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## Management Of *Suryavarta* With *Katphala Churna Nasya* And *Danti Pravala Yoga* W.S.R. To Frontal Sinusitis

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### ABSTRACT:

*Suryavarta* is one of *Shiroroga* described by *Acharyas* characterised by headache which start early in morning and increases as day passes and become maximum at noon and is a *Tridoshaja vyadhi*. As its symptoms resemble frontal headache this was selected for study . The present study was done on 29 patients of *Suryavarta* , who were grouped into three groups with 9 patients in first group, 9 patients in second group and 11 patients in third group. Group I was treated with *Katphala churna nasya*, Group II was treated with *Danti pravala yoga* as oral drug and in Group III both therapies was given. The signs and symptoms were studied before and after the treatment. Results of study show better results in Group III as 50% patients were markedly improved, 40% were mildly improved and 10% were cured.

**Keywords:** *Suryavarta*, Frontal headache, *Katphala churna*, *Danti pravala yoga*.

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## INTRODUCTION:

Since the earliest time, all human societies have developed their own body of beliefs and practices which aim to promote and maintain health and cope with disease. *Ayurveda*, the ancient Science of life which can be traced back to period of Vedas is considered as the best and worthy medicine, to preserve and to nourish the most precious gift of nature that is health. *Ayurveda* which originated from *Brahma* was later on divided into eight branches<sup>1</sup> to make it easier and approachable to ordinary man. *Shalaky Tantra*<sup>2</sup> is one of these eight branches which deals with diseases of precious part of body above the clavicular region i.e. the diseases occurring in nose, ear, eyes, throat and head etc. The *Ayurvedic* written authentic documents have emphasized on various types of *Shiroroga*<sup>3</sup> which are similar as far as

feeling of sense of pain is concerned. The intensity and character of pain although differ according to different *Doshic* involvement and there may be other associated symptoms influenced by predominance of causative Doshic factors. The disease “*Suryavarta*” which is the subject of present study is the disease of *Shira*. Other *Shiroroga* mentioned by *Acharyas* are *Vatika*, *Pittaja*, *Kaphaja*, *Raktaja*, *Sannipataja*, *Kasyaja*, *Krimija*, *Anantavata*, *Ardhavabhedaka*, *Shankhaka*, *Shirakampa* etc. In *Suryavarta* due to *Nidana Sevana Dushti* of various *Doshas* leads to this disease. According to *Acharya Charaka* vitiated *Vata* cause *Rakta dushti*<sup>4</sup>, according to *Acharya Sushruta* this is *Tridoshaja* disease<sup>5</sup> with *Vata* and *Pitta* predominance, according to *Acharya Vagbhatta* it is due to *Pitta-Anubandhi*

*Vata*<sup>6</sup>. According to *Acharya Sushruta* in *Suryavarta* headache which start mildly in region of eyes and eyebrow, gradually increases with sunrise, subsides on sunset, sometimes relieved by cold measures and sometimes by hot measures<sup>7</sup>. All these symptoms resemble to frontal sinusitis which is the inflammation of the lining of mucous membrane of Frontal sinus. As treatment is concerned there are many drugs in modern medicine but due to their many ill effects and chronicity of disease there is need of effective treatment for this disease. In the present trial “ Management of *Suryavarta* with *Katphala Churna Nasya* and *Danti Pravalva Yoga* with special reference to Frontal sinusitis” *Danti Pravalva Yoga* used as oral drug and *Katphala Churna* as *Nasya* which is mentioned as best treatment for *Udharvajatrugata vikara*<sup>8</sup>. Assessment of effect was done on the basis of subjective and objective criteria.

### AIMS AND OBJECTIVES:

- To advise preventive measures to check the occurrence of disease in individuals.
- To standardize an *Ayurvedic* line of treatment which may prove effective in management of *Suryavarta*.

- To evaluate the effect of *Nasya Karma* on the basis of line of treatment mentioned in *Ayurvedic* texts.
- To compare effect of *Nasya karma* with oral drugs.
- To explore the classical texts for the description of *Suryavarta* in relation to Frontal sinusitis of modern science.

### MATERIAL AND METHODS:

The proposed study was planned to study the detailed clinical profile of *Suryavarta* with special reference to frontal sinusitis and to evaluate the response of *Nasya karma (Katphala Nasya)* and an *Ayurvedic* compound ( *Danti Pravalva Yoga*) in *Suryavarta*.

