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STUDY OF EFFICACY OF SHUNTHYADI TAILA NASYA IN KSHAWATHU (ALLERGIC RHINITIS)

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ABSTRACT

Amongst respiratory tract nose is in direct contact with external environment, making allergies of nose (Allergic Rhinitis) a common finding. Allergic rhinitis is a type of inflammation of the nasal mucosa which occurs when the immune system over reacts to allergen in the air. The symptoms of allergic rhinitis may be seasonal or perennial. There are 31 *Nasa Roga* (nasal disorders) mentioned in *Sushruta Samhita*, *Kshawathu* is one amongst them. In *Ayurveda*, *Kshawathu* is a symptom of many diseases and at the same time a separate disease entity. *Kshawathu* literally meaning sneezing, which is the main symptoms of Allergic Rhinitis and also the etiological factors for both are similar. Present study was planned to develop evidence based support for the effect of *Shunthyadi Taila Nasya* as mentioned in our literature. All the patients were treated with *Shunthyadi Taila Nasya (Marsh)* in morning followed by *Shunthyadi Taila Nasya (Pratimarsha)* in evening for 7 days. *Shunthyadi Taila* has mainly anti-inflammatory, anti-microbial and anti-oxidant activity. The result obtained was statistically analysed. So, we can conclude that effect of *Shunthyadi Taila Nasya* in the management of *Kshawathu* are significant, but further evaluation is to be done and study should be conducted in large sample size for longer duration.

KEYWORDS: *Kshawathu*, Allergic Rhinitis, *Shunthyadi Taila, Nasya.*

INTRODUCTION

In routine medical practise Allergic rhinitis is one of the most common diseases that we see. Though, it often adversely affects the quality of life; it is often regarded as trivial disease & patients fail to attribute the ill health to symptoms of Allergic rhinitis. It adversely affect psychology, lifestyle and impact work productivity. It is an acute IgE mediated, type-1 hypersensitivity reaction of nasal mucosa in response to antigenic substance (allergen) associated with episodic attacks of sneezing, watery rhinorrhea and watering of the eyes.[1] About 20-30% of Indian population suffers from at least one allergic disease.[2] Allergic rhinitis constitutes more than 50% of all allergies in India and its incidence is steadily increasing worldwide. The word meaning of the *Kshawathu* is sneezing. Our lifestyle has changed in such a way that we invite the diseases by adopting all the means of *Viruddha Ahara Vihara* i.e. *Viprikristh Nidanas* of *Kshawathu*. In *Kshawathu Acharyas* mentioned some specific *Nidanas (Sannikristha)* like - *Tikshana upyogatt* (Use of sharp objects), *Ati jighratova bhavan katu* (Inhalation of *Katu, Tikshana* items), *Ark nirikshanat* (Continues look towards sun), *Sutradhibhi* (Nasal picking with cotton wicks etc.)[3] Regarding *Anurjata* (allergy) there is no direct reference in *Ayurveda* but the concept of *Virudha Aharas* (incompatible diet), *Dushi Visha* and *Ritusandhi* may favour this. Such abnormal changes lead to *Vata-Kapha Prakopa*, *Rasa-rakta Dushti* and *Pranavaha Sroto Dushti*. Vitiated *Doshas* seated in the *Nasa Pradesh* & give rise to *Kshawathu roga*. *Acharya Vagbhata* has mentioned that *Dushi Visha* leads to blood vitiated disorders which can be compared with allergic reactions in the body and if *Dushi Visha* located in the *Amashaya* (stomach) then *Vata-Kapha* disease is originated mainly.[4] Present study was planned to review the literature of the disease and its management with *Shunthyadi Taila Nasya.*

AIM AND OBJECTIVES

- To review the literature of *Kshawathu Roga* as per *Ayurveda* and allergic rhinitis as per modern medical science.
- To develop the evidence based support for the effect of *Shunthyadi Taila Nasya* in *Kshawathu* as mentioned in our literature.

MATERIAL AND METHODS

The study of the project is based on clinical observations, investigations and the patient's narration. Prospective randomized open trial carried out on 30 patients.

Place of Work - O.P.D. & I.P.D. of P.G. Department of *Shalakya Tantra, Gurukul* Campus Hospital, *Uttarakhand Ayurved* University, *Haridwar*.

Treatment of Subjects

In *Purva Karma Abhyanaga* & *Swedana* is done up-to neck region for 5 minutes each.

