



## COMPARATIVE CLINICAL EVALUATION OF *KARPASASTHYADI TAILAM NASYA* AND *PUNNAGADI RUKSHA PINDA SWEDA* IN *MANYASTAMBHA* (CERVICAL SPONDYLOSIS)

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## ABSTRACT

*Manyastambha* is *Vata Nanatmaja Vyadhi*. Neck pain and stiffness are two characteristic features of *Manyastambha*. *Acharya Shushruta* has described that the *Vata Dosha*, along with *Kapha Dosha*, gets vitiated and takes *Ashraya* at *Manya Pradesh*, affecting the *Manya Siras*, causing *Ruja* and *Stambha* of the neck. Cervical spondylosis can correlate to *Manyastambha* as both have similar signs and symptoms. *Nasya Karma* is considered the prime line of treatment in *Urdhwajatru Gata Vikara* and helps pacify both *Vata* and *Kapha Dosha*. According to *Ayurveda*, *Snehana* and *Swedana* are the best therapy modalities for managing *Vata Vyadhi*. *Punnagadi Ruksha Pinda Sweda* is a type of *Sankara Sweda* that helps pacify both *Vata* and *Kapha* and acts as *Shrotoshodhak*. Our study aims to evaluate the combined effect of *KarpasasthyadiTailam Nasya* and *Punnagadi Ruksha Pinda Sweda* in the treatment of *Manyastambha*. In the present study, *KarpasasthyadiTailam Nasya* and *Punnagadi Ruksha Pinda Sweda* were both efficient in treating the condition, but Group B was more significant.

**Keywords:** *Manyastambha*, *Nasya*, *KarpasasthyadiTailam*, Cervical spondylosis

## INTRODUCTION

Ayurveda is said to have its origin in India from Atharva Veda; in Sanskrit, the word Ayurveda means “The Science of life”. In today’s scenario where the world is inclined towards being digital, prolonged sitting, travelling to longer distances, working late hours, lifting heavy weights, eating unhealthy foods, and lack of exercise have led to a sharp hike in conditions like “MANYASTAMBHA” with symptoms like Pain and stiffness in the neck, headache, muscle weakness in the upper limb, altered sensation in neck etc. In Ayurveda, the above-said condition cannot be correlated precisely as a whole with any single disease/condition. Still, some essential features of cervical spondylosis can be associated nowadays with various clinical conditions described in Ayurvedic texts such as *Manyastambha*, *Greeva Hundana*, *Sandhigata Vata*, *Asthigata Vata* <sup>(1)</sup>. Cervical spondylosis is pain and stiffness in the neck region, which may further radiate to other body parts <sup>(2)</sup>. It is the degeneration of the bones in the neck (vertebrae) and the disc between them, with osteophyte formation putting pressure on (compressing) the spinal cord in the neck. Common causes of cervical spondylosis are bone spur, i.e. overgrowth of bone, dehydrated spinal disc, herniated disc, trauma, injury, ligament stiffness, overuse, etc. The prevalence of cervical spondylosis is higher in females than in males <sup>(3)</sup>. In modern science, NSAIDs, corticosteroids, and muscle relaxants are given, but they have their side effects and limitations. Cervical Spondylosis comes under Eighty *Vataja Nanatamaja Vyadhis* <sup>(4)</sup>. Degenerative disc disorders can be included under the heading of *Vata Vyadhi*. Hence, the word Cervical Spondylosis & its treatment can be viewed only from Vata Vyadhi’s point of view. Cervical Spondylosis can be considered as *Urdhwajatrugata Vikara*, which means the disease occurring above the clavicle, with symptoms such as *Gaurava* (heaviness), *Supti* (numbness), *Stambha* (stiffness), *Shirahshoola* (headache) should be treated with *Nasya Karma* to demolish the pathology. It increases vasodilation and enhances vital circulatory processes in body pathogenesis and symptoms. *Nasya Karma* is the treatment of choice in