#### a) MATERIALS:

A total no. of twenty nine patients of *Suryavarta* were selected from *Shalakya O.P.D./I.P.D.* of hospital affiliated to *Rajiv Gandhi Govt. Post Graduate Ayurvedic College, Paprola* after obtaining their consent. Case selection was random, regardless of age, sex, occupation and socio economic considerations, habitat, cast/race, temperament (*Prakriti*) etc.. Out of registered twenty nine patients only twenty two were followed up for the total

trial period, seven patients left the treatment before completion of course and were excluded from the study. The history of the Patients subjected for present work was carefully recorded giving special emphasis to the age, sex, occupation, marital status, habitat, exact mode and time of onset of headache, stating the site, duration of the illness and other associated symptoms. The family history was also recorded to find out whether the patients included for study report of the same clinical problem in their blood relation. History of past illness was also recorded. The diagnosis was made according to the signs and symptoms mentioned in *Ayurvedic* as well as modern classics.

#### **CRITERIA OF DIAGNOSIS:**

A special proforma was prepared incorporating all the signs and symptoms based on both *Ayurvedic* as well as modern description. All the points in the perspective of *Dosha, Dushya, Srotasa* and *Agni* on *Ayurvedic* line were also included in this proforma. The patients were diagnosed on the basis of signs and symptoms of *Suryavarta* (Frontal Sinusitis). The diagnosis was confirmed on the basis of 'X'-ray findings.

#### **• Subjective Criteria:**

The criteria of diagnosis of *Suryavarta* was based in signs and symptoms of *Suryavarta* described in texts i.e.

1. Frontal headache which shows characteristic periodicity i.e. starts with '*Suryodaya*' gradually increases , reaches its peak by about midday and then start subsiding.
2. Tenderness on floor of frontal sinus just above the medial canthus causes exquisite pain.
3. Nasal discharge seen high up in anterior part of middle meatus. This may be absent if ostium is closed with no drainage.
4. Inflamed nasal mucosa in middle meatus.

#### **• Objective criteria:**

It will be assessed by 'X' ray of paranasal sinuses taken in Water's view. Opacity of the affected sinus or fluid level can be seen.

**a)METHOD OF STUDY:** The present study was a clinical study. Most of the study was done in outdoor patient department. This study was carried out in 29 patients . The selected patients were

randomly divided into three groups named as Group I, Group II, Group III.

Group I : Total nine patients were included in this group and were given *Katphala Churna Nasya* for one month duration.

Group II : This group also includes nine patients and were kept on oral administration of *Danti- Pravala Yoga* for one month duration.

Group III: A total of 11 patients were studied in this group . They were given *Danti Pravala Yoga* as oral administration along with *Katphala Churna Nasya* for the same duration and were followed up after 15 days.

#### **INCLUSION AND EXCLUSION CRITERIA:**

- **Inclusion Criteria:** All the patients of ‘*Suryavarta*’ presenting signs and symptoms as per described in our texts were selected from O.P.D. of Hospital affiliated to Rajiv Gandhi Govt. Post Graduate *Ayurvedic* College, Paprola. Written consent of patients was taken before inclusion trial. They were briefed about the

entire research plan before taking consent.

- **Exclusion Criteria:**

1. Patients not willing for trial.
2. Patients of any malignancy.
3. Patients of hypertension.
4. Patients of head injury or accidental cases.
5. Patients presenting with complications of Sinusitis.

#### **ASSESSMENT CRITERIA:**

The patients treated in trial groups were assessed by presence and absence of signs and symptoms before and after the treatment. Symptomatic relief obtained by the treatment given was assessed periodically after every seven days of initial scoring till the completion of treatment. Results were noted on the basis of cured/markedly improved/mildly improved/unchanged and on the basis of clinical improvement. Scoring method adopted is as follow:

