

## A COMPARATIVE CLINICAL STUDY TO EVALUATE THE EFFICACY OF NAGARA KSHEERA NASYA AND VACHA-PIPPALI AVAPEEDANA NASYA IN SURYAVARTA

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### ABSTRACT

**Background and Objectives:** *Shiras* is the one of the three vital principal organs of the body where *prana* resides. *Suryavarta* is one among the 11 types of *Shiroroga* with clinical features of pain in the region of *Akshi* (eye) and *Bhru* (eye brow) with periodicity of pain which starts subsiding by evening. The symptoms of *suryavarta* mostly resembles to Frontal Sinusitis. *Nasya Karma* is said to be the prime treatment modality in *Shiroroga* as well as *Suryavarta*. *Nagara Ksheera* and *Vacha Pippali* being *Tikshna* and *Snigdha* act as *Shirovirechaka* and *Shulaprashamana*. Considering these views present study was planned. **Methods:** Patients presenting with the classical features of *Suryavarta* and between the age group of 16years and 60years irrespective of sex were selected and allotted in Group A and Group B with 20 patients in each. Group A was administered with *Nagara Ksheera Nasya* and Group B with *Vacha Pippali Avapeedana Nasya* 6 drops in each nostril for 7 days with a gap of 7 days in two sittings. **Results:** Administration of *Nagara Ksheera nasya* provided marked improvement in 5% patients, moderate improvement in 25% patients, 60% of patients got mild improvement and 10% patients remains unchanged. Administration of *Vacha Pippali Avapeedana nasya* provided marked improvement in 15% patients, moderate improvement in 75% patients and 10% of patients got mild improvement. Hence, from the above results it may be abstracted that *Vacha Pippali Avapeedana Nasya* provided better effect to the patients of *Suryavarta* in comparison to *Nagara Ksheera Nasya*. **Conclusion:** On the basis of the results of this study it can be clearly concluded that *Avapeedana Nasya* performed with *Vacha Pippali* provided significant relief in the signs and symptoms of *Suryavarta*.

**Keywords:** *Suryavarta*, *Vacha*, *Pippali*, *Avapeedana nasya*, *Nagara*, *Ksheera*, Frontal sinusitis.

### INTRODUCTION

*Ayurveda* is an ancient medical science which deals with restoration of health, prevention and management of diseases.

In *Astanga Ayurveda*, *Shalakyta Tantra* plays an important role. The term *Shalakyta* is originated from

the word *Shalaka* (Probe), an instrument which is used frequently in the diagnosis as well as treatment of the diseases. *Shalakyta Tantra* is also known as *Urdhwanga Tantra* or *Uttamanga Tantra* or *Nimi*

*Tantra* or *Jatrurdhwa Chikitsa* as it deals with diseases of Eye, Ear, Nose, Throat and Head.

*Shiras* is one of the three principle vital organs of the body where *prana* resides. The diseases affecting *shiras* negatively affects the quality of life. Among the 11 *shirorogas* explained in the classical texts, the most prevalent one in this present era is *Suryavarta*. Headache is the cardinal feature of *suryavarta* along with intense pain in the region of *shankha* (temples), *akshi* (eyes), *bhru* (eyebrows) & *lalata* (fore-head), commencing with sunrise, increasing in severity till midday and fasting, subsiding in the evening. Most of its features correlate with the features of frontal sinusitis, also called as “office headache”<sup>1</sup>, as it affects the routine habits of the population. This condition has become more prevalent because of some common *Nidanas* such as *Rajo – Dhoomosevana, Purovatasevana, Ambukrida, Sheeta Annapana* and *Vegadharana* etc factors.

In *Ayurvedic* classics, it is considered that *Nasya karma* is the main line of treatment for all the *Shirorogas*, as *Nasa* is considered to be the gateway of *Shiras*. Also *acharyas* have mentioned that “*Suryavarthevidhitavyanasyakarmadibheshajam*”<sup>2</sup> i.e. in *suryavarta Nasya* is the best line of treatment. *Chakradatta* has described ‘*Vacha pippali Avapeedana nasya*’<sup>3</sup> and ‘*Nagara ksheera nasya*’<sup>4</sup> as a treatment for *Suryavarta*. These are selected for the present research work in *Suryavarta* with special reference to Frontal Sinusitis.