*Urdhwajatrugata Vikara* <sup>(5)</sup>. The *Nasya Karma* relieves stiffness and increases the range of motion of cervical joints. *Nasya* is convenient, timely cost-effective, straightforward with no side effects and acts on root causes. *Swedana Karma*/fomentation therapy provides unparalleled relief in *Stambha* (stiffness), *Gaurava* (heaviness) and *Sheeta* (coldness) <sup>(6)</sup>. *Swedana Karma* is said to manage Vata vitiated conditions (7) effectively. *Ruksha* means dry, *Pinda* means bolus, *Sweda* means sweat, and *Swedana* is sweat-inducing treatment. *Ruksha Swedana* must be adopted to combat symptoms like heaviness and swelling in the neck region <sup>(8)</sup>. *Punnagadi Pottali Dravyas* has been selected for *Ruksha Pinda Sweda* from *Yogratnakar* with *Kapha Vata Hara* and *balya* property, which suits the *Vighatana* of *Samprapti* of *Manyastambha*. Thus, by considering the above factors, a clinical study was undertaken to evaluate the therapeutic efficacy of *Nasya Karma* with *Karpasasthyadi Tailam* and *Swedana* with *Punnagadi Ruksha Pinda Sweda* in Cervical Spondylosis.

### AIMS AND OBJECTIVES:

1. To evaluate the efficacy of “*Karpasasthyadi Tailam Nasya*” in *Manyastambha* (cervical spondylosis).
2. To evaluate the efficacy of “*Punnagadi Ruksha Pinda Sweda*” in *Manyastambha* (cervical spondylosis).
3. To compare the efficacy of *Karpasasthyadi Tailam Nasya* and *Punnagadi Ruksha Pinda Sweda* in *Manyastambha* (Cervical spondylosis).

### MATERIAL AND METHODS:

The present study selected *Karpasasthyadi Tailam Nasya* and *Punnagadi Ruksha Pinda Sweda* for clinical research. The study comprises a series of 40 patients of *Manyastambha*. The patients were selected from OPD and IPD of Dept. of *Panchakarma* of Himalaya Ayurvedic Medical College and Hospital, Dehradun. These patients were randomly selected based on inclusion and exclusion criteria depending upon subjective and objective parameters with detailed clinical history. The duration of treatment was

27 days, and follow-up was done twice at intervals of 15 days.

**STATISTICAL ANALYSIS:**

The results were statistically analysed using the Wilcoxon Signed Rank test and the Mann-Whitney U test.

**1. Inclusion Criteria:**

- Patients between the age group of 30-60 years
- Patients irrespective of gender.
- Patients fit for *Nasya Karma* and *Punnagadi Ruksha Pinda Sweda*.
- Patients with signs and symptoms of *Manyastambha* (cervical spondylosis).
- Patient with cervical radiculopathy
- Patients with duration of illness of less than one year.

**2. Exclusion Criteria:**

- Patients with symptoms of traumatic origin
- Pregnant and lactating mothers and menstruating females.
- Patients with other systemic disorders (Like Uncontrolled hypertension or diabetes) that might interfere with the line of treatment, including patients with lumbar and Ankylosing spondylosis.
- Acute and chronic infection of the spine, cancer of the spine and Pott’s disease.
- Patients with cervical myelopathy.
- Patients with trapezius myalgia

**ASSESSMENT CRITERIA FOR SUBJECTIVE PARAMETERS:**

- *Stambha*
- *Gaurav*
- *Supti*
- *Ruja/ Pain Intensity*
- *Sirashula/ Headache*
- Routine activities
- Lifting
- Sleeping
- Personal Care
- Reading
- Concentration
- Driving
- Recreation

Grading was done as per the NDI index:

NDI* SCORE	DEGREE OF DISABILITY
0-4	No Disability
5-14	Mild Disability
15-24	Moderate Disability
25-34	Severe Disability
35-50	Complete Disability

\*NDI- Neck Disability Index

**Objective parameters:**

- Spurling’s test
- Cervical rotation test
- Upper limb extension test
- Distraction test.