| <b>1-HEADACHE</b>   | <b>GRADE</b> |
|---|--------------|
| No headache   | 0            |
| Occasional headache but patient is able to do usual work    | 1            |
| Continuous headache but patient is able to Do usual work    | 2            |
| Continuous headache which hampers Routine work              | 3            |
| Patient is unable to do any work                            | 4            |
| <b>2-NASAL DISCHARGE</b>                                    |              |
| No discharge  | 0            |
| Occasional <i>Srava</i> not affecting routine work          | 1            |
| Continuous <i>Srava</i> affecting routine work              | 2            |
| <b>3-TENDERNESS ON FLOOR OF FRONTAL SINUS</b>               |              |
| No tenderness   | 0            |
| Wincing of face on pressure                                 | 1            |
| Wincing of face on pressure and Withdrawl of affected part  | 2            |
| Patient resist to touch                                     | 3            |
| <b>4-HYPERTROPHY OF TURBINATES</b>                          |              |
| No hypertrophy  | 0            |
| Mild hypertrophy but not interfering in respiratory passage | 1            |
| Moderate hypertrophy causes some difficulty in breathing    | 2            |

|  |   |
|--|---|
| Severe hypertrophy and causing nasal blockage            | 3 |
| <b>5-INFLAMMATION OF NASAL MUCOSA</b>                    |   |
| No congestion  | 0 |
| Mild congestion in middle meatus only                    | 1 |
| Congestion in middle as well as inferior meatus          | 2 |
| Congestion in whole nasal mucosa                         | 3 |
| <b>6-HAZINESS IN FRONTAL SINUS IN 'X'- RAYS FINDINGS</b> |   |
| No haziness  | 0 |
| Only thickening of mucosal linings                       | 1 |
| Haziness in whole frontal sinus                          | 2 |
| Haziness in all the sinuses                              | 3 |

### OVERALL ASSESSMENT OF THE THERAPY

To assess the overall effect of therapy the results are classified into four groups as listed below:

#### I COMPLETELY CURED GRADE - I

1. No headache.
2. No nasal discharge.
3. No tenderness on floor of frontal sinus.
4. No inflammation in nasal mucosa.
5. No hypertrophy of turbinates.
6. Completely clear sinuses on 'X'-ray examination.

## II-MARKEDLY IMPROVED GRADE - II

1. No headache.
2. Nasal discharge reduced upto 70-90%.
3. Very mild tenderness on floor of frontal sinus indicated by wincing of face on pressure.
4. Mild hypertrophy of turbinates, not interfering in respiratory passage.
5. Mild congestion in middle meatus only.
6. 'X'-rays showing only thickening of frontal sinus mucosa.

## III MILD IMPROVEMENT GRADE-III

1. Occasional headache which does not interfere with routine work of patient.
2. Nasal discharge reduced upto 40%.
3. Mild tenderness on floor of frontal sinus.
4. Moderate hypertrophy of turbinates causing some difficulty in breathing.
5. Congestion in lateral wall of nose.
6. Haziness in frontal sinus present in 'X'-rays.

## IV -NO IMPROVEMENT OR UNCHANGED GRADE-IV

Patient not fulfilling any of the criteria of Grade-I, II or III will be allotted Grade IV.

## DRUG REVIEW

### 1. *Katphala Churna* :

Ingredient used in this formulation is *Katphala* which have following properties<sup>9</sup>:

|               |                         |
|---------------|-------------------------|
| <i>Rasa</i>   | <i>Kshaya, Teekshna</i> |
| <i>Guna</i>   | <i>Laghu, Teekshn</i>   |
| <i>Virya</i>  | <i>Ushna</i>            |
| <i>Vipaka</i> | <i>Katu</i>             |

It alleviates *Kapha* and *Vata Dosha* but aggravates the *Pitta Dosha*.

**Method of preparation:** The preparation include crushing of *Katphala* ( *Myrica esculenta* ) bark to fine powder.

### 2. *Danti Praval yoga*:

#### a. *Godanti*<sup>10</sup>: ( $\text{CaSO}_4 \cdot 2\text{H}_2\text{O}$ )

It is a compound of Calcium hydroxide and Sulphur. Its purification is done by boiling it in lemon juice or *Dronipushpa Swarasa* for one and a half hour or by washing it with boiled water. It is then prepared for medicinal use by being calcined in covered crucible and



finally reduced to powder. *Godanti Bhasma* is *Shita Guna* predominant, useful in *Pittaj jwara, Jirna Jwara, Swash, Kasa*, having *Balya* and *Deepana* properties.

