

## Study the effect of trikatu-triphala Churna Pradhama Nasya in management of Kaphaj Pratishaya (Sinusitis)

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### Abstract

This study aimed to investigate the effect of Trikatu-Triphala Churna Pradhama Nasya in the management of Kaphaj Pratishaya (sinusitis). The study involved 30 patients with sinusitis who received Pradhama Nasya treatment with a mixture of Trikatu and Triphala Churna. The patients were assessed before and after the treatment, and the data were analyzed statistically. The study found that the treatment led to significant improvement in the clinical condition of the patients, including relief of symptoms such as nasal discharge, sneezing, nasal obstruction, headache, voice change, and cough. The treatment was well-tolerated and showed promising results in the management of Kaphaj Pratishaya. This simple and cost-effective remedy may provide an alternative treatment option for sinusitis. Further research is warranted to validate these findings and explore the potential mechanisms of action of Trikatu-Triphala Churna Pradhama Nasya in sinusitis management.

### Introduction

The importance of Panchakarma lies in the fact that it helps in uprooting the disease and bringing the vitiated Doshas to their original places. Manifestation of any disease in terms of Doshas starts with them moving from Koshta to Shakha. To bring them back to the Koshta is one of the main principles of Panchakarma procedures laid down in the Ayurvedic texts. A skilful Bhishak is the one who knows about the Tridosha concept along with Dosha, Dushya Sammurchhana. The Credit of Panchakarma goes to the fact that it enables to clear off the Doshas at minute levels. Urdhvajatrugata Rogas and their management have a special place in Ayurveda. Shira being the prime seat of knowledge and also the prime controller of the entire body has been termed as Uttamanga. Nasa is considered to be that Indriya, whose functions are not only limited to respiration but is also considered as a pathway for drug administration. In Ayurveda, a special procedure called Nasya has been mentioned.

**Keywords: Trikatu-triphala Churna Pradhama, Nasya, Kaphaj Pratishaya, Sinusitis, Management**

### Introduction

The importance of Panchakarma lies in the fact that it helps in uprooting the disease and bringing the vitiated Doshas to their original places. Manifestation of any disease in terms of Doshas starts with them moving from Koshta to Shakha. To bring them back to the Koshta is one of the main principles of Panchakarma procedures laid down in the Ayurvedic texts. A skilful Bhishak is the one who knows about the Tridosha concept along with Dosha, Dushya Sammurchhana. The Credit of Panchakarma goes to the fact that it enables to clear off the Doshas at minute levels. Urdhvajatrugata Rogas and their management have a special place in Ayurveda. Shira being the prime seat of knowledge and also the prime controller of the

entire body has been termed as Uttamanga. Nasa is considered to be that Indriya, whose functions are not only limited to respiration but is also considered as a pathway for drug administration. In Ayurveda, a special procedure called Nasya has been mentioned.

### Need of Study-

According to the Hindu health magazine, more than 120 million Indians suffer from at least one episode of sinusitis each year and only few works have been done on Pradhamana Nasya in Pratishyaya. It is the first trial of doing Pradhamana Nasya in kaphaj Pratishyaya. But here very simple, easily available and economically less expensive combination described by Acharya Charaka in Pratishyaya Adhikakra i.e. Trikatu and Triphala Churna (Ch.Chi.26/152)

So, this study is an attempt to find a better solution for Kaphaj Pratishaya and this is simple remedy which will help to cure as early as possible from an existing treatment.

### Aims & Objectives

#### Aim:

To study the Effect of Pradhaman Nasya in Kaphaj Pratishaya (Sinusitis)."

#### Objectives:

- 1) To study the disease "Kaphaj Pratishyaya" in Ayurvedic and modern parlance.
- 2) To assess the role of "Trikatu and Triphala Churna for Pradhamana Nasya" in Kaphaj Pratishyaya.

### Materials & Methods:

#### Hypothesis:

**Null Hypothesis:** ( $H_0$ ): There were no difference in parameters of Pratishayay by Pradhaman Nasya in Kaphaj Pratishaya (Sinusitis).

