

# Clinical Study of Anurjata Janita Pratishyaya (Allergic Rhinitis) & Comparative Assessment of Nasya Karma

NEHA J. MODHA (TANK)\* V. D. SHUKLA\*\* M. S. BAGHEL\*\*\*

Institute for Post Graduate Teaching and Research in Ayurveda, Gujarat Ayurved University, Jamnagar.

**ABSTRACT :** Allergic rhinitis is an atopic disease. Atopic allergy is a type-1 hypersensitivity reaction which produces IgE antibodies to allergens viz. pollen, dust, etc. In Ayurveda direct reference of allergic rhinitis is not available, but concept of allergy is scientifically explained under 'Asatmyaja Vyadhi' while its effects are explained in context of hereditary, Viruddhahara, Dushivisha and Ritu Sandhi. Various types of Pratishyaya are explained clearly in all samhitas. However, symptoms of Vataja pratishyaya like Tanu Nasa Srava, Shirashoola, Kshavathu etc. more related with symptoms of allergic rhinitis. In the present study, patients of allergic rhinitis are evaluated on the basis of general evaluation scale consisting parameters like nasal obstruction, sneezing, itching etc. Total 69 patients were selected and randomly divided into 3 groups viz : 1) Shunthi tail Nasya for 14 days, followed by internal drug Sudha Haridra 2 gms TDS. for 21days; 2) Pradhamana Nasya with Katphal churna till samayaka shuddhi lakshana obtained ,followed by internal drug Shuddha Haridra 2 gms TDS for 21days; 3) Only oral drug Sudha Haridra 2 gms TDS for 21 days. It was observed that symptoms like sneezing, rhinorrhoea, headache, itching were almost completely relieved in all groups.

**Key words :** Allergic rhinitis, Pradhaman Nasya, Shunthi Taila, Pratishyaya.

## INTRODUCTION

In Ayurveda<sup>1</sup> 3 types of treatment are described for each and every disease viz: Samshodhana, Samshamana and Nidanaparivarjana

Here prime importance is given to Shodhana followed by other treatment. Pratishyaya is highly prevalent disease affecting any age group of both sex, well known for its recurrence and chronicity. Recurrence of the disease occurs because the Doshas have not been evacuated completely. Such Doshas reside in their latent stage (predisposing stage) and give rise to the same disease when aggravating factors are favourable<sup>2</sup>. In this way disease attains the Jeerna Avastha. Anurjata Pratishyaya (Allergic Rhinitis) is also recurring frequently and attending the Jeerna Avastha and as per Charaka<sup>3</sup>, Nasya is the line of treatment.

Shirovirechana is of two varieties 'Pradhamana' and 'Avapeeda'<sup>4</sup>. In the present study a comparative assessment of Pradhamana and Avapeeda Nasya in the management of Anurjata Janita Pratishyaya has been carried out.

Here instead of using direct Swarasa for Avapeeda Nasya Shunthi oil was prepared, as preparing

oils with Tikshna Dravyas for Nasya has been included in Vairechanik Pratimarsha Nasya by Charaka.

Pratishyaya is an inflammatory condition of the mucosa of nasal passage. Haridra has been used since ages in different inflammatory conditions of the respiratory tract such as Rhinitis, Pharyngitis, Tonsillitis, Laryngitis, Bronchitis and Uvulitis, etc. Haridra is also indicated in Shwasa, Kasa and it is stated to have Raktashodhaka and Vishaghna properties. 'Sudha Haridra' is experience based medicine utilized by Vaidyas in the management of Anurjata Janita Vikara. First the Haridra is soaked in lime water, then dried & powdered.

Allergic Rhinitis has always been proved to be a problematic ailment to the doctors. There is only symptomatic treatment in modern medicine and so many measures have been adopted to check this disease. In Ayurveda all the Acharyas are of the opinion that Pratishyaya is a curable disease if treated properly, otherwise may give rise to many complications. The concept of allergy is scientifically explained under 'Asatmyaja Vadhi' in Ayurveda, while its effects are explained in hereditary, Viruddhahara, and Dushivisha and Ritu Sandhi.

Sushruta has mentioned hereditary diseases<sup>5</sup> explaining that qualitative and quantitative proportion of Vata, Pitta and Kapha is fixed at the time of fertilization only. Accordingly one's immunity is also formed in that proportion. Hence probability of formation of IgE antibodies among some people can

\* Lecturer, B. A. M. S. English Medium course, Shree Gulabkunverba Ayurved Mahavidyalaya, Jamnagar. Email: jkmodha@yahoo.com

\*\* Professor and Head, Department of Panchakarma.