***b. Pravala*<sup>11</sup>: ( *Corallium rubrum* )**

One of the nine *Ratna* described by *Acharyas*. It is of animal origin (*Pranij Ratna*) and have following properties:

*Rasa*                      *Madhura (Amla anurasa)*

*Guna*                      *Laghu, Shita, Snigdha*

*Virya*                      *Shita*

*Vipaka*                      *Madhura*

*Doshaghanata*      *Tridoshghana*  
*especially Kaphapittaghana*

*Pravala* is purified by boiling it for three hours in *Tanduliya-patra Swarasa* filled *Daulayantra*. According to *Ras Ratna Samuchaya* only *Shodhan* is sufficient for *Ratna*. *Marana* loses its properties.

*Pravala Bhasma* is prepared by soaking it in lime juice and then putting it into fire and calcining it and finally reducing it to fine powder.

It is useful in *Kshaya, Kasa, Raktpitta* etc. and having *Vishghana, Bhutshaman, Deepana, Pachana* properties. In this trial

*Bhasma* were purchased from *Dhanwantri Ayurvedic Pharmacy, Amritsar* in prepared form.

**GROUP, DOSE AND DURATION:**

**Group-I**

|                          |                                  |
|--------------------------|----------------------------------|
| <i>Katphala Churna</i> - | For <i>Nasya</i>                 |
| Dose                     | - 125mg once<br>a day in morning |
| Duration                 | - one month                      |
| Follow up                | - 7 <sup>th</sup> day            |

**Group-II**

*Danti Pravala Yoga* - Oral  
administration with luke Warm water two times per day

|                       |                     |
|-----------------------|---------------------|
| Dose                  |                     |
| <i>Godanti Bhasma</i> | 500mg               |
| <i>Pravala Bhasma</i> | 250mg               |
| Duration              | One month           |
| Follow up             | 7 <sup>th</sup> day |

**Group-III**

*Katphala Churna* as *Nasya* and *Danti Pravala yoga* for oral administration with

same dose and duration as in group I and II with follow up after 15 days.

### STATISTICAL ANALYSIS:

The information regarding demographic data was given in percentage. The scoring of criteria of assessment was analysed statistically in terms of mean values of B.T. (Before treatment), A.T. (After treatment), S.D. (Standard deviation), S.E. (Standard error). The effect of therapy in all three groups was assessed by applying unpaired 't' test. The results obtained were considered highly significant for  $p < 0.001$  or  $< 0.01$ , significant for  $p < 0.05$  and insignificant for  $p > 0.05$ .

### OBSERVATION:

In present study maximum no. of patients 27.6% were of age groups 16-25 years, were females (65.5%), 96.5% were Hindu, 62.1% of patients were household workers, maximum no. of patients (37.93%) were having primary education, 20 patients (68.9%) were married, 26 patients (89.6%) were belonging to middle class society, 20 patients (68.9%) belonged to rural area, 20 patients (68.9%) were vegetarian, majority of patients i. e. 96.5% were having no addiction, 48.3% of patients were having regular bowel habits, maximum no. of

patients (72.4%) were of *Vata-Pittaja Prakriti*, Majority of patients were having *Madhyama Sara* (69%), *Madhyama Samhanana* (82.8%), *Madhyama Satva* (82.2%), *Madhyama Satmaya* (72.4%), *Madhyama Vyayama Shakti* (72.4%), *Madhyama Abhyarana* and *Jarna Shakti* (79.3%, 75.9%). All the patients belong to *Madhyama Vaya*. Frontal headache was found in all 100% patients along with tenderness on floor of affected frontal sinus and hypertrophy of turbinates. Nasal discharge was found in 18 patients (62.1%) while nasal blockage was found in 11 patients (37.9%). Associated DNS was found in 10 patients (34.5%).

### EFFECT OF THERAPY

Effect of *Katphala Churna Nasya* : To find out the effect of *Katphala Churna Nasya* 9 patients out of which 3 patients did not turn for follow up and remaining 6 were treated and adjudged on various parameters of assessment criteria and results were derived after executing statistical analysis.

Statistically Highly Significant relief ( $p < 0.001$ ) was found in turbinate hypertrophy (%age relief=46.8%).

Statistically Significant relief ( $p < 0.01$ ) was found in Frontal headache (%age relief=56.18%), on tenderness (%age relief=57.08%), on Nasal discharge (%age relief=60%).

Effect of *Danti Pravala Yoga*: Also in 9 patients out of which 3 dropped out and remaining six were given *Danti Pravala yoga* and results were derived after statistical analysis as:

The result was statistically Highly significant ( $p < 0.001$ ) on Frontal headache (%age relief=78.9%), on tenderness (%age relief=68.9%), on nasal discharge (%age relief=64.7%) and statistically significant ( $p < 0.01$ ) on turbinate hypertrophy (%age relief= 56.2).