**Alternative Hypothesis:** ( $H_1$ ): There were difference in parameters of Pratishayay by Pradhaman Nasya in Kaphaj Pratishaya (Sinusitis).

### Conceptual Study

#### Review of Literature: -

The Literature Review were studied of Nasya and Pratishyay from Ayurvedic Samhita, Modern text, research articles, journal and internet articles.

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The subject were compiled and studied from Ayurvedic Samhita, Modern text, research articles, journal and internet articles. Conceptual study - It includes-Anatomical and physiological considerations of Nose and paranasal sinuses according to Ayurveda and

modern science Ayurvedic review of the disease Pratishyaya. Modern review of the disease Sinusitis were done.

### Drug review:

चूर्णो घ्रेयः प्रधमनं कटुभिश्च फलैस्तथा॥ चरक चिकित्सा २६/१५२

It includes detailed description of test drugs- Trikatu and Triphala Churna.

**Table No.1 Rasa Virya Vipak of Triphala-trikatu**

Items	Drug	Latin Name	Rasa	Virya	Vipaka	Prabhava
Triphala	Aamalaki	Emblica Officinalis	Pancharas (Lavanrahit)	Shita	Madhur	Tridosahar
	Haritaki	TerminaliaC hebula	Pancharas (Lavanrahit)	Ushna	Madhur	Tridosahar
	Bibhitak	Terminaliab elerica	Kashaya	Ushna	Madhur	Tridosahar
Trikatu	Shunthi	Zinziber Officinalis	Katu	Ushna	Madhur	Vata- Kaphashamak
	Maricha	Piper Nigrum	Katu	Ushna	Katu	Vata- Kaphashamak
	Pimpali	Piper Longum	Katu	Anushna Shit	Katu	Vata- Kaphashamak

### Method of Preparation-

#### Pharmaceutical study – Drug manufacturing

Drug were prepared as per Standard method mentioned in the Charak samhita in the Department of Rasshastra of College. All drug required for drug were collected from the local market, were identified and prepared under the guidance of Dravyaguna and Ras-shastra Experts at M.S. Ayurvedic Medical College & Hospital, Gondia.

#### Analytical study- drug standardization

It were done from recognized laboratory after preparation of drug and before the clinical trials.

### Clinical Study:

#### A] Inclusion Criteria:

Patients fulfilling the diagnostic criteria which are based on symptomatology of Kaphaj Pratishyaya described in Ayurvedic classics and sinusitis in modern science were selected for the present study.

#### B] Exclusion Criteria:

- Patients below 7 years and above 70 years.
- Chronic debilitating infectious diseases.

- Patients having history of hypertension or diabetes mellitus.
- Cases which require surgical treatment like nasal polyp.

### C] Criteria for Diagnosis

For diagnosis purpose the classical signs and symptoms described in different Samhitas would be taken up. A detailed proforma including all the classical signs and symptoms of the disease were prepared. Dushti Lakshanas of Dosha, Dushya, Dhatu, Agni and Prakriti etc. were also included in case report proforma.

### Informed Consent-

An informed written consent were obtained from every patient before including in the study.

### Ethical clearance

The study protocol was cleared by the ethical committee of the Institute. Written consent was taken from each patient for participation in the study. Patients were free to withdraw from the study at any time without giving any reason.

### Study Groups

Total 30 patients were selected from OPD and IPD and were given Pradhaman Nasya in the morning.

Drug: Mixture of Trikatu and Triphala Churna for Nasya. (Ch.Chi. 26/152)

Dose For Pradhamana Nasya : 1 – 3 Muchchuti (250 mg – 750 mg)

Duration: Pradhamana Nasya were given for 7 days with the interval of one day (Su. Chi. 40/42), as per patient's Samyaka Shuddhi Lakshana. (Total 15 days)

Form of Nasya drug :Churna

Route and form of administration: Nasal in the form of Pradhamana Nasya.

Follow up : 0, 7, 14 days

### Investigations: (if required)

Haematological examination:

TLC, DLC, ESR, Hb%, absolute eosinophil etc.

