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# The effect of PKG tablet and *Goghruta Nasya* in Allergic Rhinitis (*Vataja Pratishaya*)

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## ABSTRACT

Allergic Rhinitis is the inflammation of the lining of the nose caused by allergy. The symptoms includes runny nose, sneezing, nose, roof of the mouth and ears may be itchy. It can occur due to air borne allergens such as pollens of all types, house dust mites, spores or when you eat spices or hot drinks or caffeine, or when exposed to irritant chemicals such as tobacco, smoke or perfume. In Ayurveda it is compared with *Vataja Pratishaya*. According to Ayurveda imbalance of *Tridoshas* results in the manifestation of disease. So present study was undertaken with the tablet of *Guduchi*, *Kantakari* and *Pippali* along with *Nasya* of *Goghruta* for period of 3 months. A significant relief in symptoms of Allergic rhinitis were noted.

**Key words:** Allergic Rhinitis, *Vataja Pratishaya*, *PKG Tablet*, *Goghruta Nasya*.

## INTRODUCTION

Allergic Rhinitis is an allergic reaction that occurs when your immune system over reacts to substances that you have inhaled (often pollen). The two types of allergic rhinitis are seasonal allergic rhinitis (hay fever) and perennial allergic rhinitis, which occurs year-round. Hay fever is caused by outdoor allergens and perennial allergic rhinitis and indoor allergens (such as dust, mites, pet dander, mold).<sup>[1]</sup>

Symptoms of allergic rhinitis resemble a cold, but they are not caused by a virus. When you inhale an allergen, your immune system springs into action, releasing substances known as IgEs into your nasal

passages, along with inflammatory chemicals such as histamines. Your nose, sinuses, or eyes may become itchy and congested. Scientists aren't sure what causes your immune system to overreact to an allergen.<sup>[2]</sup>

Allergic rhinitis is a common condition, affecting about 1 in 5 Americans. Symptoms can be mild or severe. Many people who have allergic rhinitis also have asthma.<sup>[3]</sup>

Allergic rhinitis from an Ayurvedic perspective is due to the toxins present in the body (*ama*) and due to the low immunity. *Ama* aggravates the levels of *Pitta* and *Kapha* in the body, giving rise to different symptoms of allergies. Ayurveda consider this as a *Kapha-Pitta* disorder. Symptoms are *Nasanaha* (nose block), *Kaphasruti* (rhinorrhoea), *Kshava* (sneezing).<sup>[4],[5]</sup>

There is no specific treatment for allergic rhinitis in modern science. Available treatment for allergic rhinitis includes Anti histamines, Decongestants, Immuno therapy. It gives temporary relief and includes side effects such as drowsiness, dryness of nasal mucosa, generalized weakness, etc. So we require such medicine which not only reduces symptoms but also increases immunity and improve the quality life of the patient, which is cost effective and easily available.<sup>[6]</sup>

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**OBJECTIVES**

To put forth the effect of Ayurvedic management in Allergic Rhinitis (*Vataja Pratishaya*) in such a way that it should be convincing and acceptable to the medicos of the modern era.

**MATERIALS AND METHODS**

**Study type** - Open clinical trial

**Study centre** - Dr.D.Y.Patil Ayurvedic Hospital, Nerul, Navi Mumbai.

**Sample size** - 100 patients

**Study duration** - 3 months

**Statistical evaluation** - The statistical evaluation of study was conducted with appropriate statistical test.

**Selection of Patients**

Uncomplicated patients with characteristic symptoms and signs of Allergic Rhinitis (*Vataja Pratishaya*)<sup>[7]</sup> irrespective of sex, religion, education, occupation etc. were selected.

**Inclusive Criteria**

1. Age Group- 20 to 60 years.
2. Sex-both male and female.
3. Physical examination and clinically significant abnormal laboratory investigation at the prestudy.

**Exclusive Criteria**

1. Patient below 20 years and above 60 years.
2. Congenital defects and disorders.
3. Patient having severe cardiovascular, gastrointestinal and renal disease.
4. Hematological, Neurological and Psychiatric disease.
5. Pregnant and Lactating women.