Drug name - *Shunthyadi Taila Nasya.*

Duration of treatment – 7 days (6 drops per nostril morning (*Marsh Nasya*) & 2 drops per nostril evening (*Pratimarsha Nasya).*

In *Pashchat Karma Kaval* was done with luke warm water. Clinical assessment was done on an alternate day i.e. 1st, 3rd, 5th and 7th day during treatment. The clinical observations are recorded in tabular form. Intensity of each sign & symptoms calculated and recorded.

Drug profile

Ingredients of *Shunthyadi Taila – Shunthi, Kustha, Kana, Bilva, Draksha, Taila*.[5]

Procedure of Preparation of *Shunthyadi Taila*: All the raw drugs (*Dravyas)* for *Kalka* were finely powdered form and then *Kalka* was prepared by adding *Drava Dravya* (water) in *Khalva Yantra*. *Til Taila* was taken in a steel vessel and heated over 60˚C till complete evaporation of moisture content. After that *Til Taila* is left for cooling. After cooling *Kalka* is added and then *Drava Dravya* was added in *Til Taila.* Again heated over 60˚C with intermediate stirring in order to avoid charring till Samyaka snehasiddhi lakshanas were noted. After slight cooling, filter it with a muslin cloth and store in a sterilized glass container. This prepared Tail was used in clinical trial.

METHODOLOGY

Selection Criteria

Total 30 patients suffering from '*Kshawathu Roga* (Allergic Rhinitis)' were selected for the study.

A. Inclusion Criteria

1. Patients between the age of 12- 50 years suffering from '*Kshawathu*' (Allergic rhinitis) irrespective of sex, religion and occupation.
2. Symptoms are present ≥ 4days/week & from > 4 consecutive weeks.
3. Patient not using any topical medication 15 days before the date of involvement in the trial.

B. Exclusion Criteria

1. Patients not willing for trial.
2. Patients suffering from Chronic Sinusitis, Nasal Polyps and Other Nasal Pathologies.
3. Patients suffering from Diabetes Mellitus, Hypertension and Skin Allergy
4. Pregnancy or Lactating mother.
5. Previous history of any surgery of nose and related structure.
6. Previous history of Asthma, Tuberculosis and any other lungs related disease.
7. Any tumour (Benign and Malignant) of nose and related sinuses

Clinical Assessment - Clinical assessment was done before, during & after the treatment. The sign and symptoms assessed by adopting suitable scoring method.

Assessment Criteria for Subjective Parameters - Visual Analogue Scale was applied for subjective gradation. The subjective gradation of symptoms were done as follows –

1=<25mm 2=26 – 50mm 3= 51-75mm 4= 76-100mm

1. **Itching nose/throat**
2. **Headache**
3. **Sneezing**
4. **Rhinorrhea**

Objective Parameters

1) Nasal mucosa
2) Inferior Turbinates
3) Nasal septum
4) Spatula test
5) Absolute Eosinophil Count

Statistical Analysis - The information regarding demographic data was given in percentage. The data obtained in clinical study is subjected to statistical tests and analysed as - Wilcoxon test is applied to the statistical data on subjective parameters and Paired t-test is applied on objective parameters of data. Level of Significance: Not significant - ($p>0.05$), Significant - ($p<0.05$), Highly Significant - ($p <0.001$).

Overall effect of therapy is calculated by the percentage basis improvement of patients. The obtained result was measured according to the grades given below:

- Cured: >81 % relief in signs and symptoms.
- Marked improvement: 61-80% improvement in signs and symptoms.
- Moderate improvement: 41-60% improvement in signs and symptoms.
- Mild improvement: 21-40% improvement in signs and symptoms.
- No improvement: < 20 % reductions in signs and symptoms.

OBSERVATION AND RESULTS

Demographic analysis

- In this clinical study on ***'Kshawathu'***, a total number of 33 patients were registered, out of which 30 patients completed the therapy.
- **Age wise distribution**: It was seen that majority of the patients i.e. 51.51% were reported in the age group of 21-30 years, followed by 24.24% in the age group of 12-20 years, 15.16**%** in the age group of 31-40 years and lastly 9.09% in the age group of 41-50 years.
- **Sex wise distribution:** It was observed that maximum i.e., 66.66% patients were males and 33.34% patients were females.
- **Religion wise distribution:** it was observed that maximum patients registered i.e. 78.78% belonged to Hindu religion, followed by 21.22% belonged to Muslim community.
- **Occupation wise distribution:** Maximum i.e., 39.39% patients were Students; followed by 24.24% from housewife category, 18.18% from service category, 12.13% were business class & 6.06% were labour.
- **Education wise distribution:** Maximum i.e. 36.36% patients in each were Graduates & Higher secondary followed by Post graduate 12.13%, Uneducated 9.09% patients and Matric 6.15% patient.
- **Socio-economic status wise distribution:** Majority of the patients i.e. 87.87% belonged to middle class, followed by 12.13% patients belonging to lower class.

