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**"A CLINICAL STUDY ON THE EFFECT OF KALINGAADI NAVANA
NASYA IN THE MANAGEMENT OF DUSTA PRATISHYAYA"**

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ABSTRACT

Pratishyaya is not treated properly or neglected, it causes diseases like Dusta Pratishyaya, Nasapaka, Nasashotha, Shiroroga etc. Now a days most of the people suffering from this disease due to lack of effective treatment, push the disease to recurrence & then to chronicity which leads to severe & complicated condition, which is difficult to treat & causes lot of complications like Badhirya, Andata & Gandhanasha. In Ayurvedic classics a detailed description of Pratishyaya & its chronic phase i.e Dusta Pratishyaya is available.

The features of the disease Dusta Pratishyaya in general are similar to that of Chronic Sinusitis in modern science. The disease characterized by Nasal blockage, Nasal discharge, Sneezing, Heaviness in Head, Halitosis. Sinusitis is a common problem among all age groups and is a leading cause of hospital visits worldwide. Approximately 40 million Americans are affected by sinusitis every year, and 33 million cases of chronic sinusitis are reported annually to the Centers for Disease control and Prevention. The incidence is almost same in India.

The Properties of Kalingadya yoga drugs having Tridoshashamaka, Tikshana, Kapha nisharaka, hence this yoga taken for the management of Dusta Pratishyaya. Nasya is the chief procedure to drain the doshas from shiras, so Nasya was selected as the chief shodhana procedure. In the view of above, to know the efficacy of Nasya with Kalingadi dravya Navana Nasya in Dusta Pratishyaya, has been planned.

By seeing overall effect of the therapy (and action of the drug) based on the clinical features and the parameters, we came to a conclusion that Kalingadya Navana Nasya shows better effect with 65.55% of result.

KEYWORDS: *Dusta Pratishyaya,, Kalingadya Navana Nasya, Chronic sinusitis*

INTRODUCTION

Dushta Pratishyaya is a chronic condition of Pratishyaya. In various classics defined as - Acharya Sushruta¹ and Acharya Vagbhatta² told that improper management in acute stage is the main factor that leads to Dushta Peenasa. In addition to this Acharya Charaka in Trimarmeeya Chikitsa told that Ahita Aharasevana during acute stage can lead to Dustha Pratishyaya³. On the basis of above description, it can be concluded that-

1. Dushta Pratishyaya is a chronic condition with more vitiated Dosha.
2. Improper management of acute stage can lead to this condition.

Table Showing the Lakshana of Dusta Pratishyaya by Various Acharyas:

Lakshana	Cha ⁴	Su ⁵	Vag ⁶	M.N ⁷
Nasaparikl eda	-	+	+	+
Nasa Shosha	+	-	+	-
Nasa Sudhdhi/Vi vriyate	-	+	+	+
Nasarodha	+	+	+	+
Mukha Daurgand	+	+	+	+

hya				
Gandha Agyanata	+	+	+	+
Akasmata Prakopa	-	-	+	-
Nasa Shopha	-	-	+	-
Puyopam a,Asita,Sa rakta, Grathita, Shleshma Sruti	-	-	+	-
Krimi	-	-	+	-
Jwara	+	-	+	-
Kasa,Shw asa	+	-	+	-
Ura Parswa vedana	-	-	+	-

These symptoms show involvement of all three Dosha. So, it can be said that Dushta Pratishyaya is a Sannipatika disease.

CHIKITSA OF DUSTA PRATISHYAYA⁸:

Acharya Sushruta has not clearly mentioned the line of treatment of Dushta Pratishyaya. Acharya Charaka advocated Sannipataja

Pratishyaya Chikitsa in Dushta Pratishyaya and Vagbhata has mentioned that the disease should be managed with the treatment similar to that of Rajayakshama and Krimi.

Nasya is the chief procedure to drain the doshas from shiras, so Nasya was selected as the chief shodhana procedure.