**Subjective Parameters**

Symptoms	No - 0	Mild - +	Moderate - ++	Severe - +++
Sneezing	No Sneezing	Sneezing 3-4	Sneezing 10-	Sneezing

		times/morning	15/morning	15-25/morning
Runny nose	No runny nose	Mild watery runny nose	Watery with sticky mucous	Continuous, watery and sticky mucous
Dry cough	No Cough	2-3 episodes of coughing	Intermittent coughing with throat pain	Continuous coughing with difficulty in swallowing
Itchy mouth, throat, ears and face	No itchy	Itchy mouth and throat	Itchy mouth, throat, ear and face	Itchy mouth, throat, ear and face with redness and difficulty in normal work
Headache	No headache	Heaviness in head	Heaviness with headache	Feverish with headache
Fatigue	No tiredness	General weakness	Bodyache with general weakness	Drowsiness, Sleepy, bodyache

**Laboratory Investigations**

1. CBC
2. ESR

**Ingredients of oral medicine**

SOP of PKG Tab contains

1. *Guduchi* (*Tinospora cordifolia*)

2. *Pippali* (*Piper longum*)
3. *Kantakari* (*Solanum Xanthocarpum*)

Each 500mg tab contains *Guduchi* 250mg, *Pippali* 125mg, *Kantakari* 125mg

**Mode of administration** - oral

**Dose** - 1gm TDS (2 tab thrice a day)

**Anupana** - *Koshna Jala*

**Aushada Sevana Kaala** - After food

**Nasya** - *Goghruta* - 4 drops in each nostril in morning

**Duration of Treatment**

**Oral medications** - for 3 months

**Nasya** - for 3 months

The raw material for study is purchased from the local market certified by *Dravya Guna* Dept of Dr. D.Y.Patil School of Ayurveda.

All powders are mixed in given quantity. After homogenous mixing, sufficient quantity of gum acacia is added for binding purpose. Full mixed material is sent for manufacturing of tablets. All the manufacturing procedure was conducted in Rasashastra Dept. of Dr.D.Y.Patil School of Ayurveda, Nerul. Tablets are packed and stored in air tight containers.

**Assessment of total effect of therapy**

**Criteria for assessment**

Result	Criteria for assessment
<b>Cured</b>	Complete relief (100%) in signs and symptom of <i>Vataja Pratishaya</i> , was taken as cured
<b>Moderate relief</b>	Patients with improvement of more than 60% in sign and symptoms, were taken as moderately relieved
<b>Mild relief</b>	Patients with improvement in between 30-60% in sign and symptoms were considered as mild relief.
<b>Unchanged</b>	No change or less than 30%

improvement insigns and symptoms were considered as unchanged

## OBSERVATIONS AND RESULTS

100 patients of either sex in the age group of 20-60 years of Allergic rhinitis (*Vataja Pratishaya*) were selected as per the selection criteria, underwent physical and pathological examination. Patients - received PKG tab dose of 1gm (2 tablets) three times daily for 3 months along with *Goghruta Nasya*.

Patient were followed up every 15 days for 3 months and laboratorial investigations was done on initial day and 90<sup>th</sup> day.

**The Symptoms Score was compared Before and After Treatment**

There were 60 males and 40 females. Almost all the patients had sneezing, running nose and other associated symptoms. All the patients were examined clinically at every follow up, and analysis was carried out at 3 months.

Parameter	Before treatment			After treatment			P	T	significance	%
	M E A N	S D	S E M	M E A N	S D	S E M				
Sneezing	1.76	0.62	0.08	0.28	0.45	0.06	<0.001	19.25	extrremely significant	84.9
Runny nose	1.78	0.61	0.08	0.28	0.08	0.04	<0.001	21.01	extrremely significant	84.26
Dry cough	1.58	0.53	0.07	0.18	0.38	0.05	<0.001	16.3	extrremely signi	88.6

			6		8	4			ficant	
Itchy mouth, throat, ears and face	1.38	0.49	0.06	0.42	0.49	0.07	<0.001	12.73	extrremely significant	69.56
Headache	1.26	0.44	0.06	0.32	0.47	0.06	<0.001	14.45	extremely significant	74.66
Fatigue	1.68	0.51	0.07	0.26	0.48	0.06	<0.001	20.39	extremely significant	81.55