## MATERIALS AND METHODS

### AIM OF THE STUDY:

The present study is aimed to evaluate the efficacy of *Nagara ksheera Nasya* and *Vacha-Pippali Avapeeda Nasya* in the management of *Suryavarta*.

### SOURCE OF DATA:

Patients were selected from outpatient department and in patient department of *Shalakyia Tantra*, Alvas Ayurvedic Hospital, Moodbidri.

### SAMPLING METHOD:

The patients diagnosed as *Suryavarta* were randomly divided into 2 groups.

## CRITERIA FOR SELECTION OF PATIENTS

### Inclusion Criteria

- Patients presenting with the classical features of *Suryavarta* and between the age group of 16yrs and 60 yrs
- Patients were selected irrespective of sex, occupation, religion, socio-economic status and duration of illness.

### Exclusion Criteria

- Complications of Frontal Sinusitis
- Pregnant and Lactating women.
- Subject below 15 years of age and above 60 years of age.

### 1. Research Design:

Patients were divided into 2 groups. i.e., Group A and Group B.

**Group A:** The patients of this group were administered *Nagara Ksheera Nasya* 6 drops in each nostril daily for 7 days, early in empty stomach, In 2 sittings giving a gap of 7 days.

**Group B:** The patients of this group were administered *Vacha Pippali Avapeedana Nasya* 6 drops in each nostril daily for 7 days, early in empty stomach, In 2 sittings giving a gap of 7 days.

### Method of Avapeedana Nasya:

#### Purvakarma

*Nasya* was performed in a place with sufficient amount of light and devoid of direct dust and wind. Patient was asked to lie down comfortably on a table in supine position and *Abhyanga* with lukewarm *Tila Taila* was done over face, scalp, temporal and neck region. After *Abhyanga*, *Mrudusvedana* was done while covering the eyes.

#### Pradhanakarma

After *Abhyanga* and *Mrudusvedana*, the patient was asked to relax and lie down on a table in supine position with head tilted backwards. The limbs were kept slightly up and spread apart on both the sides. Then the *Swarasa* of *Nagara Ksheera Nasya* for Group A and *Vacha Pippali Avapeedana Nasya* for Group B was instilled in the dose of 6 drops in each nostril. Thereafter patient was asked to inhale deeply

and was advised to spit out the drug that reaches the throat.

### **Pashchatkarma**

Gentle massage was done on *Lalata, Karna, Pada* and *Paani* and advised to do Luke warm *Gandusha* to clean the mouth and to activate the therapy. Patient was advised to follow *Pathya*, not to drink more cold water, and do not expose to *Raja, Dhuma*.

### **Follow up study:**

After the completion of treatment, all the patients were reviewed once in 2 weeks after treatment for next 30 days.

The formulation taken for the study is:

1. *Nagara Ksheera Nasya*
2. *Vacha Pippali Nasya*

### *Nagara Ksheera Nasya*

The ingredients of *Nagara Ksheera Nasya* are *Nagara kanda* and *Go ksheera*. The crushed dry drug of *Nagara* 2gm is taken in mortar and into that *Goksheera* is added and made *kalka*. To that *kalka* 24 ml of *Goksheera* is again added. Then *swarasa* is obtained for *nasya karma*.

### *Vacha-Pippali Avapida Nasya*

The ingredients of *Vacha Pippali Avapeedana Nasya* are *Vacha Mula* and *Pippali Beja*; the dried drug were taken in equal quantity, with double quantity of water *Swarasa* was obtained which was used for *Nasya Karma*.

**I** *Nagara Ksheera Nasya* for 7 days in two sittings giving a gap of 7 days in Group A.

**II.** *Vacha Pippali Avapeedana Nasya* for 7 days in two sittings in Group B.

### **Collection of Drugs:**

- *Nagara, Vacha and Pippali* was collected from Alvas pharmacy mijar and were certified as genuine from the pharmacognostic department of Alvas Ayurveda Medical College Moodbidri.