**INTERVENTION REGIMEN:**

Procedure (Intervention)	(A) <i>Karpasasthyadi Tailam Nasya</i>	(B) <i>Punnagadi Ruksha Pinda Sweda</i>
Form	<i>Taila for Nasya</i>	<i>Pottali</i>
Dose/Duration	8Bindu in each Nostril	Local application on affected areas for seven days
Route of administration	Nose	External application
Duration	30days	30days

**Study design:**

1	Study type	Interventional
2	Sub type	Comparative
3	Sampling	Simple random
4	Timing	Prospective
5	Purpose	Treatment
6	Masking	Open label

7	Level of study	OPD/IPD
8	Period of study	18 months
9	Duration of treatment	7 days duration with 3 days gap , 3 sittings for 30 days

**Investigations:**

- CBC, ESR, CRP
- Thyroid profile
- X-RAY cervical spine (AP, LATERAL)
- MRI /CT SCAN cervical spine (if needed)

**RESULTS:** Statistically significant results were found in subjective parameters in Group B Ruja, *Stambha*, *Sirahshula*, *Supti*, routine activities, lifting, Sleeping and concentration with percentage relief of 62.22, 77.27, 77.78, 75.00, 57.14, 58.62, 75.00 & 96.67 % respectively. It was found that both groups showed significant results. The overall effect of Group B was better than Group A.

**Effect of treatment in subjective parameters:**

Variable	Group	N	Mean Rank	Sum of Ranks	Mann-Whitney U	P-Value
Ruja/Pain intensity	Group A	20	18.20	364.00	174.000	0.00382
	Group B	20	22.80	456.00		
	Total	40				
Stambha	Group A	20	18.45	369.00	179.000	0.00506
	Group B	20	22.55	451.00		
	Total	40				
Shirashoola/ head-ache	Group A	20	20.13	402.50	187.500	0.00663
	Group B	20	20.88	417.50		
	Total	40				
Gaurava	Group A	20	19.33	386.50	196.500	0.00909
	Group B	20	21.68	433.50		
	Total	40				
Supti	Group A	20	20.00	400.00	190.000	0.00739
	Group B	20	21.00	420.00		
	Total	40				
Work/ Routine activities	Group A	20	16.00	320.00	130.000	0.00024
	Group B	20	25.00	500.00		
	Total	40				
Lifting	Group A	20	16.43	328.50	138.500	0.00061
	Group B	20	24.58	491.50		
	Total	40				
Sleeping	Group A	20	19.65	393.00	157.000	0.00174
	Group B	20	21.35	427.00		
	Total	40				
Personal Care	Group A	20	16.50	330.00	140.000	0.00060
	Group B	20	24.50	490.00		

	Total	40				
Reading	Group A	20	16.75	335.00	145.000	0.00094
	Group B	20	24.25	485.00		
	Total	40				
Concentration	Group A	20	18.68	373.50	183.500	0.00638
	Group B	20	22.33	446.50		
	Total	40				
Driving	Group A	20	17.88	357.50	167.500	0.00349
	Group B	20	23.13	462.50		
	Total	40				
Recreation	Group A	20	14.68	293.50	103.500	0.00002
	Group B	20	26.33	526.50		
	Total	40				

The Mann Whitney U Test is carried out for comparison between Group A and Group B. From the above table, we can observe that, P-Value is less than 0.05. Hence, we can conclude that there is a significant difference between Group A and Group B.

Further, we can observe that, mean rank for Group B is greater than Group A. Hence, we can conclude that, effect observed in Group B is better than Group A.

#### Effect of treatment on objective parameters:

Variable	Group	N	Mean Rank	Sum of Ranks	Mann-Whitney U	P-Value
Spurling's test	Group A	20	19.50	390.00	180.000	0.00524
	Group B	20	21.50	430.00		
	Total	40				
Cervical rotation test	Group A	20	18.00	360.00	150.000	0.00107
	Group B	20	23.00	460.00		
	Total	40				
Upper limb extension test	Group A	20	21.50	430.00	180.000	0.00298
	Group B	20	19.50	390.00		
	Total	40				
Distraction test	Group A	20	19.00	380.00	170.000	0.00343
	Group B	20	22.00	440.00		
	Total	40				