\*\*\* Director, I.P.G.T. & R.A.

be explained. Similarly concept of Viruddhahara is indicated<sup>6</sup> which can be related with food allergens. Viruddhaharas may give rise to many chemical reactions in our body. They may also interfere with the normal metabolism of our body. Another important concept is of Dushivisha. Acharya Charaka has clearly mentioned<sup>7</sup> that Dushivisha leads to blood vitiating disorders like Kitibha, Kotha, etc. which can be compared with allergic reactions. Concept of environmental allergy is scientifically explained under the heading of 'Ritu Sandhi'. Vagbhata has mentioned that<sup>8</sup> if Ritu Charya of Ritu Sandhi is not followed it gives rise to Astamyaja Roga, Tridosha Prakopa, vitiation of Dhātu.

Samprapti of the disease Pratishyaya can be explained in three ways. First in which Sama avastha of Kapha/Pitta/Rakta is there but vitiation of Vayu is present. Here the causative factors are mainly Vata Vardhaka like Vega-Dharana, Tapa-Sevana, Manasika, etc. Secondly Kapha/ Pitta/Rakta Pradhana causative factors lead to its vitiation, where as Vata is in Sam avastha. And in third Vata and Kapha/Pitta/Rakta are individually vitiated by their etiological factors. In all the three types of Samprapti, Gati of Vata (Udana) is obstructed by Kapha/Pitta/Rakta causing its Avarana.

#### **Aims & Objectives :**

1. To clinically assess the efficacy of 'Katphala Churna Nasya' in the management of Anurjata Janita Pratishyaya.
2. To assess the clinical efficacy of 'Shunthi Taila Nasya' in the management of Anurjata Janita Pratishyaya.
3. To clinically assess the efficacy of 'Sudha Haridra' in the management of Anurjata Janita Pratishyaya.

#### **MATERIAL AND METHOD**

*Clinical Study* : To evaluate therapeutic affect of the trial drug, clinical study was under taken.

*Criteria of selection of patients and diagnosis* : Uncomplicated patients with signs and symptoms of Allergic Rhinitis, attending O.P.D. and I.P.D. of I.P.G.T. and R.A. hospital, Jamnagar were selected irrespective of age, sex, religion and occupation.

*Exclusion criteria* : Patients suffering from diseases and conditions like Tuberculosis, Pneumonia, Deviated Nasal Septum, Nasal polyps, Tumours of nose, etc. were excluded from the study.

*Proforma* : A special Proforma was prepared for the evaluation of the etio-pathogenesis and assessment of treatment efficacy. Detailed history was taken, and simultaneously general and systematic examinations of the patients having sign and symptoms suggestive of allergic rhinitis were done.

*Pathological investigations* : Patients suffering from Allergic Rhinitis were selected after routine haematological, Urine and stool investigations, such as Hb, T.L.C., D.C., Especially eosinophil count and E.S.R. were taken into consideration.

#### **Grouping & Management :**

The selected patients were randomly placed and studied under 3 groups.

1. Group A - In Group A, patients were given Shunthi Taila Nasya, along with oral drug, 'Shuddha Haridra'.
2. Group B - In Group B, patients were given Kataphala churna Nasya along with oral drug, 'Sudha Haridra'.
3. Group C - In Group C, patients were given only oral drug, 'Sudha Haridra'.

#### **Drug, Dose and Duration :**

1. Shunthi Taila: It was prepared using Shunthi as a 'Kalka Dravya' for Nasya, 6, 8 drops in each nostril for 14 days followed by Shamana drugs for 21 days.
2. Katphala Churna: Fine powder of Kataphala was prepared for Pradhamana Nasya, 3 muchuti was given until Samyaka Shuddhi Lakshana appeared (app.3-6 days), after which shamana drug was given for 21 days.
3. Oral drug : Haridra soaked in Sudhodaka and fried in shuddha Ghrita was made into powder form after drying. Powder was filled in capsules of 500 mg. each, 2 gm. & given as three times a day with luke warm milk or water as anupana for 21 days.

*Follow up study* : Patients were asked to attend the O.P.D for one more month after completion of treatment for the follow up study.