### **Method of Preparation of Nasya:**

#### ***Nagara Ksheera Nasya***

*Nagara Ksheera Nasya* was freshly prepared as per the requirement in the *kriya kalpa* theatre of Alvas Ayurveda Hospital Moodbidri. 2 gms of crushed *nagara* is taken in mortar along with 8 drops of

*Goksheera*. Then *kalka* is obtained and into that *kalka* 24 ml of *Goksheera* is added, which was taken over a cloth and squeezed to get the *swarasa*.

***Vacha Pippali Avapeedana Nasya*** was freshly prepared as per the requirement in the *Kriya Kalpa* theatre of Alvas Ayurveda Hospital Moodbidri. Equal quantity of dried *Vacha Mula* and *Pippali Beja* were taken with double quantity of water to prepare the *Kalka*, which was taken over a cloth and squeezed to get the *Swarasa*.

### **CRITERIA FOR ASSESSMENT OF EFFECTS OF TREATMENT**

Assessment of the results was made before and after the treatment based on,

1. *Shirashoola Dinavrudha Vivardhate*
2. *Lalata Ruk*
3. *Akshi Ruk*
4. *Shankha Ruk*
5. *Spandanavat Vedana*
6. Tenderness over the Sinus Area

### **DISCUSSION ON RESULT**

#### **Effect of Intervention on *Shirashoola Dinavidha Vivardhathe* within the group**

Percentage wise relief of symptom in Group B(74.46 %) is better than Group A (38.77%).

Both *Vacha* and *Pippali* are having *teekshna guna*. This symptom is mainly because of accumulated *doshas* in the *shiras*. Through *shodhana nasya* it helps to remove the excessive *doshas* from the *shiras*.

On the other hand when *nagara* is mixed with *ksheera* its *teeksna* property is reduced and acts as *mrudu snigdha shiro virechaka*.

#### **Effect of Intervention On *Akshi ruk* within the group**

Percentage wise relief of symptom in Group B (77.55%) is better than Group A (30.53%).Anti inflammatory action of *vacha* and *pippali* reduces pain and odema within the sinus there by reducing the *Akshi Ruk*. Whereas in *nagara ksheera nasya* due to *guru* and *snigdha guna* of *ksheera* there will be mild reduction in symptoms.

### **Effect of Intervention on Lalata Ruk and Shankha Ruk**

Percentage wise relief of *lalata ruk* in Group B (68 %) is better than Group A (33.33%).

Percentage wise relief of *shankha ruk* in Group B(65.30%) is better than Group A (56.52%).

Here *vedana* is the main symptom. Main karma of *vacha* and *pippali* are *shoolaprashamana*. *Pippali* helps to reduce *vata* by its *madhura vipaka* and *Ushna veerya* and *vacha* by its *ushna veerya* and *tikta rasa*.

*Nagara* also possess *vata kapha hara* and *shoola hara* properties. So both symptoms got significant result after *nasya karma*.

### **Effect of Intervention on spandanavat Vedana**

Percentage wise relief of *spandanavat vedana* in Group A (66.66 %) is better than Group B (63.82%).

*Spandanavat vedana* is mainly because of *chala guna* of *vata*. *Vacha* is having Anti spasmodic action. Both *vacha* and *pippali* helps to reduce the *vata* by its *ushna veerya*.

*Nagara* also possess *ushna veerya* and reduce *vata* by its property.

### **Effect of Intervention on Tenderness over Frontal sinus area**

Percentage wise relief of Tenderness over frontal sinus area in Group B (71.42 %) is better than Group A (57.33%).

The tenderness is mainly because of excess mucus production and inflammation of the sinus. *Vacha* and *pippali* are having *anti inflammatory* action and *teekshna guna* helps to drain out the excess mucus from the sinus.

*Nagara ksheera nasya* is also having *teekshna guna* and anti inflammatory action.

### **Mechanism of Nasyakarma**

The *Nasya Dravya* (medicine) acts by reaching '*Sringataka marma*' a main vital point situated on the surface of the brain corresponding to the nerve centers, which consists of nerve cells and fibres responsible for the function of speech-Broca's Centre, vision, hearing, taste and smell.