The drugs used in the preparation of the kalingadya navana nasya are; Kalinga, Hingu, Maricha, Laksha, Tulsi beeja, Vidanga, Vacha, Shigru beeja, Kusta, Katphala, Katu taila (sarsapa taila) and Gomutra. Kalingadya yoga is explained by chakradutta in peenasa context⁹.

The properties of Kalingadya yoga dravyas having Tridoshashamaka, Tikshana, Snigdha, Laghu, Ruksha guna, Ushana veerya, Kaphanisaraka, Vata kapha shamaka, Tikta, Katu rasa and Katu vipaka, Deepana,. hence this yoga used for Dusta Pratishyaya management.

Kalingadya taila provides nourishment to the nervous system where they can exert their vata kaphahara property. Kalingadya taila provides nourishment to the nervous system and helps in removing

irritation. Hence Kalingadya Navana Nasya was selected for the study.

METHODOLOGY

MATERIAL AND METHODS:

This study was conducted on 15 patients with classical sign and symptoms of Dusta Pratishyaya. To evaluate the efficacy of Kalingadya Navana Nasya in the management of Dusta Pratishyaya.

OBJECTIVES OF STUDY

3). Evaluation of the effect of Kalingadya Navana Nasya on Dusta Pratishyaya.

METHOD OF COLLECTION OF DATA

This is an open clinical study, in which 15 patients will be selected on the basis of simple randomized sampling method as per inclusive criteria.

RESEARCH DESIGN

Total 15 patients will be selected in study, and all 15 patients will be treated with Kalingadya Navana Nasya.

SOURCE OF DATA

- 1). Patients will be selected from college N K Jabshetty Ayurvedic Medical College attached hospital.
- 2). Ayurvedic classics, Journals, magazines, seminars, conferences, digital library and web sites.

3). Materials – Raw drugs will be collected from the Ayurvedic Pharmacy under the supervision of Dravya guna specialist. And medicine is prepared under the supervision of Rasashastra expert.

CRITERIA FOR SELECTION:

The cases were selected strictly as per the pre –set inclusion and exclusion criteria.

INCLUSION CRITERIA

- 1). Patients presenting with the signs and symptoms of Dusta Pratishyaya will be selected as explained in classics texts.
- 2). Subjects from either sex will be selected in the age group of above 16 yrs and below 60 years.
- 3). Subjects who are fit for Nasya karma.

EXCLUSION CRITERIA

- 1) Patients below 16 years and above 60 years of age.
- 2) Patients unfit for Nasya karma.
- 3) Chronic debilitating infectious diseases.
- 4) Cases of Nasal polyp and other organic deformities.

INVESTIGATIONS REQUIRED

- 1) CBP
- 2) Eosinophil count

- 3) X-ray of PNS
- 4) CT scan (if necessary)

CRITERIA FOR DIAGNOSIS

- 1) Nasa srava
- 2) Nasa Avarodha
- 3) Shirashoola
- 4) Gandha Ghrana nasha

TREATMENT SCHEDULE

Patients will be treated with kalingadya Navana Nasya for 7 days, 6 drops in each nostril.

INTERVENTION CHART

Sl.No.	PROCEDURE	PREPARATION	DURATION
1.	Purva karma	Sthanika abhanga (3-5 mins) with Tila taila, Sthanika taapa sweda.	1 to 7 days.
2.	Pradhan a karma	Kalinga, Hingu, Maricha, Laksha, Tulsi beeja, Katphala, Kusta, Vacha, Shigru beeja, Vidanga, Katu taila.	1 to 7 days, 6 drops in each nostril.
3.	Pashat karma	1.Kavala graha with luke warm water 2. Rest 3. Pathyapathya	

FOLLOW UP:

Patients will be advised to come on 7th and 14th day after the completion of therapy for 1st and 2nd follow up.

ASSESSMENT CRITERIA

Subjective and objective parameter will be assessed based on before and after treatment with appropriate statistical analysis.