- **Habitat wise distribution:** Rural patients were more affected i.e. 75.76% in comparison to urban patients 24.24%.
- **Marital status wise distribution:** Majority of the patients i.e. 57.57% were married while 42.43% were unmarried.
- **Surrounding:** Majority of the patients 75.76% were living in polluted (Dusty) surroundings whereas 24.24% were living in normal surrounding.
- ***Janam desh* (Place of birth):** Majority of the patients i.e. 66.66% having birth in *Aanup Desh* followed by 33.34% patients having birth in *Jangal Desh*.
- ***Rogatpatti desh* (Place of disease origin):** Majority of the patients i.e. 87.87% *Rogauttpatti Desh* were from *Aanup desh* followed by 12.13% were in *Jangal Desh*.
- **Diet**: The majority of patients i.e. 51.51% were taking a mixed diet followed by 48.49% patients who were vegetarian.
- **Appetite:** Maximum number of patients i.e. 84.84% had medium appetite followed by 12.13% had poor and 3.03% had good appetite.
- **Bowel habit:** Maximum of patients i.e. 57.57% were having a regular bowel habit followed by 27.27% of irregular bowel habit and 12.13% were constipated and 3.03% patient having loose stool.
- **Urinary habit:** Maximum no. of patients i.e. 84.84% were having normal urinary habit followed by 15.16% patients having burning micturition.
- **Addiction:** The maximum number of patient i.e. 42.42% were not having any kind of addiction, followed by 24.24% who were taking tea as supplementary drinks, but they were not addicted to it. 21.21% patients had habit of tobacco chewing followed by 12.13% patients were smoking habit.
- **Sleep:** Maximum numbers of patient i.e. 54.54% were having disturbed sleep while 45.46% were having sound sleep.
- **Family history:** Family history of maximum patients was not relevant to this disease i.e. 81.82% followed by 18.18% had positive family history of *Kshawathu* (Allergic Rhinitis).
- **Chronicity:** Maximum number of patient i.e. 39.39% had up to 1 to 3 years of chronicity followed by 36.36% patients had fresh complains, 12.13% patients had up to 4 to 6 years of chronicity, 9.09% had up to 7 to 10 years of chronicity and 3.03% patients had more than 10 years of chronicity.

- **Emotional make up**: Maximum patients i.e. 48.48% having normal emotional make up followed by 39.39% patients having tension, 12.13% having anxiety.
- **Symptoms:** Maximum no. of patients i.e. 57.57% has seasonal manifestation of the disease followed by 42.43% having perennial manifestation.
- **Exercise habit:** Maximum no. of patients had no habit of exercise i.e. 66.67% followed by 27.27% patients having irregular & 6.06% patients having regular habit of exercise.
- **Bathing habits:** Maximum no. of patients i.e. 66.66% having normal bathing habits according to the season followed by 33.34% patients having hot water bathing habits.
- ***Sharir prakriti*:** Patients having *Vata Kapha* predominant *Prakrti* were more affected (48.48%) followed by 27.27% patients of *Vata - Pitta Prakriti*, 24.24% were of *Pitta-Kapha Prakriti*.

Effect OF Therapy in 30 Patients on Subjective Parameters (Wilcoxon Signed Rank test).

No.	Parameters	N	Median		% Effect	W Value	P Value	Result
			BT	AT				
1.	Sneezing	30	4.000	2.000	51.260504	-465.000	<0.001	HS
2.	Headache	30	2.000	1.000	46.031746	-253.000	<0.001	HS
3.	Itching nose/throat	30	4.000	2.000	55.263158	-465.00	<0.001	HS
4.	Rhinorrhoea	30	4.000	2.000	39.830508	-465.000	<0.001	HS

Sneezing was improved by 51%, which was statistically highly significant ($p<0.001$). Improvement in headache was 46%, which was statistically highly significant ($p<0.001$). Improvement in itching of nose/throat was 55%, which was statistically highly significant ($p<0.001$). Rhinorrhoea was improved by 40%, which was statistically highly significant ($p<0.001$).