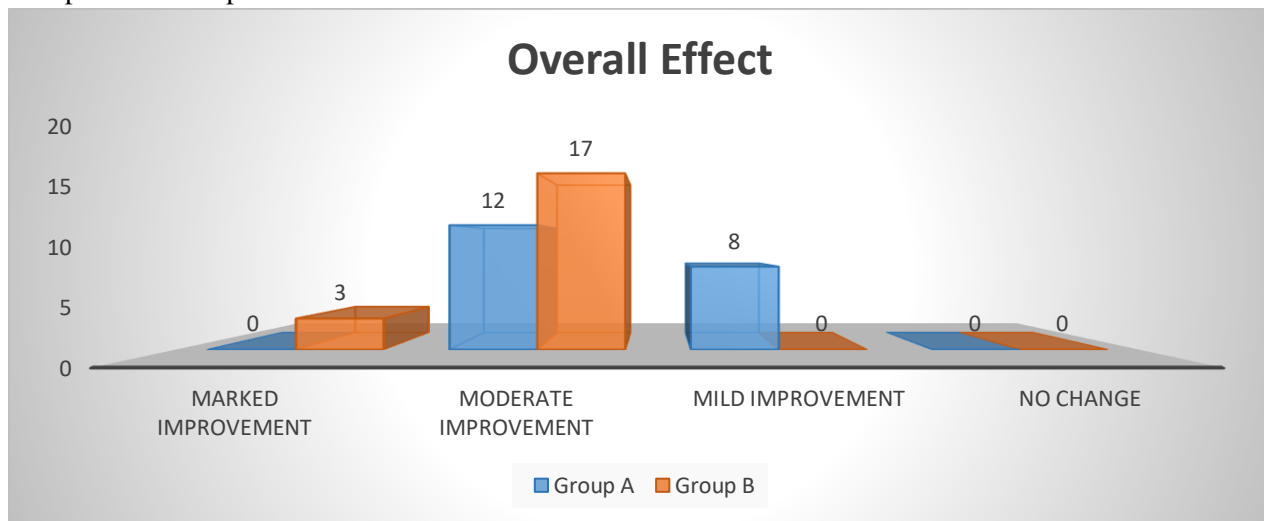
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Further, we can observe that, mean rank for Group B is greater than Group A. Hence, we can conclude that, effect observed in Group B is better than Group A.

**Overall effect after treatment on Group A & Group B:**

Overall Effect	Group A		Group B	
	N	%	N	%
Marked Improvement	0	0.00%	3	15.00%
Moderate Improvement	12	60.00%	17	85.00%
Mild Improvement	8	40.00%	0	0.00%
No Change	0	0.00%	0	0.00%
TOTAL	20	100.00%	20	100.00%

Since observations are on ordinal scale (gradations), we have used Wilcoxon Signed Rank Test to test efficacy in Group A and Group B.



**DISCUSSION**

**INTER GROUP COMPARISON:** Though both the groups were effective, better results were observed in group B comparatively.

- PAIN INTENSITY / RUJA:** *Ruja* is manifested due to aggravated *Vata*. *Punnagadi Ruksh Pinda Sweda* bears *Vatahara* property and helps in alleviating *Ruja*.
- STAMBHA:** *Sweda* is said to have *Stambha Nigraha* property and due to *Ushna Guna* and *Vatahara* property *Punnagadi Ruksh Pinda Sweda* alleviates *Stambha*.
- HEADACHE / SHIRASHOOLA:** *Shirashool* is manifested due to *Prakupit Vata*. Both *Nasya* with *Karpasasthyadi Tailam* and *Punnagadi Ruksh Pinda Sweda* plays important role in pacifying aggravated *Vata* due to *Usna Guna* and *Vatahara* property.

- GAURAVA:** *Gaurava* is heaviness and *Sweda* is said to have *Gaurava Nigraha* property.
- SUPTI:** *Supti* is numbness caused due to *Avaran* of *Vata* by *Kapha*. *Ruksh Sweda* by *Punnagadi* breaks the *Avaran* and pacifies *Vata* by its *Ushna Guna* and *Vatahara* property.
- WORK/ROUTINE ACTIVITIES:** Patient's daily routine is affected due to pain and stiffness in *Manyastambha*. *Punnagadi Ruksha Pinda Sweda* works as anti-spasmodic, anti-inflammatory and antioxidant hence plays very important role in combating the symptoms.
- LIFTING:** In *Manyastambha* pain and stiffness in neck further radiates to other parts of the body, constricting the shoulder as well. Lifting becomes difficult due to pain, stiffness and restricted movement. *Punnagadi Ruksh Pinda Sweda* relieves pain and stiffness as a larger area is exposed to heated bolus improving blood circula-

tion, removal of waste metabolites and muscles relaxation due to massage and hyperthermia.