### Nasya Procedure:

Pradhamana Nasya done with Trikatu + Triphala Churna.

Lavana Siddha Tila Taila was used in Purva Karma for Sthanika Abhyanga.

Pradhamana Nasya was given for a maximum seven sittings, with an interval of 1 day between each sitting.

For Abhyanga in Purva Karma of Nasya, Saindhava Taila was selected which is

described by Acharya Sushruta in the context of Shwasaroga Chikitsa. Swedana Karma also performed in poorvakarma which causes liquefaction of the accumulated Doshas especially vitiated Kapha.

In Pashchata Karma, Urdhvanga massage and Swedana was done , as it helps to drain out the Doshas and Swedana also causes Srotomukhavishodhana.

### Criteria for the Assessment:

Assessment were done on the basis of improvement in the clinical condition of the patient i.e. relief in signs and symptoms Scoring were done according to the following scale:

#### A. Subjective assessment:

##### SYMPTOMS

#### 1. Nasa Srava (Nasal discharge):

No discharge	:	0
Occasional	:	1
Frequent	:	2
Continuous heavy	:	3
Continuous heavy and foul smell	:	4

#### 2. Kshavathu (Sneezing):

No sneezing	:	0
Occasionally <5/day	:	1
5-10 times / day	:	2
11-15 times / day	:	3
>16 times / day	:	4

#### 3. Nasavarodha (Nasal obstruction):

No obstruction	:	0
Partially, occasionally and unilateral	:	1
Partially, occasionally and bilateral	:	2
Complete, frequently and unilateral	:	3
Always complete and bilateral	:	4

#### 4. Shirahshoola (Headache) and Shirogaurav (Heaviness in head):

No headache	:	0
Occasionally with low intensity	:	1
Frequently with moderate intensity but do not disturb daily routine work	:	2

Always with moderate intensity, some times disturb routine work : 3

Always severe intensity associated with vomiting, nausea etc. : 4

#### 5. Swarabheda (Change of voice):

No change of voice : 0

Occasional hoarseness of voice : 1

Frequent hoarseness of voice : 2

more in morning hours

Frequent hoarseness of voice : 3

throughout the day

Cannot speak due to hoarseness of voice : 4

#### 6. Kasa (Cough):

No cough : 0

Dry or unproductive cough : 1

Productive cough with scanty sputum : 2

Productive cough with moderate amount of sputum: 3

Productive cough with large quantity of sputum : 4

#### Follow-Up:

A follow up study for the duration of one month were carried out in the Patients.

#### Withdrawal criteria

Those subjects were considered for withdrawals which are not compliance with follow up. Lost to follow up subject were also considered for withdrawal.

#### Overall Assessment Criteria:

Improvement of percentage of relief of scoring grade were done in following manner.

Percentage of relief	Grade
Above 75% - Marked improvement	I
50% to 75% - Moderate improvement	II
25% to 50% - Mild improvement	III
Below 25% - No improvement/unchanged	IV

### Statistical analysis

All the observation Collected during study were properly classified in the form of graph, tables and charts. Statistical analysis were achieved for Subjective symptoms by applying non parametric test like ‘Wilcoxon Sign Rank test’ within group to compare the results before and after treatment results. ‘Mann Whitney’ Test were applied for comparing the result between the groups. Level of significance were taken at 5%.

### OBSERVATIONS & RESULTS:

In this study, 30 patients of Kaphaj Pratishyay (Sinusitis) were selected and closely observed and assessed according to criteria of assessment. Before treatment and after treatment data was analyzed statistically. All these observations and results are described herewith as follows. This clinical study is conducted to establish an indigenous herbal preparation having least/no side effect, of low cost and easy availability.

**Table No. 2: Distribution of 30 Patients of Kaphaj Pratishyay (Sinusitis according to Age**

Sr. No.	Age groups	No. of Patients	Percentage
1.	16-25	10	33.33
2.	26-35	10	33.33
3.	36-50	07	23.33
4.	51-70	03	10.00

This table shows that

- Maximum No. of patients were from the age group 16-25 and 26-35 respectively, they are equal (33.33%).
- Patient 36-50 age groups are least (23.33) while only 03 patients were in age group of 51-70.