#### **Criteria of Assessment :**

Assessment of the effect of treatment was done on the basis of relief of subjective and objective (Trans illumination test and postural test) signs and symptoms of Allergic Rhinitis through statistical analysis and other tests.

*General evaluation score -*

## 1. Nasal obstruction

0 -No obstruction

1 -Inhalation and exhalation with effort with feeling of mild obstruction.

2 -Inhalation and exhalation with effort with feeling of moderate obstruction &amp; inhalation and exhalation to be supplemented with mouth breathing.

3 -Complete blockage with total mouth breathing.

In this way, symptoms like Rhinorrhoea, Sneezing, Loss of smell (Anosmia), Headache, cough, itching, Allergic shiners, Pharynx congestion, Redness of conjunctiva, redness around nose, Akasmat Pravriti and Nivriti were assessed.

*Overall effect of therapy:*

It is evaluated as :

- 1) Complete remission with 100% Relief in sign and symptoms,
- 2) Marked improvement Relief between >75-100%
- 3) Moderate improvement Relief between >50 - 75%
- 4) Improvement Relief between 25-50%
- 5) Unchanged either no Relief or < 25.

**OBSERVATION & RESULTS**

Total 69 patients were registered for the study of Allergic Rhinitis. Distribution of patients was as follows :

Group	Completed	LAMA	Total Registered
A	19	02	21
B	23	02	25
C	21	02	23

Assessment of Nasya karma - Samyaka Nasya Karma was obtained in total 45 patients of both the groups i.e. 97.77% while only 1 patient had Ati Yoga i.e. 2.17%.

Total 69 patients were registered in the present study, which were divided into 3 groups. 6 patients left the treatment i.e. 2 in each group. Reason was, few of them could not respond to the treatment as they were indulged in Apathaya Sevana. In Pradhmana Nasya group, one patient had Atiyoga due to which he discontinued the treatment. In both

the Nasya groups some patients were not ready to come to hospital for performing the Nasya karma daily regularly.

**Demographic data :**

Data	%
Age- 26 to 40	47.82
Sex- female	52.17
Religion-hindu	94.20
Occupation-service	37.68
Education - graduation	30.43
Marital Status- married	72.46
Socio economic status- lower middle class	49.37
Habitat-urban area	75.36
Onset-gradual	97.10
Disease course- progressive	63.76
Aggravating factor-climatic change	92.70
Past illness- gastritis	68.11
Family history-positive	73.91
Food habit-vegetarian	76.81
Dietary habits-viruddha Ahara	98.55
Koshtha-madhyama	50.72
Sleep-normal	62.31
Exercise-avoidance	76.81
Habit-tea	21.73
Emotional make up-tensive nature	56.52

**Examination of nose :** Due to inflammatory reaction of Nasal mucus membrane maximum no. of patients i.e. 82.60% had redness. Congestion was observed in 50.72% of patients.

**Examination of Paranasal Sinus :** Frontal and maxillary sinusitis was observed in 40.57% and 27.53% of patients respectively. Transillumination test was positive in 59.42% of patients. Postural test was positive in 27.53% of patients.

**Loss of Smell :** The 30.43% patients had temporary loss of smell.

Parameter	Maximum %
Sharir Prakriti - Vata-Kapha Prakriti	44.92
Manas Prakriti - Rajasika Prakriti	59.42
Saratah - Madhyam Sara	60.86
Samhanan - Madhyam Samhanan	73.91
Praman - Madhyam	73.91
Satmya - Shadrassa	72.42
Satva - Madhya	65.21
Vyayam Shakti - Avara	52.17
Vaya - Madhya	94.20
Desha - Jangam Pradesha	91.30

Vegadharana was reported in maximum no. of patients i.e. 94.20% followed by Ritu Vaishmya and Dhuli Rajah Sevana i.e. 92.75% and 91.30% of patients. This indicates that Vegadharana, Ritu Vaishmya and Dhuli Rajah Sevana were most important causative factor of Allergic Rhinitis reported by the patients of this study.

**Chief complaints :** Nasa Srava was observed in 98.55% of patients, Kshavathu in 95.65% of patients and Shirahshoola in 94.20% of patients. So it can be concluded that Nasa Srava, Kshavathu and Shirahshoola are chief complaints.

**Associated complaints :** Shirogaurava, Jwara and Aruchi are associated complaints which were observed in 72.46% of patients.