PARAMETERS OF STUDY

Subjective Parameters:

- 1) Nasa srava
- 2) Nasa Avarodha
- 3) Shirashoola
- 4) Gandha Ghrana nasha

Objective Parameters:

- 1) Tendernes (over sinus area)
- 2) Trans illumination test

CLINICAL OBSERVATIONS:

The patients were analysed according to various factors like Age, Sex, Religion, Marital status, Educational, Socioeconomical status, Occupation, Surrounding, Prakruti, Diet, Sara, Samhanana, Satva etc of 15 patients details of these observations are shown in subsequent pages in tables and graphs for easy understanding.

In the present study total 15 patients of Dusta Pratishyaya were recorded & assesed according to the

standared performa. All 15 patients in were treated by Kalingadya Navana Nasya.

a) TABLE SHOWING AGE WISE DISTRUBUTION OF PATIENTS:

Age in Years	No. of Patients	Percentage %
16-30	06	40
31-45	06	40
46-60	02	13.33
61-75	01	06.67

Out of 15 patients, 6(40%) patients were of age group ranging from 16-30 years , 6patients (40%) 31 - 45 years , patient in age group ranging from 46-60 years were 02 (13.33%) and 01 patients (6.67%) were in 61-75 years age group.

b) TABLE SHOWING SEX WISE DISTRUBUTION OF PATIENTS:

Sex	No. of patients	Percentage %
Male	06	40
Female	09	60

Above observation shows incidence of dusta pratishyaya is maximum in female patients (60%) as compared to male 6 patients (40%).

c) TABLE SHOWING RELIGION WISE DISTRUBUTION OF PATIENTS:

Religion	No. of patients	Percentage %	House work	04	30.00%
Hindu	12	80.00%	Service	02	13.33%
Christian	02	13.33%	Business	03	16.67%
Muslim	01	6.67%	student	03	20.00%
			Labour	03	20.00%

Among 15 patients 12 patients (80.00%) of patients belong to Hindu community, 2 patient (13.33%) to Christian community and 1 patients (6.67%) belongs to Muslim community.

Out of 15 patients, 3(20%)patients were Students, 02 patients (13.33%) were doing Service, 3 patients (16.67%) were doing Business, 04 patients (30.00%) were Houseworks and remaining 3 patients (20.00%) were doing Labour.

d) TABLE SHOWING EDUCATION WISE DISTRIBUTION OF PATIENTS:

Education	No. of patients	Percentage %
Illiterate	04	26.27%
HSC	05	33.33%
UG	04	26.67%
PG	02	13.33%

In the present study, out of 15 patients, 4 (26.67%) patients were Illiterate, 05 (33.33%) patients had completed Higher secondary class ,4 patients (26.67%) were Under graduate and 2 patients (13.33%) were Post graduate.

f) TABLE SHOWING SOCIO-ECONOMIC WISE DISTRIBUTION OF PATIENTS:

Status	No. of patients	Percentage %
Upper	00	00.00
Upper Middle	07	43..33
Middle	05	40.00
Lower	03	16.67

Socio economic status in this study showed majority of patients belonged to Upper middle class i.e. 7 patients (43.33%), 5 patients (40.00%) were Middle class, 3 patient (16.67%) was lower class and no patient were in Upper class.

e) TABLE SHOWING OCCUPATION WISE DISTRIBUTION OF PATIENTS:

Occupation	No. of patients	Percentage %
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**g) TABLE N SHOWING
SURROUNDING WISE
DISTRIBUTION OF PATIENTS:**

Surrounding	No. of patients	Percentage %
Normal	03	20.00
Polluted	04	26.67
Dusty	06	40.00
Smoky	02	13.33

Among 15 patients 6 (40%) were having dusty surrounding, 4(26.67%) were having polluted, 2(13.33%) were having smoky and 3 (20%) patients were having normal surrounding.

**h) TABLE SHOWING DIET WISE
DISTRIBUTION OF PATIENTS:**

Diet	No. of Patients	Percentage %
Vegiterian	06	40
Mixed	09	60

Among 15 patients 6 patients (40%) had Vegiterian diet, while 9 patients (60%) had Mixed diet.

