasthyadi Taila Nasya* in managing Cervical spondylosis. Also the cost effectiveness and less production effort makes it a more suitable choice for managing the disease**.**

Keywords: *Manyasthambha*, Cervical spondylosis, *Nasya karma, Masha saindava taila nasya, Karpasathyadi taila nasya.*

INTRODUCTION

Ayurveda is the most ancient and natural system of medicine that has been practiced for more than 5000 years. Ayurveda was the system of health care conceived and developed by the Rishis and natural scientists through centuries of observations, experiments and discussions. The term 'Panchakarma' literally means five-fold therapy. The word 'Pancha' has a meaning 'Vistara' (elaborate) also. Thus, it implies the meaning elaborate procedures. Both the meanings are really true in their sense. The therapies that are included under this collective term are Vamana karma, Virechana karma, Nirooha vasti, Anuvasana vasti and Nasya karma[1]. It is necessary at this state to make it clear that these Panchakarmas do not imply simple administration of emesis, purgation, enema or nasal drops as is conventionally understood. Elaborate methods are described for preparation of the individual prior to the administration (Poorvakarma), the administration of the procedure (Pradhanakarma) and the management of the patient after the therapy is administered (Paschat karma). From the five types of therapies Nasya is described as having a significant role in urdhwa jathrugata vyadhis[2] due to its sodhana, brumhana and samana effect. Especially the brumhana nasya is having vata samaka property. So, this study was taken to see whether the treatment is effective or not in cervical spondylosis which is a common degenerative spinal problem affecting the people very badly.

Ayurveda the age-old Indian system of medicine advocates a reliable management of diseases with due consideration to protect the normal health while treating the disease with highly efficacious and easily available drugs. Ayurvedic scientists at various centers with an aim to study the cervical pathologies like Grivasthambha, Manyasthambha etc. and to evolve safer and economical medicaments for it, have carried out several experimental and clinical studies. The works are successful to some extent to relieve pain and stiffness, the common complaints of this condition.

This clinical study is to assess the comparative effect of Mashasaindhavathaila[3,4] Nasya and Karpasasthyadi thaila[5] Nasya on the signs and symptoms of cervical

spondylosis. Previously it was proved that Nasya is very effective in reducing the signs and symptoms of cervical spondylosis. Nasya is one among the panchakarma procedure especially indicated for jatruoordha vyadhis. As far as etiopathology of cervical spondylosis is concerned vatavaigunya is important and snehanasya is specially indicated for jatruoordha vatavikaram.

Many medicines are prescribed in Ayurveda for treatment of Vata rogas. Among them Masha saindava thaila yoga and Karpasasthyadi thaila yoga is famous for the treatment of Manyasthamba. Though both yogas are beneficial in urdhwa jathru vikaras. The masha saindhava taila which is specifically for the kaphavrta vata or directly pacifies the vata, Masha, Tilathaila, Saindhava are the contents of Mashasaindhavathaila. therefor it helps the proper spreading of medicine through srotas where as karpasasthyadi taila is vatakaphahara and brimhana in nature. So, it is essential to evaluate the efficacy of two yogas independently over the samprapthi vighatana of manyasthambha. Since Manyasthamba is a disease affecting the neck and upper limbs, these two yogas is expected to give good response in the treatment of this disease. So, the study is planned to evaluate and to compare the therapeutic effect of Mashasaindava thailam and Karpasasthyadi Taila Nasya in the management of Manyasthamba. So, the present study to evaluating the efficacy of both nasya forms in manyasthambha.

AIMS AND OBJECTIVES

- To evaluate the efficacy of Masha saindava Taila nasya in the management of Manyasthambha
- To evaluate the efficacy of Karpasasthyadi taila Nasya in the management of Manyasthambha
- To compare the efficacy of Mashasaindava Taila Nasya and Karpasasthyadi Taila Nasya in the management of Manyasthambha

METHODOLOGY

SAMPLE SIZE:

Those patients diagnosed as cervical spondylosis based on clinical and radiological findings, attaining the inclusion criteria were selected for the study, A minimum of 40 patients fulfilling either sex was selected randomly.