Kapha Varga Pariksha - Kapha Prakopa was observed in 92.75% of patients. Symptoms of Kapha Prakopa like Sneha, Kandu, Sheetatva, Gaurava, Banddha, Shotha, Apaka and Atinidra were obtained.

Srotas	% wise Srotodushti
Pranavaha	100
Udakavaha	63.76
Rasavaha	94.20
Raktavaha	100

**TABLE NO. 1 : TOTAL EFFECT ON SYMPTOMS IN GROUP A :**

Symptoms	n	BT	AT	% Relief	SD	SE	t	p
Nasal obstruction	05	2.8	0.6	78.57	1.09	0.48	04.58	< 0.001
Rhinorrhoea	19	3.31	0.52	84.29	0.71	0.16	16.87	< 0.001
Sneezing	19	2.26	0.42	81.41	1.06	0.24	07.66	< 0.001
Loss of smell	04	2.75	0.75	72.73	0.81	0.40	05.00	< 0.001
Headache	18	2.50	0.56	77.60	0.63	0.14	13.85	< 0.001
Cough	11	1.91	0.27	85.86	0.67	0.20	08.15	< 0.001
Itching	17	1.65	0.12	92.73	0.49	0.11	14.90	< 0.001
Allergic shiners	19	1.78	0.05	97.19	0.45	0.10	17.30	< 0.001
Pharynx congestion	13	1.31	0.08	93.89	0.43	0.11	11.18	< 0.001
Red conjunctiva	17	1.76	0.12	93.18	0.49	0.11	14.90	< 0.001
Bhutwabhutwa	17	2.71	0.35	87.08	0.93	0.22	10.68	< 0.001
Redness of nose	18	1.83	0.11	63.00	0.46	0.10	17.20	< 0.001
Akasmata pravriti and Nivriti	15	2.73	0.40	85.35	0.61	0.15	15.53	< 0.001

p<0.001 : Highly significant

**TABLE NO. 2 : TOTAL EFFECT ON SYMPTOMS IN GROUP B :**

Symptoms	n	BT	AT	% Relief	SD	SE	t	p
Nasal obstruction	6	0.61	0.00	100	1.16	0.47	06.02	< 0.001
Rhinorrhea	22	3.09	0.27	1.26	0.53	0.12	23.41	< 0.001
Sneezing	21	2.67	0.19	92.88	0.60	0.13	19.00	< 0.001
Loss of smell	09	1.78	0.56	68.54	0.83	0.27	04.51	< 0.001
Headache	22	2.73	0.45	83.52	0.70	0.14	16.21	< 0.001
Cough	17	1.71	0.18	89.47	0.62	0.15	10.13	< 0.001
Itching	23	2.00	0.04	98.00	0.36	0.07	26.00	< 0.001
Allergic shiners	23	2.04	0.04	98.04	0.30	0.06	33.33	< 0.001
Pharynx congestion	20	1.20	0.10	91.66	0.30	0.16	18.33	< 0.001
Red conjunctiva	22	1.95	0.05	97.44	0.29	0.06	31.66	< 0.001
Bhutwabhutwa	23	3.39	0.26	92.33	0.86	0.17	18.41	< 0.001
Redness of nose	23	2.04	0.09	95.59	4.01	0.83	03.34	< 0.001
Akasmata pravriti and Nivriti	22	2.18	0.13	93.76	0.58	0.12	18.16	< 0.001

p<0.001 : Highly significant

**TABLE NO. 3 : TOTAL EFFECT ON SYMPTOMS IN GROUP C :**

Symptoms	n	BT	AT	% Relief	SD	SE	t	p
Nasal obstruction	04	2.50	1.00	60.00	1.00	0.50	03.00	< 0.001
Rhinorrhoea	20	2.75	0.45	83.64	0.73	0.16	14.37	< 0.001
Sneezing	18	1.50	0.11	92.66	0.60	0.14	09.85	< 0.001
Loss of smell	09	2.11	0.66	68.72	0.72	0.24	06.00	< 0.001
Headache	20	2.20	0.45	79.54	0.65	0.14	12.14	< 0.001
Cough	16	1.50	0.25	83.33	2.01	0.50	03.50	< 0.001
Itching	19	2.10	0	100	0.45	0.10	21.00	< 0.001
Allergic shiners	19	1.75	0.05	97.14	2.58	0.59	04.10	< 0.001