8. **SLEEPING:** Sleep gets disturbed due to pain and discomfort associated with the condition. Pain is manifested by *Prakupit Vata* due to *Kapha Avarana* and *Dhatukshaya*. *Punnagadi Ruksha Pinda Sweda* mitigates pain owing to its *Ushna Guna* and *Vatahara* property. As most of the patients were not in chronic stage, they are not having much problem in sleeping.
9. **PERSONAL CARE:** Personal care includes washing, dressing etc. Pain and stiffness hinder day to day activity of a person. *Punnagadi Ruksha Pinda Sweda* relaxed muscles of the area exposed by improving blood circulation.
10. **READING:** Reading involves flexion of neck and hands in the same posture for a long period of time leading to aggravation of pain, stiffness and uncomfort. *Punnagadi Ruksha Pinda Sweda* relieved the exertion of the muscles involved by improving blood circulation due to hyperthermia.
11. **CONCENTRATION:** Concentration is lost due to uncomfort caused by pain and stiffness. It improved after *Nasya* as well as *Ruksh Pinda Sweda*, comparatively with *Punnagadi Ruksh Pinda Sweda* it was much improved.
12. **DRIVING:** Driving also requires sitting in a particular posture for a long time, which aggravates pain and stiffness in the neck. As *Punnagadi Ruksha Pinda Sweda* possess *Ushna Guna* and *Vatahara* property and also works in direct contact with the skin, this causes vasodilatation due to hyperthermia, resulting in improved blood circulation and sympathetic nerves activation combating pain and stiffness.
13. **RECREATION:** Recreational activities of patient were hampered due to uncomfort caused by pain and stiffness, which was relieved by *Ushna Guna*, *Vatahara* property, increased metabolism and circulation of the area by hyperthermia by *Punnagadi Ruksha Pinda Sweda*.
14. **SPURLING'S TEST:** *Punnagadi Ruksha Pinda Sweda* removes the *Avarana* by *Kapha* and paci-

fies the *Vata* by its *Ushna Guna* and *Vatahara* property.

15. **CERVICAL ROTATION TEST:** In this test the flexion, extension, right lateral flexion, and left lateral flexion and rotation was done. *Punnagadi Ruksha Pinda Sweda* acts on *Vatadosha* and reduces pain by its *Vedana shamaka* property. Further it helps in relieving muscle spasm leading to increased movement by removing stiffness. The mechanism behind this is improvement in blood circulation, removal of waste metabolites and muscles relaxation due to massage and hyperthermia.
16. **UPPER LIMB EXTENSION TEST:** Hyperthermia and massage together during *Punnagadi Ruksha Pinda Sweda* provides muscle relaxant effect and reduces stiffness.
17. **DISTRACTION TEST:** *Punnagadi Ruksha Pinda Sweda* provided unparallel relief due to its *Ushna Guna* and *Vatahara* properties. It acts as analgesic, anti-inflammatory and antioxidant also.

#### MODE OF ACTION OF KARPASASTHYADI TAILAM NASYA:

In *Ayurvedic* literature it is stated that there is a very strong correlation between the *Nasa* and the *Shira*. The medication instilled through nostrils reaches the *Shira* and thus acts upon the aggravated *Doshas*. It reaches the *Shringataka Marma* which is a *Sira Marma* formed by union of *Siras* supplying the *Nasa*, *Karna*, *Akshi*, *Jihwa*. *Nasya karma* is the most favorable treatment in conditions like *Manyastambha*. *Karpasasthyadi Tailam* is *Brimhan* and *Shodhana* type of *Nasya*. Being *Brimhana Nasya*, it provides strength (*Balya*) to all *Dhatu*s by virtue of its *Dhatuposhaka* (nourishment) property. It gives strength to the neck and shoulder and improves eyesight. As it comprises of *Ushna* and *Tikshna* medicines it also acts as *Shodhana Nasya*, hence removes *Avarana*. The importance of *Purvakarma* in *Nasya karma* is to facilitate drug absorption through nasal mucosa and paranasal sinuses. The *Abhyanga* and *Swedanato* face and neck improves the blood circulation to the head and provides a better chance of absorption *Karpasasthyadi Tailam* reaches the upper