Effect of therapy in 30 patients in objective parameter

1) Non parametric wilcoxon signed rank test

No.	Parameters	N	Median		% Effect	W Value	P Value	Result
			AT	BT				
1.	Nasal Mucosa (colour)	30	3.000	1.000	42.857143	-465.000	<0.001	HS
2.	Turbinates (colour& hypertrophy	30	2.000	1.000	43.076923	-378.000	<0.001	HS
3.	Nasal septum	30	3.000	3.000	11.392405	-45.000	0.004	S
4.	Spatula test	30	2.000	1.000	47.619048	-435.000	<0.001	HS

Improvement in nasal mucosa (colour) was 43%, which was statistically highly significant (p<0.001). Turbinates (Colour & hypertrophy) was improved by 43%, which was statistically highly significant (p<0.001). Improvement in nasal septum was 11% which was statistically significant (p=0.004). Spatula test was improved by 48% which was statistically highly significant (p<0.001).

2) Parametric Paired T Test

NO.	Parameters	N	MEAN		% Effect	't' Value	P Value	Result
			BT	AT				
1.	Eosinophil Count	30	1.300	1.000	23.076923	3.525	0.001	S

By applying paired T-test, Absolute Eosinophil Count showed 23% improvement which was statistically significant (p=0.001).

When data were analysed for total effect of therapy following result was found: Moderate improvement was seen in 18 (60%) and mild improvement was seen in 12 (40%) patients.

DISCUSSION

Kshawathu can manifest as a separate disease entity and as a symptom of other diseases. By observing classical references we can say that *Kshawathu* is a *Vata-Kapha* disease. There are two types of *Nidana* i.e. *Sannikrishtha* & *Viprakrishtha*. *Kshawathu* can be co-related with Allergic Rhinitis, but it should not be the only correlation.

Nasya is the best procedure amongst the *Shodhana* procedure for *Uttamanga Shuddhi. Shunthyadi Taila/Ghrit* is indicated as *Nasya Dravya* in the treatment of *Kshawathu*. The reason why we opted *Taila* preparation because *Taila* is best medicine in condition of *Kapha Yukta Vata Prakopa,*[6] The position of patient during *Nasya Karma* is lying supine with head down & slight elevation of lower limb has an impact on the circulation of *Shiras*. Seven days of therapy was selected because after that *Snehana Satmya Bhavati,*[7] & *Acharya Vagbhata* also mentioned that *Nasya* should be given for seven days.[8]

Acharya Sushruta while describing dose of *Shirovirechana Nasya* mentioned four, six & eight *Bindu* respectively according to the *Dosha* & *Bala* of *Roga/Rogi* for each nostril. Here we selected *Madhyam Matra* i.e. six *Bindu* (Aprox. 3ml).

According to *Acharya Sushruta* in *Vata* predominant conditions *Nasya* is indicated two times a day.[9] Again *Acharya* mentioned in *Kaphaj Roga Nasya* is used in morning time while in

Vataj Roga in evening time.[10] So, here we give *Nasya* in morning & evening time. In evening *Pratimarsha Nasya* is used because it was not convenient for most of the patient to come in hospital in evening time.

Probable mode of action of *Shunthyadi Taila Nasya* - Drugs used in *Shunthyadi Taila* are mainly *Tikta - Katu Rasa, Laghu Tikshna Guna, Ushna Veerya* & *Katu Vipaka* make it suitable for *Srotoshodakatwa* & dries up *Kleda* (Discharge). Due to *Ushnata* & *Tikshnata Avarana Bhedana, Ghranamsravyati* & *Chhedana* of vitiated *Kapha* take place. Because of *Laghu* & *Vyavayi Guna* it possesses a good spreading capacity through small channels in the body. By the above properties *Nasya Dravya* removes the obstruction & facilitates drainage of *Doshas* from minute channels. *Madhur Rasa, Sheeta Virya* & *Snigdha Guna* promotes the nourishment of *Dhatus, Balya, Brimhana, Rasayana* etc. which ultimately increases the local & general immunity. In *Kapha Yukta Vata Prakopa Tila* is the best drug. So oil preparation is best form for conditions like *Kshawathu* (Allergic Rhinitis). When we analyse overall effect of medicine, it shows *Vata-Kapha*h*ara* properties. Most of ingredients possess anti-inflammatory, anti-rhinoviral, analgesic & immunomodulator properties. Due to these properties it reduces inflammation & prevents recurrent attacks of *Kshawathu*.

CONCLUSION

Kshawathu is the Vata-kapha disease and younger male population is more affected by this. Results of the study are highly significant on all the parameters except on nasal septum and absolute eosinophil count. The drug exerts Strotoshodhaka and Dosha Anulomaka effect.

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