Pharynx congestion	15	2.20	0.07	96.82	0.41	0.10	12.00	< 0.001
Red conjunctiva	15	1.86	0.13	93.01	0.45	0.11	15.72	< 0.001
Bhutwabhutwa	15	3.53	0.80	77.34	0.88	0.22	12.40	< 0.001
Redness of nose	18	2.00	0.05	97.50	0.20	0.05	38.80	< 0.001
Akasmat pravriti and Nivriti	15	2.13	0.56	73.71	0.51	0.13	11.76	< 0.001

p<0.001 : Highly significant

**TABLE NO. 4 : ASSESSMENT OF NASYA KARMA :**

Nasya Karma	Group A	Group B	Total	Percentage
Samyaka yoga	21	22	43	97.77
Hinayoga	00	00	00	00.00
Atiyoga	00	01	01	02.17

**EFFECT OF THERAPIES ON CHIEF COMPLAINTS :**

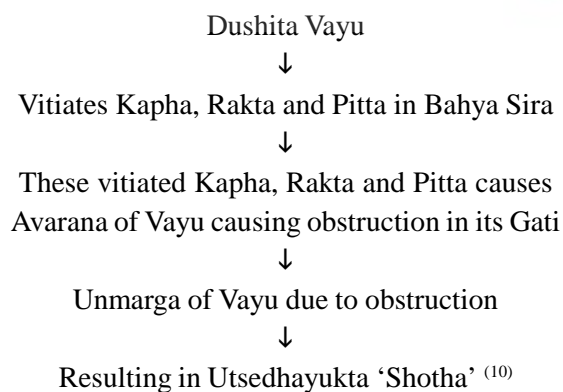
**TABLE NO. 5 : COMPARATIVE DATA OF % WISE RELIEF IN ALL THE THREE GROUPS :**

Symptoms	Group A	Group B	Group C
Nasal obstruction	78.57%	100%	60.00%
Rhinorrhea	84.29%	91.26%	83.64%
Sneezing	81.41%	92.88%	92.66%
Loss of smell	72.43%	68.54%	68.72%
Headache	77.60%	83.52%	79.54%
Cough	85.86%	89.47%	83.33%
Itching in Nose	92.73%	98.00%	100%
Allergic shiners	97.19%	98.04%	97.14%
Pharynx congestion	93.89%	91.66%	96.82%
Redness of Conjunctiva	93.18%	97.44%	93.01%
Bhutwabhutwa	87.08%	92.33%	77.34%
Redness around nose	63.00%	95.59%	97.50%
Akasmat pravriti and Nivriti	85.35%	93.76%	73.71%

**DISCUSSION**

On the basis of comparison of data in 3 treatment groups following explanations may be presented.

Nasal obstruction, Pharynx congestion, Allergic shiners, Redness around nose and Redness of conjunctiva, all these are manifested due to an inflammatory reaction taking place. In Ayurveda it can be explained under the heading of 'Shotha' where Rasa, Rakta involvement is predominant.



Acharya Vagbhata has also given same explanation regarding the Samprapti of Shotha, but the only difference is of chronology i.e. Vata vitiates Rakta, Pitta and Kapha. Chakrapani has explained 'Bahya' as skin and 'Sira' as Srotas. Obstruction in blood vessels leads to congestion, redness and swelling. In the treatment of Shotha in Urdhavajatrugata Pradesh 'Shirovirechana' is indicated. Same is explained in inflammatory reaction, which is described as below. <sup>11</sup>

In most inflammatory reactions, there is vascular dilatation and leakage of fluid and proteins during the early stage of neutrophil emigration. This exudate contains an array of proteins and other mediators. Much has been learned about the cellular and mediator events involved in the initiation of acute inflammation, some of these mechanisms may provide new targets for therapy in inflammatory disease. Local tissue perturbation, e.g. bacterial invasion, causes the release of inflammatory mediators. Some of these act as chemotaxins, attracting neutrophils, then monocytes to the site, others act on local vascular endothelial cells to promote their adhesion to the surface of activated inflammatory cells. The arrest of neutrophils in local microvessels is a necessary prelude

to their transmigration through the endothelial and epithelial layers and it involves a two-step process. The first phase is one of transient adhesion which is mediated by adhesion molecules of the selectin family, the second phase of tight adhesion and transmigration is mediated by adhesion molecules of the integrin family. Although eosinophils and monocytes sequester and emigrate by very similar mechanisms, it is likely that selective accumulation is achieved by differential secretion and expression of the different members of the chemokine and adhesion molecule repertoire.