From where it spreads into various *Srotas* (vessels

and nerves) and brings out vitiated *Dosha* from the head

*Sringataka* is a composite structure consisting of four *Sira* (arteries) in connection with four sense organs-viz, nose, ear, eye and tongue. The composite structure formed by the union of these four arteries is called *Sringata*. As per the *Ayurveda* for the evolution of a disease the vitiated *Doshas* should be brought to the site from its original seat. This movement will be made through the *Srotas* (channels) and if there is any disturbance in the integrity of the *Srotas* it results in the development of disease.

With regards to the *Urdhwangaroga* (diseases of head) there should be some disturbance in the normal functions of *Urdhwanga Srotas* (arteries, veins, nerves in the head). *Sringataka* are the most important group of *Srotas* in the *Urdhwanga* (head) and drugs acting through these *Srotas* are certain to bring about *Srotoshuddhi* (cleaning) in *Urdhwanga*.

### **Action of drugs used in Nasyakarma**

- By general blood circulation, after absorption through mucous membrane.
- Direct pooling into venous sinuses of brain via, inferior ophthalmic veins
- Absorption directly into the cerebrospinal fluid.

Many nerve endings which are arranged in the peripheral surface of mucous membrane, olfactory, trigeminal etc will be stimulated by *Nasyadravya* (the medicine used to give *Nasya*) and impulses are transmitted to the central nervous system. This results in better circulation and nourishment of the organs and the diseases will be subsided.. These *drugs* produce *Draveekaranam* and *Chedanam* of vitiated *Dosha*. The *Kashaya Rasa* drugs produce astringent effect while *Madhura Rasa* drugs produce cooling and nourishing effect. It may be stated that the nose is the doorway to the brain and it is also the doorway to consciousness. *Prana* or life energy enters the body through breath taken in through the nose. Nasal administration of medication helps to correct the disorders of *Prana* affecting the higher cerebral, sensory and motor functions. The brief

study of the mechanism of *Nasya* can be summed up in a single statement made in the Ayurvedic classics, "*Nasa hi Shirasodvaram*" i.e., nose is a pharmacological passage into the brain.

## CONCLUSION

- The Etiology, Pathology and the clinical features are nearly similar in *Suryavarta* and Frontal Sinusitis.
- The prevalence of disease is observed more in the Middle age group (51%).
- *Nagara Ksheera Nasya* and *Vacha Pippali Avapeedana Nasya* are proved effective merely in all patients.
- No patient was reported to have side Effects.
- Overall effect of Group A *Nagara Ksheera Nasya* has got 5% of marked relief as compared with Group B *Vacha Pippali Avapeedana Nasya* which got 15% of marked relief.
- Hence *Vacha Pippali Avapeedana Nasya* is found to be more effective than *Nagara Ksheera Nasya*.
- No side effects were observed during and after the Treatment.

## SUMMARY

The present clinical study was done to compare the efficacy of *Nagara Ksheera Nasya* and *Vacha Pippali Avapeedana Nasya* in the management of *Suryavarta*.

The *Nidana*, *Lakshana*, *Samprapti* of *Suryavarta* is merely similar to frontal sinusitis, Hence, *Suryavarta* can be correlated to Frontal Sinusitis *Suryavatha* is one among 11 types of *Shiroroga* It is observed in day to day practice and affects the routine work of the persons, which is prevalent in both developed and developing countries. It has no bar of Sex, religion or geographical distribution.

In the present clinical study, 40 patients suffering from *Suryavarta* were studied in two groups, each comprising of twenty patients. One group of the patients was given *Nagara Ksheera Nasya* while other group was given *Vacha Pippali avapeedana*

*Nasya* for 7 days in two sittings giving a gap of 7 days.