**Pathological Investigation**

Vitals	Mean ± Std. Dev.	
	Initial 0 day (baseline)	90 <sup>th</sup> day
Hb	13.3 ± 1.89	13.45 ± 1.48
Total RBC	5.19 ± 0.69	5.21 ± 0.69
Total WBC	7437.75 ± 1970.92	6177.5 ± 1185.65
Neutrophils	60.81 ± 6.71	60.9 ± 5.97
Lymphocytes	34.07 ± 3.41	33.89 ± 3.23
Eosinophils	3.74 ± 4.44	2.49 ± 2.04
Monocytes	1.19 ± 1.87	2.33 ± 2.76

Basophils	0.09 ± 0.2	0.35 ± 0.71
ESR	13.59 ± 8.73	9.39 ± 4.31
Using Paired t test : a = significant (p< 0.05) as compared to baseline, b = not significant (p> 0.05) as compared to baseline		

The Laboratory evaluations for safety (CBC, ESR) did not indicate any significant change compared to baseline

**Variation in Symptoms Severity with Drug**

Symptoms	0 day	15 day	30 day	60 day	90 day
Sneezing	100%	100%	70%	40%	10%
Runny nose	100%	80%	50%	20%	5%
Dry cough	100%	90%	60%	10%	-
Itchy mouth,throat,ears and face	100%	80%	50%	10%	-
Headache	80%	40%	10%	-	-
Fatigue	70%	40%	20%	10%	-

**DISCUSSION**

Allergic rhinitis (*Vataja Pratishaya*) is a common health hazard and no corner of the world have unaffected in developing and undeveloping countries. The management of Allergic rhinitis (*Vataja Pratishaya*) in effective manner has always been a challenge to modern and Ayurvedic Physician world over *Goghruata Nasya* with PKG Tab orally is very effective and not having any toxic effect.

During this study it was observed that the *Goghruata Nasya* with PKG Tab orally, produce significant symptomatic progressive relief (Sneezing - 84.09%, Running Nose - 84.26%, Headache - 74.60%, Dry Cough - 88.60%, Fatigue - 81.15%.)

During this clinical study *Goghrua Nasya* with PKG Tab orally treatment it does not required hospitalization or any special technique and hence patients social, psychological and economic status is not disturbed. During this clinical study we have not found any significant changes in hematological analysis.

#### Probable mode of action of PKG Tablet.

	Ra sa	Vi ry a	Vi pa ka	Dosh aghnt a	Chemical Constituent	Action
<i>Pippali</i> (Piper longu m)	<i>Ka tu</i>	<i>U sh n a</i>	<i>M ad hu r</i>	<i>Kaph avata hara</i>	Piperin, Sesamin, B- sitosterol , Piperonaline	Anti inflam matory , Anti oxidan t
<i>Kantakari</i> (Sola num Xanth ocarp um)	<i>Ka tu Tik ta</i>	<i>U sh n a</i>	<i>Ka tu</i>	<i>Kaph avata hara</i>	B-Carotene, Disgenin, Carpesterol, Solasodine, Solamargine	Anti inflam matory , pain killer
<i>Guduchi</i> (Tino spori a cordif olia)	<i>Tik ta Ka sh aya</i>	<i>U sh n a</i>	<i>M ad hu r</i>	<i>Trido shah ara</i>	palmatine, ber berine, tinocordifoliosi de	Anti allergic , anti inflam matory , Immun omudu lator

**Pippali** - Pippali helps in carrying out easy expectoration and removes obstruction to movement of Prana. Its petroleum extract produces analeptic potency due to central nervous stimulation. Alkaloid Piperine is better than Nikethamide in counter acting respiratory depression.<sup>[8]</sup>

**Kantakari** - It eliminates *Kapha* obstructing *Pranavaha* Srotas by its *Katu Tikta Rasas* and *Ushna Virya* and also it does *Anuloman* of *Prana Vayu*. It has been proved that it eliminates histamine present in *Pranavaha Srotas* and hence acts as *Shwasahara*.<sup>[9]</sup>

**Guduchi** - Dry barks of *Guduchi* has anti-spasmodic, antipyretic, anti-allergic, anti-inflammatory. It inhibits the constrictor response of histamine and acetylcholine on smooth muscle.

#### CONCLUSION

*Goghrua Nasya* with PKG Tab orally is an effective treatment for Allergic Rhinitis (*Vataja Pratishaya*) with fast recovery and with minimal financial burden, hence it can be concluded that this treatment is economical, alternative and safe.

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