**i) TABLE SHOWING NIDRA WISE
DISTRIBUTION OF PATIENTS:**

Nidra	No. of patients	Percentage %
Sound	05	33.33
Disturbed	09	60
Good	01	6.67

Among 15 patients only 9 Patients (60%) were having disturbed sleep and 05 patients (33.33%) were

having sound sleep, 1(6.67%) had good nidra.

**j) TABLE SHOWING AGNI WISE
DISTRIDUTION OF PATIENTS:**

Agni	No. of patients	Percentage %
Tikshanagni	04	26.67
Vishmaagni	10	66.67
Mandaagni	01	6.66

In the present study, out of 15 patients, 10 patients (66.67%) had Vishama Agni, 1 (6.66%) had Manda Agni and 4 patients (26.67%) had Tikshna Agni.

**k) TABLE SHOWING KOSTHA
WISE DISTRIBUTION OF
PATIENTS:**

Kostha	No. of patients	Percentage %
Mrudu	02	6.67
Madhyam	06	40.00
krura	07	53.33

In assessment of kosta, 2 patients (6.67%) had Mrudu kostha, 12 patients (40%) had Madhyama kostha and 16 patients(53.33%) had Krura kostha.

**l) TABLE SHOWING PRAKRUTI
WISE DISTRIBUTION OF
PATIENTS:**

Prakruti	No. of patients	Percentage %
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Vata- pitta	06	40
Vata- kapha	07	46.67
Kapha- pitta	02	13.33

In this study the dominance of Vata-kapha Prakruti 7 patients (46.67%), 6 patients (40%) were of Vata- Pitta Prakruti and 02 patients (13.33%) belong to Kapha-pitta prakruti.

**m) TABLE SHOWING SARA WISE
DISTRIBUTION OF PATIENTS:**

Sara	No. of patients	Percentage %
Pravara	00	00.00
Madhyama	14	93.33
Avara	01	6.67

In this study majority of the patients, 14 (90%) had Madhyama Sara, 1 patients (10%) had Avara Sara and no one in Pravara Sara.

**n) TABLE SHOWING SATVA WISE
DISTRIBUTION OF PATIENTS:**

Satva	No. of patients	Percentage %
Pravara	00	00.00
Madhyama	11	73.33
Avara	04	26.67

In this study majority of the patients exhibited Madhyama Satva 11 patients (73.33%), 4 patients (26.67%) are of Avara Satva and no one patient to Pravara Satva.

**o) TABLE SHOWING PRAMANA
WISE DISTRIBUTION OF
PATIENTS:**

Pramana	No. of patients	Percentage %
Pravara	02	13.33
Madhyama	10	66.67
Avara	03	20

In this study most of the patients, 10 (66.67%) had Madhyama pramana, 3 patients (20.00%) were Avara Pramana and 2 patients (13.33%) were of Pravara Pramana.

**p) TABLE SHOWING SAMHANA
WISE DISTRIBUTION OF
PATIENTS:**

Samhana	No. of patients	Percentage %
Pravara	00	00.00
Madhyama	12	80
Avara	03	20

In this study most of the patients, 12 (80%) had Madhyama , 3 patients (20%) were of Avara samhana, no one patient to pravara samhana.

**q) TABLE SHOWING SATMYA
WISE DISTRIBUTION OF
PATIENTS:**

Satmya	No. of patients	Percentage %
Pravara	00	00.00
Madhyama	13	86.67
Avara	02	13.33

In this study most of the patients, 13 (86.67%) had Madhyama satmya 2 patients (613.33%) were of Avara satmya, no one patient to Pravara satmya.

**r) TABLE SHOWING
AHARASHAKTI WISE
DISTRIBUTION OF PATIENTS:**

Aharashakti	No. of patients	Percentage %
Pravara	00	00
Madhyama	13	86.67
Avara	02	13.33

In this study majority of the patients exhibited Madhyaa Aharashakti 13 patients (86.67%), 2patients (13.33%) are of Avara Aharashakti .