DAIGNOSTIC CRITERIA:

- Greeva rujam
- Siro graham

INCLUSION CRITERIA:

- Patients in the age group between 20 - 60 years will be select.
- Patients of both sex.
- Patient indicated for nasya.
- Patient willing and able to participate in the study for 2 weeks.

EXCLUSION CRITERIA:

- Patients related to major systemic disorders that interfere in the line of treatment.
- Pregnancy and lactating mother.
- Age group: less than 20yrs and exceeding 60 yrs are to be excluded.
- Some disease conditions like Cervical Myelopathy, Prolapsed disc etc
- Patients contra-indicated for Nasya.

STUDY DESIGN

The research design for this study is an open clinical trial. It is a comparative clinical study in which the data collected before study is compared with data collected after study.

INVESTIGATIONS

- X-ray
- Blood – HB, TC, DC, ESR.
- Urine routine examination.
- Any other investigations if found necessary like CRP, RA factor will be taken.

POSOLOGY

Patients were selected in two groups Group A and Group B, consisting of 20 patients in each group excluding dropouts as per the criteria for the study.

GROUP A:20 patients will be given Nasya karma with Masha saindava thaila 8 bindus in each nostil once a day for seven days sitting.

GROUP B:20 patients will be given Nasya karma with karpasthasyadi thailam 8 bindus in each nostril once a day for seven days sitting.

STUDY DURATION:

- 1-7th day: *Nasya* is given
- 7 days followed by *Parihara Kala* of 14 days
- Follow up after 21 days

INTERVENTION: Treatment Procedure

SambharaSamgraha

Cotton pad, gauze, lotus petals to protect eyes while swedana were made available. For swedana arrangement for nadiswedana (pressure cooker without weight, long heat resistant flexible pipe) was made. Gokarna, Warm water for kavala, Haridra churna

dhoomavarthi, disposable sterile plastic container for spitting (preferably transparent) were made available.

Purva karma

The Patient was advised to wash the face and mouth with luke warm water. Abhyanga was done over shiras, lalata, kapala, greeva and skanda. Nadisweda was done followed by abhyanga over palm and sole. Eyes were bandaged with a clean gauze piece after placing lotus petals and cotton pad over closed eyelids while doing the swedana. Patient was made to lie in supine position with slightly elevated legs and head extended backwards.

Pradhana karma

The medicine was mildly warmed over a water bath. The prescribed dose of medicine was taken in the Gokarna and poured into either nostril closing the other in a continuous single stream. Immediately after instillation of medicine mild massage was done over pani, pada, greeva, skanda. Patient was asked to inhale the medicine with moderate force and to spit it through mouth turning head to either side alternatively without rising from the cot. Patient was made to lie in the same position for 100 matrakala (3-5 minutes

Pashchat karma

Dhoomapana was done with Haridra churna followed by Kavala with warm water to attain kanthashudhi.The patient was advised not to take any type of food or drinks for two hour after nasya.

ASSESSMENT CRITERIA

Assessment was done at baseline, on completion of the procedure and after follow up.

SUBJECTIVE PARAMETERS

- Ruk
- Graha

OBJECTIVE PARAMETERS

- Mobility (Flexion)
- Extension
- Lateral flexion
- Rotation
- Passive neck flexion
- Muscle strength

STASTICAL ANALYSIS

For the statistical analysis, the data obtained in both the groups were recorded, presented in tables, diagrams and graphs. The following statistical tests are used for assessment of parameters:

- Assessment of parameters within the group (after treatment and after follow up) – Wilcoxon sign rank test.
- Assessment of parameters between the groups – Mann-Whitney U test.

The corresponding p value was noted and obtained results were interpreted as follows:

- For p value > 0.05 – interpreted as no significant.
- For p value < 0.05 – interpreted as significant.