part of nasal cavity and stimulates the olfactory neurons. It has properties like *Snigdha Guna* (unctuous), *Ushna Veerya* (hot potency) and it is *Kaphavata Shamaka* and act as *Vedana Shamaka* (analgesic) and *Shothahara* (anti-inflammatory), the indication of *Karpasasthyadi Tailam* states that it is effective in almost all *Vatavyadhi* and especially on *Avabahuka*, *Pakshagatha* (hemiplegia) and *Arditha* (facial palsy), especially in upper spinal radiculopathy. As it possesses *Balya* (strengthen) and *Brimhana* (nourishment) karma it is given in degenerative disorders. Most of the ingredients of *Karpasasthyadi Tailam* is *Katu Rasa Pradhana* (pungent taste), but the influence of *Snigdha* (unctuous) & *Guru* (heaviness) *Guna* of *Tailam*, *Ushna Guna* (hot potency) and *Veerya* (potency) of the *Dravyas* it subsides the *Prakupita Vata* (agitated *Vata*), i.e., the *Ushna Veerya* (hot potency) of the ingredients of *Tailam* will subside the *Sheeta Guna* (cold potency) of *Vata* and the patient will get relief from *Shoola* (pain) and *Sthamba* (stiffness) condition.

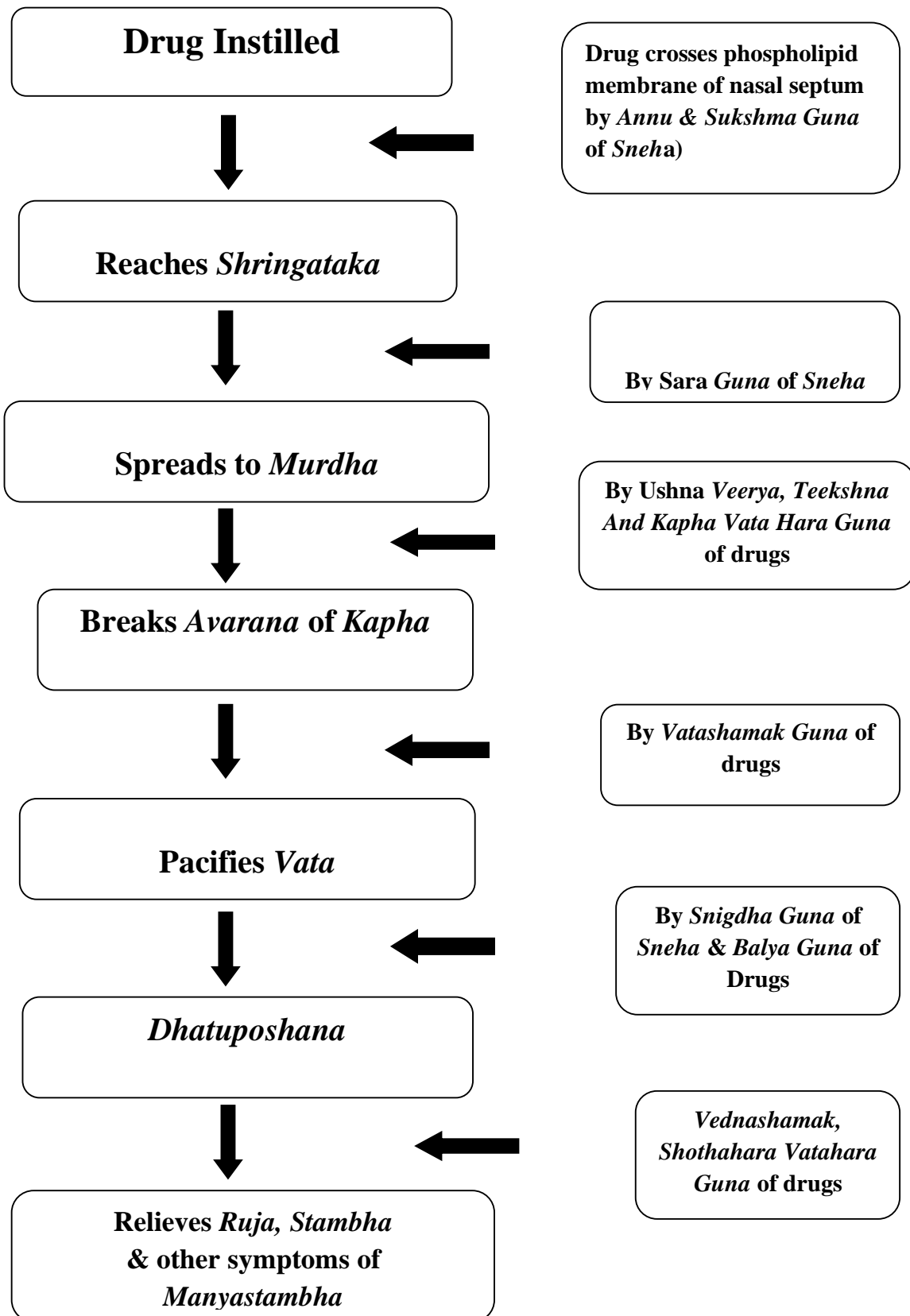
#### **MODE OF ACTION OF PUNNAGADI RUKSHA PINDA SWEDA:**