**s) TABLE SHOWING
VYAYAMASHAKTI WISE
DISTRIBUTION OF PATIENTS:**

Vyayamashakti	No. of patients	Percentage %
Pravara	01	6.67
Madhyama	09	60
Avara	05	33.33

**t) TABLE SHOWING
CHRONICITY WISE
DISTRIBUTION OF PATIENTS:**

Chronicity	No. of	Percentage
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	patients	%
>1year	06	40
1-5 years	07	46.67
5-10 years	02	13.33

In this study out of 15 patients, 6(40%) were suffering from less than 1year, 7 (46.67%) patients were suffering from 1 to 5 years and 2(13.33%) patients was suffering from 5-10 years.

**u) TABLE SHOWING
OBSERVATION ON
SYMPTOMOTOLOGY**

SYMPTOMS	No. Of Patients	%
Nasa srava	15	100
Nasa avarodha	15	100
Shirashoola	14	93.34
Gandha ghrana nasha	6	40

Maximum number of the patients i.e.15 (100 %) had Nasasrava and Nasaavarodha as their chief complaints.14 (93.33 %) patients had Shirashoola and 6(40.00 %) patients had complaints of Gandha ghrana nasha.

**v) TABLE NO SHOWING
DISTRUBUTION OF PATIENTS
ON NASA SRAVA**

Nasa srava	No.of Patients	Percentage %
Watery	05	33.33
Thick	06	40

Purulent	01	6.67
Yellow	03	20

6 (40 %) of patients had thick nasal discharge; followed by 5(33.33 %) had watery discharge, 3(20 %) patients had yellow discharge, 1(6.67 %) patients had purulent discharge.

80 % patients had right and left Frontal sinus Tenderness on palpation, 66.67 % patients had right and left Maxillary sinus Tenderness. Amongst 30 patients 6.66% patients had right and left Ethmoid sinus Tenderness respectively.

**w) TABLE SHOWING
DISTRUBUTION OF PATIENTS
ON TENDERNESS OVER
SINUSES**

Sinuses		No. of patients	%
Frontal	Right	12	80.00
	Left	12	80.00
Maxillary	Right	10	66.67
	Left	10	66.67
Ethmoid	Right	1	6.67
	Left	1	6.67

**x) TABLE SHOWING
DISTRUBUTION OF PATIENT
ON TRANS ILLUMINATION
TEST**

Transillumination	No. of patients	%
Present	10	66.67
Absent	05	33.33

Maxium number i.e 66.67% of patients had Transillumination Test present and 33.33% patient had absent Transillumination Test.

RESULTS :

i) Table Showing Effects of Kalingdya Nasya on Subjective Parameters

Sl. no	Sympt oms	B.T Mean \pm S.E	Mean \pm S.E AT & AF		D f	%	t-value	p-value	Remarks
1	Nasa srava	3.0667 \pm 0.1533	AT	1.5333 \pm 0.1919	14	50.00%	6.24	<0.001	HS
			AF	1.2000 \pm 0.1746	14	60.87%	8.0352	<0.001	HS
2	Nasa	2.6667	AT	1.2	1	52.50%	5.03	<0.001	HS

	avarodha	± 0.2108		667 \pm 0.1 817	4				
			AF	1.0 000 \pm 0.0 976	1 4	62.50%	7.1743	<0.001	HS
3	Shirashoola	2.5333 ± 0.2153	AT	1.2 667 \pm 0.1 817	1 4	50.00%	4.49	<0.001	HS
			AF	0.6 667 \pm 0.1 594	1 4	73.68%	6.5816	<0.001	HS
4	Gandha ghrana nasha	2.2667 ± 0.1182	AT	1.0 000 \pm 0.1 690	1 4	55.88%	6.14	<0.001	HS
			AF	0.8 000 \pm 0.1 069	1 4	64.71%	9.2033	<0.001	HS

The statistical evidence shows that there was highly significant difference between before treatment and immediately after treatment and after follow up $P < 0.01$ on Nasa srava.