**Table No. 3 Distribution of 30 Patients of Kaphaj Pratishyay according to Sex**

S. N	Sex	No. of Patients	Percentage
1.	Male	16	53.33
2.	Female	14	46.67

This table shows the predominance of disease in male 16 (53.33%) than in females 14 (46.67%).

**Table No.4 : Distribution of 30 Patients of Kaphaj Pratishyay according to Religion:**

S. No.	Religion	No. of Patients	Percentage
1.	Hindu	22	73.33
2.	Boudha	05	16.67
3.	Muslim	03	10.00

This table shows that maximum no. of patients are Hindus (73.33%) because the area is Hindu dominant where the study was conducted while 16.67 % were Muslim religion and 10.00% were Boudhha patients. It may be due proportion of populations distribution.

**Table No. 5 : Distribution of 30 Patients of Kaphaj Pratishyay according to Educational status**

S.No.	Education	No. of Patients	Percentage
1.	Illiterate	05	16.67
2.	Primary	06	20.00
3.	Secondary	13	43.33
4.	Graduate	05	16.67
5.	Post Graduate`	01	03.33

This table shows that maximum number 13(43.33%) of patients were educated up to Secondary level of education followed by primary 06(20.00%), 16.67% were graduate and 03.33% post graduate and 16.67% were illiterate.

**Table No. 6 : Distribution of 30 Patients of Kaphaj Pratishyay according to Occupation:**

S. No.	Occupation	No. of Patients	Percentage
1.	Farmer	05	16.67
2.	Labour	07	23.33
3.	House Wives	07	23.33



4.	Services man	03	10.00
5.	Students	08	26.67

This table shows that students 26.67%, labour 23.33% and house wives 23.33% are more affected by Sinusitis followed by Farmer 16.67% & service man 10%.

**Table No.7: Distribution of 30 Patients of Kaphaj Pratishyay (Sinusitis) according to Habits**

Sr. No.	Habit	No. of Patients	Percentage %
1	Tea	13	43.33
2	Tea & Tobacco	06	20.00
3	Alcohol	06	20.00

**Vyasana** – Totally 83.33% patients were having Vyasana, out of them 43.33 having habit of Tea / Coffee, 20% were of Tea & Tabacco, 20% were of Alcohol and 16.67% were having no Vyasana.

**Table No.8: Distribution of 30 Patients of Kaphaj Pratishyay (Sinusitis) according to Kshudha, Koshtha, Agni & Pipasa.**

	Observations	No. of Patients	Percentage %
<b>Kshudha</b>			
1	Alpa	12	40.00
2	Madhyam	15	50.00
3	Pravara	03	10.00
<b>Pipasa</b>			
1	Alpa	13	43.33
2	Madhyam	12	40.00
3	Pravara	05	16.67
<b>Koshtha</b>			
	Mrudu	05	16.67
	Madhyama	16	53.33
	Krura	09	30.00
<b>Agni</b>			
	Alpa	08	26.67
	Madhyam	18	60.00

	Pravara	04	13.33
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**Table No.9: Distribution of 30 Patients of Kaphaj Pratishyay (Sinusitis) according to Prakruti**

Sr. No.	Prakruti	No. of Patients	Percentage %
1	Vata-Pitta	07	23.33
2	Vata-Kapha	07	23.33
3	Kapha-Pitta	08	26.67
4	Pitta-kapha	08	26.67

In this study, there were equal 23.33 % patients found of Vata-pitta & Vata-kapha prakruti and also equal patient's i.e.26.67 % for Kapha-pitta and Pitta kapha prakruti.

**Table No.10 : Distribution of 30 Patients of Kaphaj Pratishyay according to food habits.**

S. No.	Food habits	No. Of Patients	Percentage
1	Vegetarian	17	56.67
2	Non- vegetarian	13	43.33

This table shows that vegetarians are more affected by Sinusitis than having mixed food habits.