RESULTS

Statistical analysis of Subjective and Objective parameters

Group	Mean score				%	S.D (±)	S.E (±)	Wilcoxon Z Value	p value
	BT			BT-AT					
Group A on Ruk	2.45	AT	1.35	1.10	44.90	0.308	0.071	3.92	<0.05
		AF	0.95	1.50	61.22	0.513	0.118	3.92	<0.05
Group B on Ruk	3.05	AT	2.20	0.85	27.87	0.366	0.084	3.92	<0.05
		AF	1.85	1.20	39.34	0.616	0.141	2.21	<0.05
Group A on Graha	1.70	AT	2.60	0.90	29.03	0.553	0.127	3.62	<0.05
		AF	3.10	1.40	45.16	0.754	0.173	3.72	<0.05
Group B on Graha	1.25	AT	2.20	0.95	36.54	0.224	0.051	3.82	<0.05
		AF	2.60	1.35	51.92	0.587	0.135	3.82	<0.05
Group A on Flexion	0.45	AT	1.30	0.85	62.96	0.366	0.084	3.62	<0.05
		AF	1.35	0.90	66.67	0.447	0.103	3.62	<0.05
Group B on Flexion	0.20	AT	1.05	0.85	68.00	0.366	0.084	3.62	<0.05
		AF	1.25	1.05	84.00	0.510	0.117	3.72	<0.05
Group A on Extension	0.35	AT	1.30	0.95	65.52	0.224	0.051	3.82	<0.05
		AF	1.45	1.10	75.86	0.447	0.103	3.82	<0.05
Group B on Extension	0.20	AT	1.05	0.85	68.00	0.366	0.084	3.62	>0.05
		AF	1.25	1.05	84.00	0.510	0.117	3.72	>0.05
Group A on Right Lateral Flexion	0.35	AT	1.35	1.00	68.97	0.000	0.000	3.92	<0.05
		AF	1.45	1.10	75.86	0.447	0.103	3.92	<0.05
Group B on Right Lateral Flexion	0.20	AT	1.05	0.85	77.27	0.366	0.084	3.62	<0.05
		AF	1.10	0.90	81.82	0.308	0.071	3.72	<0.05
Group A on Left Lateral Flexion	0.45	AT	1.25	0.80	55.17	0.410	0.094	3.52	<0.05
		AF	1.45	1.00	68.97	0.562	0.129	3.62	<0.05
Group B on Left Lateral Flexion	0.20	AT	1.00	0.80	72.73	0.410	0.094	3.52	<0.05
		AF	1.10	0.90	81.82	0.308	0.071	3.72	<0.05
Group A on Rotation	0.45	AT	1.25	0.80	55.17	0.410	0.094	3.52	<0.05
		AF	1.45	1.00	68.97	0.459	0.105	3.72	<0.05
Group B on Rotation	0.20	AT	1.00	0.80	69.57	0.410	0.094	3.52	<0.05
		AF	1.15	0.95	82.61	0.224	0.051	3.82	<0.05

Group A on Passive Neck Flexion	2.15	AT	1.30	0.85	39.53	0.366	0.084	3.62	<0.05
		AF	0.65	1.50	69.77	0.607	0.139	3.82	<0.05
Group B on Passive Neck Flexion	2.10	AT	1.50	0.60	28.57	0.503	0.115	3.05	<0.05
		AF	1.10	1.00	47.62	0.324	0.074	3.82	<0.05
Group A on Muscle Strength	2.20	AT	3.10	0.90	27.69	0.308	0.071	3.72	<0.05
		AF	3.25	1.05	32.31	0.224	0.051	3.92	<0.05
Group B on Muscle Strength	1.25	AT	2.25	1.00	36.36	0.000	0.000	3.92	<0.05
		AF	2.75	1.50	54.55	0.513	0.118	3.92	<0.05

Comparative results of Signs and Symptoms of Group-A and Group-B.