Effect of Combined therapy: This group were having 11 patients out of which 1 patient discontinued the treatment and effect of combined therapy was analysed in 10 patients as:

Results were statistically highly significant ( $p < 0.001$ ) in Frontal headache (%age relief=82.75%), reduction in tenderness on floor (%age relief=69.2%), nasal discharge (%age relief=66.7%), turbinate hypertrophy (%age relief=56%).

### Comparative study:

- Frontal headache: Highly significant results ( $p < 0.001$ ) in third group (%age relief=82.75%) followed by second group (%age relief=78.9%) and significant results ( $p < 0.01$ ) in third group (%age relief=56.18%).
- Tenderness on floor of Frontal sinus: Show significant results in Second and Third group as compared to first group. On comparison of first and second group second group had significant effect in comparison to first group, third group also had statistically significant result on first group. There is no significant difference between second and third group which show that these two groups have almost same effect on this sign.
- Nasal discharge: Statistically highly significant in second group ( $< 0.001$ ) than the first group ( $p < 0.01$ ) but statistically there was no difference between the two groups. In third group result was highly significant with  $p < 0.001$  but on comparison with first and second group no significant difference was found which shows that

all the three groups have almost equal effect on this sign.

- Turbinate hypertrophy: Result was highly significant in third group ( $p < 0.001$ ) in comparison to second group ( $p < 0.01$ ).

In third group also, highly significant results were found with  $p < 0.001$ , but on comparison of three groups no significant difference was found which show same effect of all three therapies on turbinate hypertrophy.

**Overall results:** The overall study of all the three groups revealed that in third group which was on combined therapy, 10% patients were cured, 50% were markedly improved and 40% were mildly improved. In second group 66.7% patients were mildly improved and 33.3% were markedly improved, but no patient was totally cured in this group. In first group which was on *Nasya Karma* only, all patients (100%) were mildly improved i.e. no patient was markedly improved or cured. But in all the three groups every patient had responded variably to the treatment.

## DISCUSSION

*Suryavarta* is explained one among *Shiroroga* explained by *Acharyas*. *Acharyas* has explained symptoms of this disease which in modern resembles the symptoms of Frontal sinusitis<sup>12</sup>. It has been claimed to cause by “*Tridosha*” with *Vata* and *Pitta* predominance. The mode of action of drugs can be understood on the basis of properties of drugs as in *Katphala Laghu, Teekshna guna; Kshaya, Tikta, Katu Rasa ; katu vipaka, Ushna virya* due to which it alleviates *Kapha* and *Vata Dosha*. This drug is given in the form of *Nasya* which is described as best therapy for *Uttmanga Shudhi* by *Acharyas*. *Katphala* is explained in *Vednasthapana Mahakshaya*<sup>13</sup> by *Acharya Charka* and in *Rodhradi Gana, Sursadi Gana*<sup>14</sup> which have *Kaphahara* properties. As *Nasya* therapy is concerned while describing *Shirovirechna yogya Rogi*<sup>15</sup> *Acharya Charaka* has mentioned *Shiroroga* there and also mentioned *Shiroshoola*<sup>16</sup> in disease in which *Nasya* therapy is beneficial. *Acharya Sushruta* has

also mentioned *Shoola* and *Urdhvajatrugata Vikara* in *Shirovirechana yogya Rogas*. Other drug *Danti Pravala yoga* have *Danti* which is having *Shita Guna*<sup>17</sup> and also having *Deepana Pachana* of *Ama Dosha* which is also responsible for this disease. *Pravala* used in this drug also have *Tridoshamaka*<sup>18</sup> properties and also have *Deepana* and *Pachana* properties which are responsible for its action in this disease.

## CONCLUSION

On the basis of clinical features of *Suryavarta* it can be correlated with Frontal sinusitis in modern science. Combined therapy is providing good results as compared to single therapy . Drug of *Nasya Karma* i.e. *Katphala* showed no significant effect, hence should be changed by *Vata Pitta Shamaka Nasya* in oil or *Ghrita* base. *Danti Pravala yoga* is having significant effect on relieving the symptoms of *Suryavarta* by acting at *Jathragni* and *Dhatwagni* level and this can be an effective ayurvedic treatment in this disease.

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