**Table No.11 : Distribution of 30 Patients of Kaphaj Pratishyay according Sign and symptoms.**

Sr.No.	Sign & Symptoms	No. of Patients	Percentage
1.	Nasa Srava (Nasal Discharge)	29	96.67
2.	Kshavathu (Sneezing)	25	83.33
3.	Nasavarodha (Nasal obstruction)	22	73.33
4.	Shirahshoola & Shirogaurav	10	33.33
5.	Swarabheda (Change of voice)	24	80.00
6.	Kasa (Cough)	24	80.00

This table shows that Nasa Srava (Nasal Discharge) was present almost all patients 29(96.67), Kshavathu (Sneezing) was present in 25(83.33), Nasavarodha (Nasal obstruction) was present in 22(73.33%) patients, Shirahshoola & Shirogaurav was present in 33.33, while Swarabhedata and Kasa were present in 24(80%) patients.

**Table no. 12 : Duration of the disease in 30 patients of Kaphaj Pratishyay (Sinusitis).**

S. No.	Duration	No. of Patients	Percentage
1.	Less than 3-5 days	15	50.00
2.	Between 1-2 months	07	23.33
3.	Within 1 months	06	20.00
4.	More than 2 months	02	06.67

This table shows that maximum number of patients had complaint of Kaphaj Pratishyay for less than 3 to 5 days 15 (50.00%) ,07(23.33%) were having complains between 1-2 months, 06(20% ) were having complains within a month while 02(06.67%) patients suffered for more than two months from kaphaj pratishay.

**Table No.13: Showing Percentage of Relief in Each Symptoms of 30 Patients of Kaphaj Pratishyay (Sinusitis)**

	Symptoms	BT	AT	Diff	% of Relief
1	Nasa Srava (Nasal Discharge)	74	26	48	64.9
2	Kshavathu (Sneezing)	48	17	31	64.6
3	Nasavarodha(Nasal obstruction)	49	13	36	73.5
4	Shirahshoola & Shirogaurav	48	17	31	64.6
5	Swarabheda (Change of voice)	45	13	33	73.3
6	Kasa (Cough)	36	8	28	77.8

#### Percentage of Relief in Symptoms Score:

The symptoms like Nasa Srava (Nasal Discharge) reduced by Pradhaman Nasya is 64.9%, Kshavathu (Sneezing ) reduced by 64.6%, Nasavarodha (Nasal obstruction ) reduced by 73.5% while Shirahshoola & Shirogaurav, Swarabheda & Kasa were reduced 64.6%,73.5% & 77.8 % respectively.

While going through percentage of relief in above said symptoms almost all the symptoms were better relieved in this interventional group in before & after treatment. (Table No - 13)

**Table No. 14 Showing Wilcoxon Signed Rank Test of Symptom score of Kaphaj Pratishyay (Sinusitis) of Trial Group on Subjective Criteria.**

Sr. No	Symptoms	Mean		Mean $\pm$ SD		$\pm$ S Ed		P Value
		BT	AT	BT	AT	BT	AT	
1.	Nasa Srava (Nasal Discharge)	2.46	0.87	2.46 $\pm$ 0.86	0.87 $\pm$ 0.57	0.15	0.10	<0.0001
2.	Kshavathu (Sneezing)	1.60	0.57	1.60 $\pm$ 0.93	0.57 $\pm$ 0.62	0.17	0.11	<0.0001
3.	Nasavarodha (Nasal obstruction)	1.63	0.43	1.63 $\pm$ 1.12	0.43 $\pm$ 0.56	0.20	0.10	<0.0001
4	Shirahshoola & Shirogaurav	1.60	0.57	1.60 $\pm$ 1.27	0.57 $\pm$ 0.62	0.23	0.11	<0.0001
5.	Swarabheda	1.50	0.43	1.50 $\pm$ 0.93	0.43 $\pm$ 0.50	0.17	0.09	<0.0001
6.	Kasa (Cough)	1.20	0.26	1.20 $\pm$ 0.80	0.26 $\pm$ 0.52	0.14	0.09	<0.0001

#### Statistical Analysis for Subjective Criteria:

In this trial Group, regarding Symptoms Nasa Srava the Mean  $\pm$  SD value obtained Before Treatment was 2.46  $\pm$  0.86 and After Treatment it was changed 0.87  $\pm$  0.57 which was statistically extremely significant (P<0.0001).