The statistical evidence shows that there was significant difference

between before treatment and immediately after treatment and highly significant difference after follow up $P < 0.01$ on Nasa avarodha.

The statistical evidence shows that there was highly significant difference between before treatment

and immediately after treatment and after follow up P<0.01 on Shirashoola.

The statistical evidence shows that there was significant difference

between before treatment and immediately after treatment and after follow up P<0.01 on Gandha ghrana nasha.

ii) Table Showing Effects of Kalingdya Nasya on Objective Parameters.

Sl. no	Objectives	B.T Mean \pm SE	Mean \pm SE AT & AF	D f	Percentage	t-value	p-value	Remark
1	Trans illumination	1.7333 \pm 0.1309	AT 0.8000 \pm 0.1069	14	50.00%	4.73	<0.001	HS
			AF 0.4667 \pm 0.1333	14	70.83%	6.06	<0.001	HS
2	Tenderness	1.8000 \pm 0.1069	AT 0.7333 \pm 0.1182	14	59.26%	6.69	<0.001	HS
			AF 0.6667 \pm 0.1260	14	62.96%	6.85	<0.001	HS

significant difference after follow up P <0.01 on Trans illumination test.

The statistical evidence shows that there was significant difference between before treatment and immediately after treatment and highly

The statistical evidence shows that there was significant difference between before treatment and immediately after treatment and highly

significant difference after follow up $P < 0.01$ on Tenderness.

DISCUSSION ON OBSERVATIONS:

The observations were made on age, sex; occupation, socio-economic status etc. were of self explanatory. The observations made in this study are analysed as follows.

Age wise: 6(40%) patients were of age group ranging from 16-30 years , 6patients (40%) 31 - 45 years , patient in age group ranging from 46-60 years were 02 (13.33%) and 01 patients (6.67%) were in 61-75 years age group. Chronic sinusitis can affect any age group, but young and middle age group persons are more affected. In this study also the same observations were found. The criteria of age have not much to do with the prevalence but prognosis depends upon age up to some extent.

Sex wise: Majority of the patients were female i.e.9 (60%)patients and rest patients were male 06 (40%). In present study female were affected more than male, may be because females are more exposed to fumes by staying long period in kitchen and also exposed to dust in keeping cleaning

the home etc. However the severity of the disease is same in the both sexes.

Religion: Maximum number of the patients i.e.12 (80.00%) was Hindu. No relation of religion with the incidence of chronic sinusitis can be established. since the proportion of patient intake is not taken in the study is not according to demographic study.

Educational status: 4 (26.67%) patients were uneducated, 05 (33.33%) patients had completed secondary, 4 patients (26.67%) were graduate and 2 patients (13.33%) were post graduate. This suggests their less awareness towards health.

Occupation wise: 4 (30%) patients were house wives. It may be because of females are in maximum numbers in this study. While doing house work they easily get exposed to dust, water and fumes etc. Thus incidence was high in those patients.

Socio-economic status: Majority of the patients 7(43.33 %) belonged to upper middle class followed by 40 % to middle class. Middle class peoples are mostly affected by the disease, since they are more exposure to external environment like dust, pollution etc.

Surrounding: Patients 6 (40%) were having dusty surrounding, 4 (26.67%) were having polluted, 2 (13.33%) were having smoky and 6 (20.00%) patients were having normal surrounding. Basing on the residence and working place, rajo Sevana (exposure to dust) is one of the Sadyojanaka cause of Prtishyaya, So recurrent acute episodes are very common due to continuous and repeated exposure, if these episodes remained untreated, turn into chronic sinusitis.

Diet: Majority of the patients i.e 9(60%) were taking Mixed diet, however the role of diet in this sample is not much evident may be because of semi urban and cosmopolitan nature.