Signs and Symptoms	Group A (Mean Score)	Group B (Mean Score)	Z-Value of Mann Whitney	U Value	P Value
Ruk	1.58	2.37	3.57	67.50	<0.05
Graha	2.47	2.02	2.39	111.00	<0.05
Flexion	1.03	0.83	1.17	156.00	<0.05
Extension	1.03	0.83	1.17	156.00	>0.05
Right Lateral Flexion	1.05	0.78	1.78	133.50	>0.05
Left Lateral Flexion	1.05	0.77	2.32	113.50	<0.05
Rotation	1.05	0.78	2.04	124.00	<0.05
Passive Neck Flexion	1.37	1.57	1.90	129.00	>0.05
Muscle Strength	2.85	2.08	3.09	85.00	<0.05

Comparative results of Group A and Group B

Group A	Group B	Mean Difference	SE (±)	Z-Value of Mann Whitney	U Value	P value
58.72	60.88	2.16	3.25	1.52	143.00	>0.05

Comparative analysis of the overall effect of the treatments in both the groups was done by statistically with Mann Whitney test. The test shows that the treatment is equally significant in Group A when compared to Group B. Group A overall result is 58.72% and Group B overall result is 60.88%.

DISCUSSION

Discussion on Karma

Cervical Spondylosis- Greevagraha is a vatavyadhi. The condition is affecting

the neck region with the symptoms such as pain and stiffness. Vata is vitiated either because of Avarana or Dhathukshya when vata covered by kapha or dosha accumulation makes Greevagraha. In initial stage of the disease the kaphaanubandam is acknowledge. Ayurveda advocates a reliable management of this condition through highly efficiencies and easily available drugs based on doshic theory. Ayurvedic approach to the disease management of Greevagraha, a vyadhi occurring in the Jatruurdhwa is to retard the inflammation and degeneration and to strengthen the dhathus and pacifying the vatadosha which has a special importance in the management.

Nasya karma is the first line of management explained in the classic for urdwajatrugatavatavyadhi. Greevasthambha being one of the urdwajatrugathavikara and especially dhatukshayajanyavataroga, bruhmana type of nasyakarma is more beneficial. Brimhananasya karma has been selected for the study because the disease Greevasthambha is degenerative in orgin and Urdwajatagatavatavyadhi. Hence Nasyakarma with Mashasaindhavathaila and Karpasasthyadi taila is advisible to palliate the disease which helps to set right the disease as it being santarpana type of chikitsa which prepared with vatakaphahara drugs.

Discussion on Drug review

MashasaindhavaThaila

Most of the ingredients of Mashasaindhavathaila are having guru and snigdhagunas which pacifies vatadosha. Saindhava and Tilathaila are having sookshmaguna that helps the proper spreading of the medicine through subtle srothas. Most of the drugs are having ushnavirya, so they act as vatakaphasamana. All the ingredients of this thaila are having madhuravipaka and alleviatesvatadosha. Masha is vatahara, Saindhava is tridoshasamana and Tilathaila is vatakaphasamana by nature. By concidering all these facts we can assume that the overall effect of Mashasaindhavathaila will be vatakaphasamanaCervical spondylosis being a vatajavyadhi with kaphaanubandha gets regressed by the usage of this thila as Nasya.

Karpasasthyadi Thaila

For the procedure Nasyakarma taila is considered better for the treatment of

Vatavyadi. Simple Tila taila can control the vitiated Vata but the medicated taila with Vatahara drugs is more beneficial. Karpasasthyadi taila has been described in Sahasrayoga as Vatahara. Hence Karpasasthyadi was selected for procedure Nasya in present study. Most of the ingredients of Karpasasthyadi taila are having ushna veerya , snigdha guna , vata kapha nashaka properties and having karmukata as vedana nashaka ,snehana and brumhana

Discussion on Disease

Cervical Spondylosis is a non-specific term describing the morphological manifestations of progressive degeneration of the spine. Cervical Spondylosis is a common degenerative condition of the cervical spine that most likely is caused by age related changes in the inter-vertebral discs. The most common symptom is pain in the neck, worsening with exertion and relieved, in the early stages, by rest. This pain often radiates down to the hand, with the fingers becoming numb due to compression of the nerves that innervate the upper extremity of the brachial plexus is affected. The trapezius area becomes tender and painful. A nodule can form in the muscle due to chronic pressure. The symptoms of cervical cord compression can sometimes be severe. The pain radiates down the right or left arm to the fingers, to the chest and shoulder blades depending on which side the nerve root is involved. It can become continuous, making movements painful and limited.