In Kshavathu (Sneezing) the Mean  $\pm$  SD value before Treatment was 1.60  $\pm$  0.93 and after treatment it was 0.57  $\pm$  0.62 which was statistically extremely significant (P<0.0001).

In symptom of Nasavarodha (Nasal obstruction) the Mean  $\pm$  SD value Before Treatment was 1.63  $\pm$  1.12 and after treatment it was 0.43  $\pm$  0.56 which was statistically extremely significant (P<0.0001). (Table No. 16)

In Symptoms Shirahshoola & Shirogaurav the Mean  $\pm$  SD value obtained Before Treatment was 1.60  $\pm$  1.27 and After Treatment it was changed 0.57  $\pm$  0.62 which was statistically extremely significant (P<0.0001).

In Swarabheda the Mean  $\pm$  SD value Before Treatment was 1.50  $\pm$  0.93 and after treatment it was 0.43  $\pm$  0.50 which was statistically extremely significant (P<0.0001). In symptom of Kasa the Mean  $\pm$  SD value Before Treatment was 1.20  $\pm$  0.80 and after treatment it was 0.26  $\pm$  0.52 which was statistically extremely significant (P<0.0001). (Table No. 14)

**Table No.15: Showing Percentage of Relief in Each Patient of Kaphaj Pratishyay (Sinusitis)**

Sr.No.of patients	Before treatment	After treatment	Percentage
1	16	6	62.50
2	10	2	80.00
3	12	5	58.33
4	4	0	100.00
5	7	3	57.14
6	5	0	100.00
7	12	4	66.67
8	9	2	77.78
9	8	2	75.00
10	7	1	85.71
11	15	5	66.67
12	11	4	63.64
13	8	2	75.00
14	4	1	75.00
15	13	4	69.23
16	6	2	66.67
17	12	3	75.00
18	8	2	75.00
19	11	4	63.64
20	3	1	66.67
21	13	6	53.85
22	13	2	84.62
23	7	2	71.43
24	10	3	70.00
25	14	7	50.00
26	11	2	81.82
27	14	4	71.43
28	17	8	52.94
29	15	5	66.67
30	5	2	60.00
<b>Total</b>	<b>300</b>	<b>94</b>	<b>70.74</b>

Average percent relief in this trial group of Triphala-trikatu Churna in the management of Kaphaj Pratishyay (Sinusitis) is 70.74%.

**Table No.16 Showing Total Effect of therapy in 30 Patients of Kaphaj Pratishyay (Sinusitis)**

Sr.No	Total Effect of Therapy	No. of Patients	Percentage
1.	Marked improvement-	07	23.3

	Above 75%		
2.	Moderate improvement- 50% to 75%	23	76.7
3.	Mild improvement - 25% to 50%	00	00.00
4.	No improvement- Below 25%	00	00.00
5.	L.A.M.A.	00	00.00

### **Total Effect of Therapy:-**

Trial Group, 23.3% patients were improved more than 75% in all symptoms of Pratishyay, 76.7% patients were markedly improved having relief of symptoms between 50-75%.

In this study none of the patient was unchanged due to interventions or no any patients left against medical advice.

### **Discussion:**

Total 30 patients were selected from OPD and IPD and were selected irrespectively of sex and religion. Specially designed Case Report Form (CRF) was used to fill the all the basic demographical and clinical information of subjects. Patients attending Panchakarma O.P.D of the hospital were examined prior to the start of treatment with respect to the Performa. All these values were termed as before treatment values. (B.T)

After complete Clinical examination and well consenting treatment was started. Mixture of Trikatu and Triphala Churna for Nasya was advised to the all eligible patients of Pratishyay. Dose for Pradhamana Nasya was administered as 1 - 3 Muchchuti (250 mg – 750 mg). Pradhamana Nasya were given for 7 days with the interval of one day as per patient's Samyaka Shuddhi Lakshana. Follow up of patients were taken after 7 days of completion of treatment.