Sleep: Disturbed sleep was observed in 9(60%) of the patients. This may be due to the nasal blockage and rhinorrhoea. The continuous disturbed sleep will make the disease to progress.

Agni: Majority of the patients i.e.10 (66.67 %) were having Vishmagni. This Kind of Agni sometimes digests the food properly and sometimes not. The Rasa Dhatu made from improper

digestion will not be able to provide sufficient nutrition, so such patients may have lower immunity in comparison to the healthy one. Vishamagni will also cause Ama formation, which is one of the important cause for Samprapti of the disease.

Koshta: Majority of patients i.e. 53.33 % were having Krura Koshta. No any influence on study.

Deha Prakriti: Maximum number of patients i.e 7 (46.67%) was having Vatakapha Prakruti. This Prakruti definitely plays an important role in the path physiology of the disease. Short term exposure to etiological factor can cause sudden manifestation of the disease in this group.

Sara: Maximum patients i.e. 14(93.33%) were observed with Madhyama Sara. The incidence was high because they may get the disease even after exposure to some minute etiological factors.

Samhanana & Pramana : Maximum patients i.e.12(80%) and 10(66.67%) were observed with Madhyama Samhanana and Madhyama Pramana. It may be said that a weak Samahana & Pramana is always liable to invites

several disease on account of lowered physical strength and lowered resistance against disease.

Satwa: Madyama Satwa was found in 11(73.33%) of the patients followed 4 (26.67%)Avara Satwa mind will certainly play a role in the progression of the disease.

Ahara Shakti: Maximum patients i.e. 13(86.67 %) were observed with Madhyama Abhyavarana Shakti. Proper Agni Bala is very essential for proper Dhatu Nirmana and Bala Vridhdhi.

Vyayama Shakti: Maximum patients i.e.9(60 %)were observed with Madhyama Vyayama Shakti. Vyayama Shakti reflects upon the Dhatu Sarata and Samhanana which are as seen earlier.

Chronicity: Maximum i.e.7(46.67%) patients were having chronicity of 1-5 years. 6(40%) patients were having the disease since 1 year. 2(13.33%) were having chronicity of 5-10 years. This factor directly influences the prognosis. So the chances of getting total cure will be decreased as the disease become more chronic, because of more tissue damage.

Chief complaints: Majority of the patients i.e. 15(100 %) apatients had complaints of Nasarava(Nasal dischagge) and Nasa Avarodha (nasal obstruction). The inflammation of nasal and sinus mucosa causes hyperemia, exudation of fluid and increased activity of serous and mucous glands. This causes nasal discharge. Increased blood flow due to infection causes oedema of nasal and sinus mucosa which results in nasal obstruction. Deviated Nasal septum and hypertrophied turbinates worsen the conditions like Nasasrava and Nasavarodha. Next Maximum i.e. 14(93.34 %) patients had Shirashoola (headache) as their chief complaint. Due to retention of the secretions in sinuses, one kind of pressure is developed which feels like heaviness and pain to the patients. However in chronic phase of the disease the severity will be less but acute or chronic attacks can aggravate this condition. This Shirashoola is not directly mentioned as a symptom of Dushta Pratishyaya but can be taken as Pratishyaya Janya Shirashoolo. 6(40%) patient had Gandha ghrana nasha thus Smell perception is done by

olfactory receptors situated at olfactory bulb. If the smell perception is obstructed due to oedema of mucosal lining, it can be restored by reducing inflammation. But if the olfactory epithelium is destroyed once cannot be restored.

Nasa srava: 6(40.00%) patients had thick nasal discharge, followed by 5 (33.33%) had watery discharge. 3(20 %) patients had yellow discharge and 1(6.67 %) patients had purulent discharge. This data supports the fact that in Dushta Pratishyaya there will be Puyopam- Grathita Srava. (As.H.Ut.19/9, 11, 12).

Sinus examination: 12(80.00 %) patients had right and left frontal sinus tenderness, 10(66.67 %) patients had right and left maxillary sinus tenderness on palpation and 1(6.67 %) patients had right and left Ethmoid sinusitis respectively. All these observations point out that anterior group of sinuses are affected more than posterior group.