Trauma is observed to be the next causative factor for the disc prolapse. Trauma or abhigatha to the marmas are considered here. Almost all the patients of cervical Spondylosis have a history of trauma or bad postures which in turn leads to improper positioning of cervical vertebrae, this puts uneven pressure over the spinal nerve roots producing different signs and symptoms. It is observed that when a person sleeps with improper head position, especially in middle aged or old aged, develop Inflammatory and degenerative processes in the cervical vertebrae, and may lead to Greevastambha. Spondylosis is due to ageing process or with wrong postures causing minor trauma, which can accelerate the pathology of greevasthambha and further degeneration leading to set a clinical features. Considering the etiology, signs and symptoms the

cervical Spondylosis can be compared to Greevagraha as follows. Stiffness which is a major symptom of cervical spondylosis can be correlated to Sthambha. Aching pain which occurs in this disease can be correlated to the ruk and muscle weakness to sada and paraesthesiae and numbness to swapa. Muscle wasting which can occur in root compression as a complication of cervical spondylosis can be correlated to sosha which is again karma of vridhavata. Thus, most of the almost all the symptoms reveal essential role of vitiated vata in the pathogenesis of cervical spondylosis. Sandhis are the abode of sleshakakapha. Its function is to connect the different units of sandhi.This action is performed by snigdhatwa (unctuousness), Slakshnatwa (smoothness), Mrisnatwa (lubricability) of kapha. Apart from this asthi sandhis are strengthened by the presence of snayu and peshis in the surrounding area.

Discussion on Probable Mode of Action:

In Ayurvedic classics, the mode of action of Nasya karma is explained indirectly. According to Charaka Samhita, the drug administered through the nose enters in the Uttamanga and eliminates the morbid doshas residing there. The sneha Nasya which is administered through nose gives Bala and do the preenana of Shira kapalagata siras,sandhis and snayu kandaras. It indicates the action of Nasya. The absorption of the drugs is carried out in three media they are by general blood circulation, after absorption through mucous membrane. The direct pooling into Venus sinus of brain via inferior ophthalmic veins and next one absorption directly in to the cerebra spinal fluid. Apart from the small emissary veins entering cavernous sinuses of the brain, a pair of venous branch emerging from alliance will drain into facial vein. Just almost in the opposite direction inferior ophthalmic in other hand also drain into cavernous sinus of the menages. And in addition neither the facial vein nor the ophthalmic veins have any venial values so there are more chances of blood draining from facial vein into the cavernous sinus in the lowered head position.

The nasal cavity directly opens with the frontal maxillary and sphenoidal air sinus epithelial layer is also continuous through out then the momentary retention of drug in naso pharynx.

Medicine causes oozing as drug material enters into air sinus, which are rich with blood vessels entering the brain and remaining through the existing foramens in the bones there are better chances of drug transportation in this path. Recent authors as middle cephalic fosse of the skull consisting para-nasal sinus and meningial vessels and nerves one can see in to the truth of narration made have explained the shringataka marma by Vagbhata here. The drug administered enters the para nasal sinus especially frontal and sphenoid sinus i.e., shringataka where the ophthalmic veins and the other veins spread the sphenoid sinus are in close relation with intra-cranial structures. Thus there may be a so far undetected route between air sinuses and cavernous sinuses enabling the transudation of fluids. As a whole, the mentioning of the shringataka in this context seems to be more reasonable. From the above it was observed that the Mashasaindhava thaila Nasya and Karpasasthyadi thaila is very much effective in reducing the sign and symptoms of cervical spondylosis. About the exact mechanism of the action of the MashasaindhavathailaNasya and Karpasasthyadi thaila in reducing the signs and symptoms is not clearly understood. Still a humble attempt to analyse the possible mode of action is made. Considering the pain relief, the vataharatwa nature of MashasaindhavathailaNasya and Karpasasthyadi thaila is found to be reducing the pain. In the case of neck stiffness, the ushnavirya of the Mashasaindhavathaila may found to be alleviating the stiffness, which is caused by seethaguna. As the stiffness is removed it enhances the mobility of the joints also. The cause for neck stiffness is dehydration of intervertebral discs. Nasyawith a nourishing drug can induce some nourishment to the tissues by impregnating kaphabhavas and may reduce degeneration. In cervical spondylosis, degenerative changes and osteophytosis occurs which compress the nerve roots. This leads to radiculopathy and resultant radiation of pain. It is difficult to reverse these structural changes. Still Nasya is having significant relief in pain radiation. The exact mechanism is obscure but it is assumed that the nasya improves circulation and prevents the degeneration up to some extent.