*Nasal Obstruction* : The 100% relief is obtained in group B by treatment of Katphala. Katphala has Ushna, Tikshna Guna causing Avarana bhedana in Shotha Samprapti. Its Vatanulomana property checks the Vata. Kleda dushti is present in Shotha. Katphala helps in relieving this Kleda dushti. The 78.57% relief is obtained in Shunthi Taila group. Shunthi is widely utilized in various combinations of Shotha treatment<sup>12</sup>. Shunthi is Kaphaghna and Vataghna which are main Doshas of Shotha. Katphala is also proved drug having anti inflammatory action.

*Congestion in pharynx*: Maximum relief is observed in group C (98.82%) as compared to both the Nasya groups. Sudha Haridra has the property of 'Rakta Shodhaka' and Vishaghana, both are helpful in relieving congestion. It is also Kapha Vata Shamaka, which are responsible for pharyngeal congestion. It is also a result of an inflammatory reaction. Sudha Haridra has the property of Anti inflammatory as it directly acts on the chemokines like IL-8, RANTES and Eotaxin, etc. which are responsible for inflammatory reaction.

*Redness around nose* : It is maximum relieved in group C (97.50%). While explaining Shotha it is shown that 'Rakta' is involved, and it is also vitiated which results in 'Raktima'. Haridra has 'Raktashodhaka' property which relieves the symptom. Redness around nose is due to vasodilatation caused in inflammatory reaction. 'Sudha Haridra' an inflammatory drug acts on the mediators, which activate different inflammatory cells via specific surface receptors. Thus preventing inflammatory reaction, resulting in decrease of symptom.

*Redness of conjunctiva* : It is maximum relieved in group B (97.44%). This is due to IgE mediated activation of mast cells in the conjunctiva. Katphala has the property of suppressing the antibody formation, decreasing the inflammation and lowering of the eosinophil count.

*Allergic Shiners* : Maximum relief is observed in group B (98.04%). It is clearly manifested due to allergic

reaction taking place. Katphala is already having properties, which are helpful in curing the disease itself and through Nasya it is helpful in curing local symptoms of inflammation, thereby relieving symptoms which arise due to local antigen-antibody reaction.

*Rhinorrhoea* : This is maximum relieved in group B (91.26%). From the Samprapti of Pratishyaya explained previously, it can be understood that this symptom is manifestation of Kapha due to vitiation of Vata as it is Avrut. Ushna, Tikshna Gunas, Ushna Veerya of Katphala, are responsible for Avaranabhedana and Vatanulomana. Rhinorrhoea is primarily the result of glandular hypersecretion that is mediated by reflexes, mainly involving the cholinergic innervation of the nasal mucosa. Anticholinergic agents provides more relief in such patients. Here Kataphala churna Nasya may act like anticholinergic agent.

*Sneezing* : Nearly equal relief was observed in group B (92.88%) and group C (92.66%). Its Samprapti explained in Ch. Chi. 26/11 shows that mainly vitiation is of Vata and Kapha Doshas. Katphala is Vataghna and Kaphaghna. After Katphala Nasya patients are sneezing nearly for 15-20 times. It can be explained that due to excess sneezing, it helps in clearing the 'Kleda Dushti' by doing 'Kleda Nishkasana' through sneezing. This ultimately helps to subside the Shotha and its related symptoms. Katphala churna causes irritation of the nasal passage initiating sneezing reflex, clearing the foreign matter, relieving inflammation and congestion immediately compared to other groups.

*Loss of Smell* : Maximum relief was in group A patients (72.43%). In Ayurveda for the perception of any sense organ, Vata is main Dosh involved. So any abnormality pertaining to these sense organs is mainly due to Vata vitiation. 'Shunthi' is Vataghna, which helps in relieving this symptom. Moreover in this disease there is swelling of turbinates leading to temporary loss of smell and as Shunthi is 'Shothaghna', it acts on swollen turbinates, helping of subside anosmia.

*Headache* : Maximum relief was observed in group B (83.52%). It is clearly mentioned in Ayurveda that without Vata there will be no pain. Headache is mainly caused by Vayu<sup>13</sup>. Katphala has the property of Vataghna and Vatanulomana. Thus it relieves this symptom.