In the present study, *Punnagadi Ruksha Pinda Sweda* was used in management of *Manyastambha*. It is a modified type of *Sankara Sweda* having *Ushna* and *Tikshna Guna*. *Swedana* is one of the important treatment modalities for number of disorders especially of *Vata-Kapha* origin mentioned in *Panchakarma*. *Punnagadi Ruksha Pinda Sweda* has its

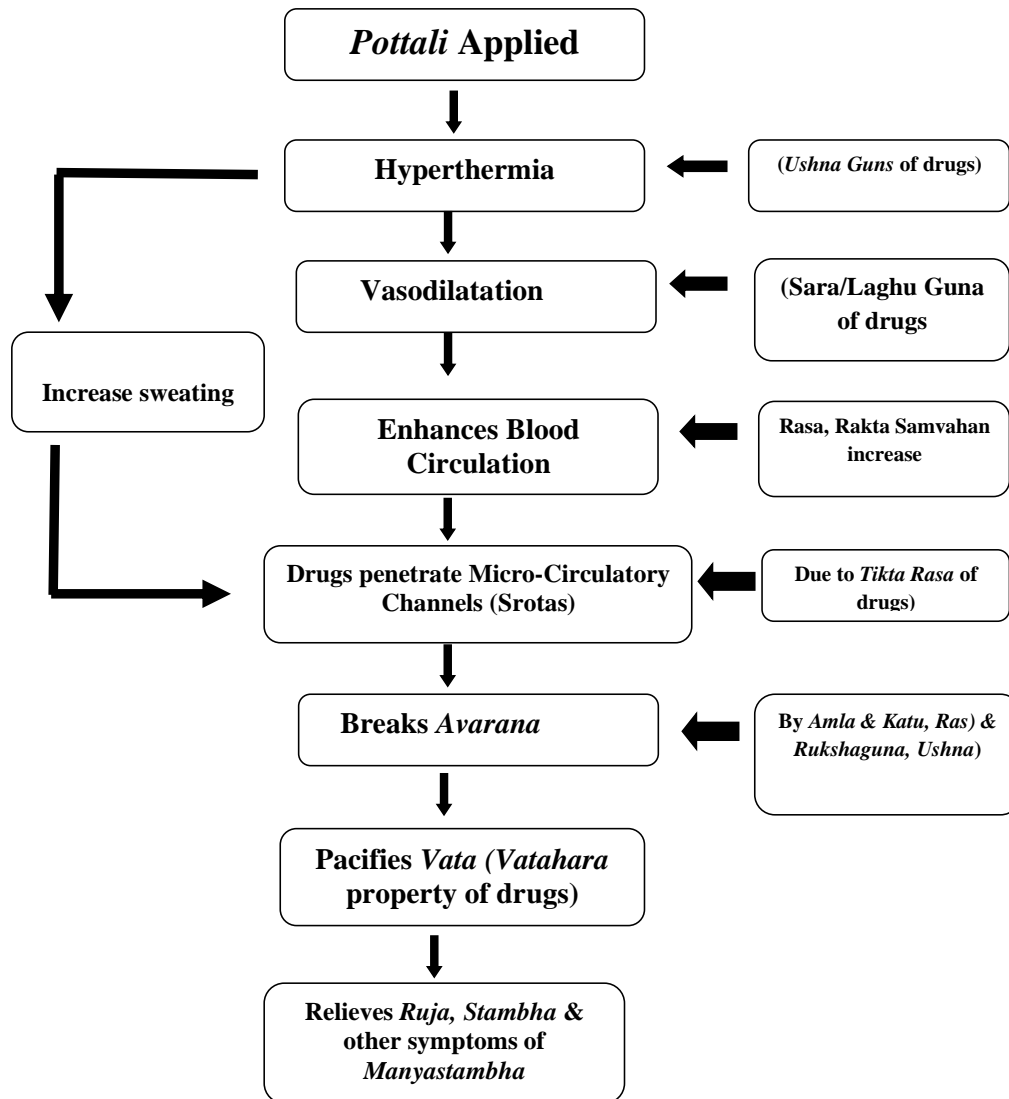
main actions like *Stambhaghna*, *Gauravaghna*, *Shitaghna*, *Sweda Karaka*, *Srotaha Su Abhiviliyate*, *Khani Mardavam Ayanti*, *Sleshma Vishyandate*. It improves blood circulation, increases muscle strength, and relieves body pain and stiffness. The ingredients of *Punnagadi Ruksh Pinda Sweda* are *Kapha Vata Shamaka*, *Shoolaghana* (analgesic)<sup>(9)</sup>, and *Shothahara* (anti-inflammatory)<sup>(10)</sup> and *Punnaga* (*Nagkeshar*) being the main ingredient of the *Potali* is *Sheeta Virya*, *Madhur Vipaka*, *Kaphapitta Shamak*, *Vatashamaka*, and possess analgesic, antispasmodic and anti-inflammatory properties<sup>(11)</sup>. *Karanja*, *Karpas*, *Sahijan*, *Rasna*, *Vacha*, *Hingu*, *Changeri*, *Kustha*, *Kulatha* are *Ushna Virya*, *Katu Vipaka* and *Katu*, *Tikta Rasa Pradhana Dravyas* and possess *Kapha Vata Shamak* property. *Punnagadi Ruksh Pinda Sweda* was applied to affected part of the body, this increases the body temperature and accelerates metabolism causing vasodilatation (*Sroto Vispharan*) hence improving the blood circulation and providing necessary oxygen and nutrients to the area and removing the waste products. So, it can be inferred that the *Ushna Guna* of *Punnagadi Ruksha Pinda Sweda* leads to stimulation of sympathetic nervous system and thereby significantly reducing the inflammation, pain, and stiffness in the neck region and associated symptoms, which overall proves that *Punnagadi Pinda Sweda* is an effective local remedy in the management of clinical symptoms of *Manyastambha* (cervical spondylosis).