As far occipital headache is concerned the treatment has good effect. In ayurvedic terms brimhana effect of nasya may be responsible for reducing headache. Brumhana is the samana for vata and pitta doshas.The medicine in nasya reaches the sringataka and spreads all over the head there by removing the doshas and cleansing srothas. Once the srothasudhi obtained, circulation improves. This may helps in reducing the headache,So due to the brimhana (nourishing) nature and Vatahara property the nasya may produced considerable effects in reducing the signs and symptoms of cervical spondylosis.

CONCLUSION

Cervical Spondylosis is a degenerative disease producing various signs and symptoms which is badly affecting the day to day activities. The disease cervical Spondylosis and Greevagraha are similar in their etiology, signs and symptoms. The Dosha involved in greevagraha are Vyanavata and Sleshaka Kapha. It is a Vatavyadhi affecting asthi and sandhi of greeva The Greevagraha is a roga occurring above the Jathru. Nasya is the main treatment modality of Urdhwajatrugatavikaras and which is cost effective and can be implicated easily in day today life. In this study Nasya is very much effective in reducing signs and symptoms of cervical Spondylosis. No complications of Nasya (atiyoga, ayoga and mitya yoga) were observed in this study. Statistical analysis of patients of group A showed moderately significant results in Ruk ($p<0.05$) and group B showed highly significant results ($p<0.05$). Statistical analysis of patients of group B showed moderately significant results in Graha ($p<0.05$) and group A showed highly significant results ($p<0.05$). In the case study of Masha Saindhava Thaila Nasya drug cost effect is too less when compared to other thaila. Comparatively both the groups have almost same significance in the parameters. But both the Groups shows more net mean effect and results lasted throughout follow up period.

REFERENCES

1) Acharya Vagbhata Ashtanga Hridaya english transilation by Srikantha Murthy k.r chaukambha Krishnadas academy reprint 2004 vol.2 chikithsa sthan chapter 21 sl.44 page :no 505.
2) Vagbhata Ashtanga Hridaya,commentaries of sarvanga

sundara of arunadatta and ayurveda rasayan of hemadri edited by paradakara hari sadashiv shasthri varanasi chaukamba surbharati prakashan print 2007 p.p 956 page no; 287.

3) Shasthri Kavirajshri Ambika Datta Bhaishajya ratnavali Chaukhmbha sanskruthi samsthan Varanasi pp: 412.
4) Sasthri Ravi Datta, Chakradatta of Srichakrapani data padartha bod hini commentary chaukambha Surbharathi Prakashan Varanasi pp 101.
5) K.Vaidyanath Sahasrayogam taila prakarana Ist edition 2006 Chouwkambha Sanskrit series office Varanasi page no; 118 sl:no 15.

Corresponding author:
Vinu Sugathan
PG Scholar, Department of P.G studies in Panchakarma, Karnataka Ayurveda Medical College and Hospital, Mangalore, D.K District, Karnataka, India
Email: vinusugathan@gmail.com

Published BY:
Shri Prasanna Vitthala Education and Charitable Trust (Reg)

Source of Support: NIL
Conflict of Interest : None declared