Headache (intracranial type) is referred pain to the surface of the head from the deep structures. This result from pain stimuli arising inside the cranium, but others result from pain arising outside the cranium, such as from the nasal sinuses. Headache (extracranial type) is caused by irritation of the Nasal and Accessory

Nasal structures. According to first theory, headache is caused by reflex vasospasm. Due to Pradhamana Nasya there is vasodilatation which relieves the headache. In second theory, headache is due to spasticity of muscles, Pradhamana Nasya also causes muscle relaxation.

**Cough :** Maximum relief was observed in group B patients (89.47%). While explaining Samprapti of Kasa Acharya Charaka<sup>12</sup> has stated that Vata and Kapha are main Doshas involved. Guna, Veerya and Rasa of Katphala shows its Vataghna and Kaphaghna property.

Coughing may be initiated either voluntarily or reflexly as a defensive reflex. It has both afferent and efferent pathways. The afferent limb includes receptors within the sensory distribution of the trigeminal, glossopharyngeal, superior laryngeal nerve and the spinal nerves.

As a protective mechanism against foreign or noxious material, cough can be initiated by a variety of airway irritants, which enter the tracheo bronchial tree by inhalation (smoke, dust, fumes) or by aspiration. Prolonged exposure to such irritants may initiate airway inflammation, which can itself trigger cough and sensitize the airway to other irritants. Any disorder resulting in inflammation, constriction, infiltration or compression of airways can be associated with cough. Katphala is an anti-inflammatory drug which indirectly helps in relieving cough.

**Itching :** Maximum relief was observed in group C (100%). Itching is caused by vitiated Kapha<sup>13</sup>. It is also a Pitta Vikara<sup>14</sup>, whereas Kashyapa opines, that Kandu is caused by vitiated Vata. It can be concluded that due to vitiated Kapha and Vyanavayu, sensation of Kandu arises in the body. If this condition is associated with Pitta it will result into Daha after itching. Haridra is Kaphaghna and Vataghna, which are main Doshas involved in Kandu.

**Effect on Haematological Parameters :** Total Leucocyte Count (TLC): No significant change was noticed in TLC of the patients.

**Eosinophil count :** This was decreased by 22.03% in group A, decrease of 18.88% in group B and 9.91% decrease in group C. But these results were statistically insignificant.

**Erythrocyte Sedimentation Rate (ESR):** Marginal decrease in the ESR level was noticed in the patients of all the three groups, which was statistically insignificant.

### Total effect of Therapy :

Marked improvement was found in 78.94% patients of group A, 91.30% of group B and 76.19% of group C. As a whole of the 63 patients studied, moderate improvement was found in 75.36%, improvement was obtained in 15.78% in group A, 8.69% in group B and 19.04% in group C. Out of the 63 patients studied, improvement was found in 13.04% patients. Similarly none of the patient remained unchanged.

Maximum percentage wise relief was observed in group B. Symptoms such as Allergic Shiners, Itching, Redness of Conjunctiva, Akasmata Pravriti and Nivriti. These were relieved almost completely. Similar results were also obtained in group A, however percentage wise relief was around 95%.

### Mode of Action of Drugs :

Katphala and Shunthi Taila breaks the pathogenesis of Pratishyaya by virtue of Tikshna & Ushna properties, causing Avaranabhedana. Kapha and Vata Doshaghna are helpful in relieving symptoms. Their Vatanulomana property checks Vata. Moreover Kataphala and Shunthi both are proven anti-inflammatory as well as analgesic drugs.<sup>14,15</sup>

Rhinorrhoea, a common symptom in patients with allergic rhinitis, is primarily the result of glandular hypersecretion mediated by reflexes, mainly involving the cholinergic innervation of the nasal mucosa. Katphala may act as an anticholinergic drug relieving watery nasal hypersecretion. Shunthi Taila exerts a marked anti-inflammatory effect on the nasal mucosa by inhibiting the release of inflammatory mediators from the mast cells and basophils, and by blocking the inflammatory effect of leucocytes in the nose.

Sudha Haridra has Rakta Shodhaka and Vishaghna properties, which acts on Dushya Rasa and Rakta. It also has antihistaminic property. It directly acts on H<sub>1</sub> and H<sub>2</sub> receptors which are mainly involved in the histaminic reactions. Haridra prevents the release of a number of inflammatory mediators and inhibit the action of the released mediators on their target cells.<sup>16</sup> Calcium potentiate this action of Haridra.

### CONCLUSION

Clinically both the trial drugs used for Nasya karma gave better results compared to oral drug group. This suggest importance of Shodhana karma i.e.Nasya karma in treating Pratishyaya.