Mode of action of Kalingadya Navana Nasya: We preferred Kalingadi dravya administration in the form of Navana Nasya in thaila base to have smooth elimination of doshas

without causing much damage to the mucosal surfaces. It also helps in nourishing the dhatus concerned with Urdhwajatrugata Vikaras. Since Navana Nasya is Shamana Nasya can be given after food. It pacifies the Vata due to the Brumhana effect of the sneha. The drug used for Nasya is of mridu paka which maintains the water solubility for diffusing through Olfaction epithelium and lipid solubility for interacting with the lipid nature of morbid factors. All these factors contribute well for the specific ability of Sneha Nasya in stimulating the brain through olfactory pathway. Since its absorption is through the nasal mucosa it has the immediate effect on the affected part so Nasya karma is considered as the best. Kalingadya taila provides nourishment to the nervous system as well as mucosal layer where they can exert their Vata kaphahara property. Kalingadya taila provides nourishment to the nervous system and helps in removing irritation and eliminating the morbid factors. It may act as an anti-inflammatory agent also. On this nasal administration, it reaches Shirogata indriya and causes Vatashamaka and Balya.

DISUCUSSION ON RESULT

The statistically significant relief was observed in Nasasrava, Nasaavarodha, Shirashoola and Gandha ghrana nasha symptoms. The administration of Kalingadya Navana Nasya helped in reduction of inflammation and infection, and thus relieved, Nasaavarodha due to oedema and Nasasrava due to infection and over activity of mucous secreting glands. When both inflammation and infection are checked, the sinuses get proper drainage and ventilation, Thus Shirshoola was reduced. In symptom of Gandha ghrana nasha, the Smell perception is done by olfactory receptors situated at olfactory bulb. If the smell perception is obstructed due to oedema of mucosal lining, it can be restored by reducing inflammation. But if the olfactory epithelium is destroyed once cannot be restored. Hence, the Kalingadi drugs having the Tikshana ushna properties the therapy acts locally and helped in reduction of oedema. Thus the symptoms showed better result in all symptos, because of Kalingadya Navana nasya, the lipid soluble drugs attain higher concentration in the membrane and

diffuses quickly. Drops spread more extensively than spray, churna etc. Nasya Karma, as drainage of retained secretions is Facilitated by local Swedana and Aushdha instillation. This helps in early and better improvement in local pathology. The overall effect of therapy was 65.55%.

CONCLUSION :

- If the recurrent attack of Pratishyaya continues for months and years, then the improperly attended disease will turn to a chronic phase with much complication called Dushta Pratishyaya.
- On the basis of similarity between the signs, symptoms, complications, prognosis and chronicity, chronic sinusitis can be said as Dushta Pratishyaya, basing on the lakshanas mentioned in almost all samhitas.
- Nasya is the chief Sodhana procedure selected because it is the one and only procedure which can perform Uttamanga Suddhi where dushta pratishyaya is manifested.
- Majority of ingredients of Kalingadya yoga shows Tikta rasa, Katu rasa, Laghu guna, Ushna veerya and Katu Vipaka which can produce Tridosha shamaka, srotoshodhaka, Kapha

nissaraka and Chedana of dushta Kapha.

- Dusta Pratishayaya is a chronicity related problem because of mild to moderate nature of the disease and may be low and middle socio economical conditions.
- Peak incidence of the disease is found among the young and middle age.
- In this study Vatakapha prakruti persons are more prone to Dusta Pratishyaya which is also supported by Ayurvedic classics.
- Kalingadya Navana Nasya have shown statistically significant results in all the parameters.

SUGGESTIONS FOR FUTURE STUDY

: However the sample is small, further studies are required in long term duration of course i.e. more than 7 days along with large sample (scale) of the patients to assess and to get better results. To prove scientifically the exact mode of action, highly equipped Research centers are

required for the global acceptance of Ayurvedic therapies.

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