**Mode of Action of Karpasasthyadi Tailam Nasya**



## Mode of Action of Punnagadi Ruksha Pinda Sweda



### CONCLUSION

The present study reveals that the pain and the range of movements of the cervical spine have been improved by applying Punnagadi Pottali Swedana compared to Karpasasthyadi Tailam Nasya. Punnagadi pottali Swedana has excellent effect which is achieved due to the mode of action of Swedana and its neuro stimulatory effect, as well as absorption of active ingredients of Pottali Dravya via micro channels and its stimulatory effect over Shira. Karpasasthyadi Tailam Nasya acts effectively on the Dhatukshaya level. This is due to the Balya, Bri-

hman, and Shodhana effect of Karpasasthyadi Tailam ingredients, which work on Vata and Dhatukshaya conditions. The components of Punnagadi Pottali Swedana have Balya, Ushna Virya and Kapha Vata Hara properties, which give strength and stability to the Dhatus. The direct application on the affected part at Manya Pradesha works very fast due to the vasodilatation and increased blood circulation in Manya Pradesha. Karpasasthyadi Tailam Nasya and Punnagadi Pottali Swedana are very effective measures in managing Manyastambha (cervical spondylosis) as they possess anti-inflammatory, mus-

cle relaxant, bone and muscle strengthening and analgesic effects. *Punnagadi Pottali Swedana* has the local effect, that's why it acts fast compared to *Karpasasthyadi Tailam Nasya*. However, if both therapies are used together, they may provide more effective results.

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