## Effect of Nagara Ksheera Nasya in Suryavarta

After treatment with *Nagara Ksheera Nasya* provided highly significant relief in *Shirashoola Dinavrudha Vivardhate* by 53.06%, in *Lalata Ruk* by 72.9%, in *Shankha Ruk* by 43.47%, in *Spandanavat Vedana* by 46.66%, and Tenderness over Sinus area by 40%. and significant relief in *Akshi Ruk* by 6.52%. *Nagara Ksheera Nasya* provided marked relief to 5% patients, moderate relief to 10% patient and mild relief to 60% patients but 10% patients got no relief.

## Effect of VachaPippali Avapeedana Nasya in Suryavarta

After treatment with *Vacha Pippali Avapeedana Nasya* provided highly significant relief in *Shirashoola Dinavrudha Vivardhate* by 70.21%, in *Lalata Ruk* by 72%, in *Akshi Ruk* by 57.14%, in *Shankha Ruk* by 57.14%, in *Spandanavat Vedana* by 57.44%, and Tenderness over Sinus area by 63.26%. *Vacha Pippali Avapeedana Nasya* provided marked relief to 15% patients, moderate relief to 75% patients and mild relief to 10% patients but no recurrence was there.

## Comparison of Effects in both the Groups:

Comparison of the effects in all the symptoms in both the Groups showed that *Vacha Pippali Avapeedana Nasya* provided better relief in *Shirashoola Dinavrudha Vivardhate*, *Akshi Ruk*, *Shankha Ruk*, *Spandanavat Vedana* and Tenderness over sinus area.

On the basis of the fore going discussions it can be concluded that though both groups provided significant relief in the signs and symptoms of the patients of *Suryavarta*, the effect of *Vacha Pippali Avapeedana Nasya* was comparatively better than *Nagara Ksheera Nasya*. On the basis of the results of this study it can be concluded that *VachaPippali Avapeedana Nasya* is ideal for the management of *Suryavarta*. Because *Nagara Ksheera Nasya* provided less relief to the patients and recurrence

was there in comparison to *Vacha Pippali Avapeedana Nasya*.

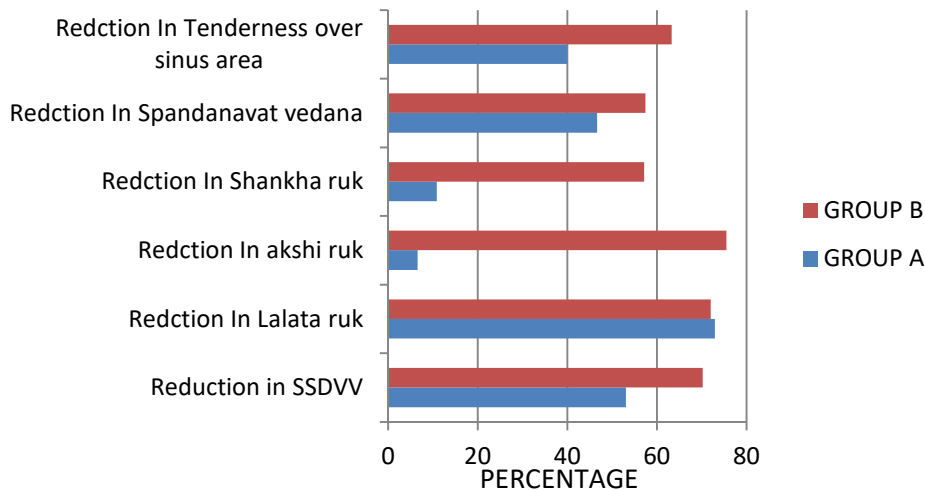
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**Table 1:** Showing the percentage of improvement / relief in the symptoms of *suryavarta* in Group A and Group B after treatment

Percentage of improvement / relief	Group A	Group B
Reduction In <i>Shirashoola Dinavrudha Vivardhate</i>	53.06%	70.21%
Reduction In <i>Lalata Ruk</i>	72.91%	72%
Reduction In <i>Akshi Ruk</i>	6.52%	75.51%
Reduction In <i>Shankha Ruk</i>	43.47%	57.14%
Reduction In <i>Spandanavat Vedana</i>	46.66%	57.44%
Reduction In Tenderness Over Sinus Area	40%	63.26%

**Graph No: 1**



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