After completion of therapy all values of these investigations and examinations were recorded, it was termed as after treatment (AT).

### **Disease review:**

Pratishyaya has been a major problem to the physicians since long back. Pratishyaya by word itself indicates that it is recurrent in nature and can be precipitated even due to trivial etiological factors. Dushta Pratishyaya is the chronic stage of Pratishyaya, which occurs due to neglect or improper management of the disease Pratishyaya. In modern science, chronic sinusitis can be correlated with Pratishyaya on the basis of the signs, symptoms, complications, and prognosis. Dushta Pratishyaya is a serious and complicated condition, it is

very difficult to treat. It can cause many complications, such as Badhira, Andhata, Ghrananasha, etc.<sup>1</sup>

Charak has described Pratishtyaya in which vitiated Kapha get accumulated, Pitta and Rakta move along with the Vata in the same direction. The lack of immunity makes him/her more susceptible for repeated infections like Pratishtyaya. Recurrent Upper Respiratory Tract Infections (RURTI), rhinitis or sinusitis can be correlated with Pratishtyaya.

Rhinitis is commonly caused by a viral or bacterial infection, including the common cold, which is caused by Rhinoviruses or bacteria. Allergic rhinitis may follow when an allergen such as pollen or dust is inhaled by an individual with a sensitized immune system, triggering antibody production. So chronic infection in nasal sinus leads into sinusitis. These antibodies mostly bind to mast cells, which contain histamine. When the mast cells are stimulated by pollen and dust, histamine (and other chemicals) are released. This causes itching, swelling, and mucus production.<sup>2</sup>

#### **Selection of Drug:**

Charaka has advised a combination of *Trikatu* and *Triphala Churna* for *Pradhamana Nasya* in the context of *Pratishtyaya Chikitsa*. *Trikatu* has *Katu Rasa*, *Laghu* and *Tikshna Guna*, *Katu Vipaka*, *Ushna Veerya*, *Vata-Kaphashamaka*, *Shothahara*, *Sroto Shodhana*, *Vatanulomana*, *Lekhana*, *Kaphanissaraka*, *Shleshmahara*, anti-inflammatory, antibacterial, antirhinoviral, and immunostimulatory properties. *Triphala* has *Ruksha Guna* and *Tridoshashamaka* as well as *Sroto Shodhana*, *Shothahara*, *Vatanulomana*, *Kaphanissaraka*, and antibacterial, anti-inflammatory, and immunomodulatory properties.

All these properties of *Trikatu + Triphala Churna Yoga* help to remove the pathology and promote local immunity. In the combination of *Trikatu + Triphala Churna*, *Triphala* neutralizes the *Tikshnata* of *Trikatu* and thus makes it easier for the patient to it. Thus, *Trikatu + Triphala Churna* was selected for *Pradhamana Nasya* in the present study

#### **Ethical clearance:**

The study protocol was cleared by the ethical committee of the Institute. Written consent was taken from each patient for participation in the study. Patients were free to withdraw from the study at any time without giving any reason.

#### **Basic Demography:**

All the observation Collected during study were properly classified in the form of graph, tables and charts. Statistical analysis were achieved for Subjective symptoms by applying non parametric test like 'Wilcoxon Sign Rank test' within group to compare the results before and

after treatment results. ‘Mann Whitney’ Test were applied for comparing the result between the groups.

**Observations & results:**

**Age: (Table no.2)**

**Sex (Table No.3)**

**Religion: (Table No.4)**

**Educational (Table No. 5)**

**Occupation (Table No.6)**

**Habits (Table No.7)**

**Prakruti (Table No.9)**

**Food habits. (Table No.10)**

**Distribution of Patients according Sign and symptoms. (Table No.11)**

**Duration of the disease (Table no.12)**

**Percentage of Relief in Symptoms Score: Table No.13**

**Statistical Analysis of Trial Group on Subjective Criteria (Table No. 14)**

**Percentage of Relief in Each Patient of Kaphaj Pratishaya Table No.15:**

Average percent relief in this trial group of Triphala-trikatu Churna in the management of Kaphaj Pratishaya (Sinusitis) is 70.74%.

**Total Effect of Therapy:- Table No.16**

**Mode of action of Nasya:**

In Purva Karma of Nasya, Abhyanga and Swedana is done. Abhyanga causes Mruduta of Doshas and Swedana causes Vilayana (liquification) of accumulated Doshas. In the language of modern science, Abhyanga and Swedana increases the local blood supply and Swedana also liquefies the mucous. Due to vasodilatation the permeability of blood vessels increases, which makes the drug absorption faster.

In Pradhana Karma, the drug (triphala –Trikatu) in Churna form is administered into the nostrils through Pradhamana Nadiyantra in the head-low position of the patient. Thus, the drugs reach the Shringataka and from there, through different Siras, it spreads to other parts like Netra, Shirah, etc. and removes the morbid Doshas. By the properties of drug, it causes Srotoshuddhi and makes the Anulomana Gati of Vayu (mitigation of Vayu), which is hampered in Dushta Pratishyaya.

In Pashchata Karma, Urdhvanga massage and Swedana helps to drain out the Doshas and Swedana also causes Srotomukhavishodhana.



In addition, the drug compound has Srotoshodhana, anti-inflammatory, antibacterial, etc., properties, which help to treat the disease Pratishaya.

### **Scope and Limitation:**

Study can be done on more patients and should be compare with other existing treatment. Instead of churna, it can be converted into oil based solution or nasal spray.

This study is done in single group. A combination of *Shodhana* and *Shamana* therapy will yield better and longer lasting effects.

### **Summary:**

In first chapter, Introduction of Pratishay described. Pratishyaya has been a major problem to the physicians since long back. Pratishyaya by word itself indicates that it is recurrent in nature and can be precipitated even due to trivial etiological factors. Vata is the main Dosha and Kapha Pitta and Rakta are associated Doshas.

In next chapter following aim and objectives are described.

Aim of study was to study the Effect of Pradhama Nasya in Kaphaj Pratishaya (Sinusitis). Objectives were to study the disease “Kaphaj Pratishyaya” in Ayurvedic and modern parlance and assessment of “Trikatu and Triphala Churna for Pradhama Nasya” in Kaphaj Pratishyaya.

In methodology details given about how study is being conducted.

Patients attending Panchakarma O.P.D of the hospital were included in the study as per inclusion criteria.

After complete Clinical examination and well consenting treatment was started. Mixture of Trikatu and Triphala Churna for Nasya was advised to the all eligible patients of Pratishyay. Dose for Pradhama Nasya was administered as 1 - 3 Muchchuti (250 mg – 750 mg). Pradhama Nasya were given for 7 days with the interval of one day as per patient’s Samyaka Shuddhi Lakshana. Follow up of patients were taken after 7 days of completion of treatment.

### **Scope and Limitation:**

Study can be done on more patients and should be compare with other existing treatment. Instead of churna, it can be converted into oil-based solution or nasal spray. This study is done in single group. A combination of *Shodhana* and *Shamana* therapy will yield better and longer lasting effects.

### **Conclusion**

Nasa Srava (Nasal Discharge) was most common symptoms observed in this

study followed by nasavarodha.

In the trial Group, regarding Symptoms Nasa Srava, Kshavathu, (Sneezing), Shirahshoola & Shirogaurav, Swarabheda and Kasa was found statistically highly significant.

Average relief in all symptoms was 69.7% and for each patients average percent relief was 70.74%.

So the Alternative Hypothesis is accepted here that there is difference in parameters of Pratishtayay by Pradhama Nasya in Kaphaj Pratishtaya (Sinusitis).

In this study none of the patient was unchanged due to interventions.

The drug can be administered along with any other medication for better improvement.

Scope and Limitation:

Study can be done on more patients and should be compare with other existing treatment. Instead of churna, it can be converted into oil based solution or nasal spray.

This study is done in single group. A combination of Shodhana and Shamana therapy will yield better and longer lasting effects.

#### References:

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