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### Effect of Neti and Nasya on the Management of Sinusitis –

#### A Comparative Survey

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#### ABSTRACT

Yoga is the turning away of the senses from the objective universe and the concentration of the mind within. Hatha Yoga is the most perfect system to make the brain, muscles, nerves, organs, tissues toned and energized. It is the science of purification. By the practice of Hatha Yoga, we can possess a healthy body and mind and attain spiritual experiences. Shat karma is described under Hatha yoga. Neti is a process of cleansing and purifying the nasal passages. Jala Neti is nasal cleansing with water. Nasya is one of the Pancakarma treatments of Ayurveda. It is basically a bio-cleansing regimen intended to eliminate toxic elements from the head, eye, nose and throat. Sinusitis or sinus infection is an inflammation of the tissue lining the sinuses. According to Ayurveda the main site of kapha dosha is the head and the nose is the gateway of the head. Sinusitis can be correlated as Kaphaja siroroga and Suryaavartha under Siroroga and as Dushtapratishyaya in Nasa roga. India is greatly afflicted by sinusitis. The present study has been done to compare the effect of jalaneti and nasya and in sinusitis. The study is conducted at Divine Life Holistic Health Centre (DLHC), Basudev Complex, In front of Gauri Sankar Park, Choudhary Bazar, Cuttack, Odisha. Total number of 90 female patients of age 40-45 years having sinusitis are selected out of which Nasya with Anu Taila is given to 30 patients, Jalaneti is given to another 30 patients and both Jala Neti and Nasya with Anu Taila are given to another 30 patients. Comparative Comparison will be done by clinical study. It is a clinical trial and comparative study). Objective of the study is to know the effect of Jala neti and Nasya with Anu taila for the management of sinusitis without any adverse effect by comparative clinical study.

**KEYWORDS:** Nasya, Jalneti, Kaphaja siroroga, Suryaavartha, Dushtapratishyaya, Nasa roga.

#### I. INTR

**ODUCTION** - Yoga is a perfect practical system of self-culture. It is the discipline of the mind, senses and physical body. It aims at the harmonious development of the body, the mind and the soul. It controls the mind and its modifications. It is the turning away of the senses from the objective universe and the concentration of the mind within. It helps in coordination and control of the subtle forces within the body. Hatha Yoga was practiced and prescribed by the ancient Rishis and sages. It is the most perfect system to make the brain, muscles, nerves, organs, tissues toned and energized. All chronic diseases are rooted out. It deals with Shat Karmas, Asanas, Pranayamas, Mudras, Bandhas, and exercises on concentration and meditation.

By the practice of Hatha Yoga, we can possess a healthy body and mind and attain spiritual experiences also. To purify the mind, it is necessary for the body to undergo a process of absolute purification. Hatha yoga is also known as the science of purification. Therefore, we consider Hatha yoga as the preliminary practice of Tantra, Raja yoga, Kundalini yoga and Kriya yoga. The main objective of Hatha yoga is to create an absolute balance of the interacting activities and processes of the physical body, mind and energy. Raja yoga is the science of mind. It is the science of mental discipline and includes various methods of making the mind one-pointed. Shat karma is described under Hatha yoga. It is a very precise and systematic science. Shatmeans 'six' and karma means 'action'; the satkarmas consist of six groups of purification practices. Dhauti, Basti, Neti, Trataka, Nauli and Kapalabhati - these are said to be the six purificatory processes.<sup>1</sup> Performing the satkarmas: Dhauti, Basti, Neti, Laukiki (Nauli), Trataka and Kapalabhati, is essential.<sup>2</sup> In Hatha Ratnavali, astakarmas have been described such as cakri, nauli, dhauti, neti, basti, gajakarani, trotana (trataka) and kapalabhati (mastakabhranti).<sup>3</sup> Neti is said to be one of the six purificatory processes.<sup>1, 2, 3</sup> Neti is a process of cleansing and purifying the nasal passages. Practices included in this category are: jalaneti and sutraneti. Jala Neti is nasal cleansing with water.<sup>7</sup> Nasya is one of the Pancakarma treatments (Samsodhana cikitsa) of Ayurveda. It is basically a bio-cleansing regimen intended to eliminate toxic elements from the head, eye, nose and throat. The therapy which is administered through the nose (Nasa) is called Nasya or inhalation therapy.<sup>8</sup> As per Modern Science Sinusitis or Sinus infection is an inflammation, or swelling, of the tissue lining the sinuses. Sinuses make mucus, which keeps the inside of our nose moist. That, in turn, helps protect against dust, allergens, and pollutants. Healthy sinuses are filled with air. But when they become blocked and filled with fluid, germs can grow and cause an infection. According to Ayurveda the main site of kapha dosha is the head and the nose is the gateway of the head.<sup>9</sup> It can be correlated as Kaphaja siroroga and Suryaavartha under Siroroga and as Dushtapratishyaya in Nasa roga.<sup>10</sup> Jala neti removes mucus and pollution from the nasal passages and sinuses, allowing air to flow without obstruction. It takes about 5 minutes. It may be practiced daily, once or twice a week, or as required.<sup>7</sup> Nasya therapy involves administering herbs, oils, and herbal powder through the nostril to stimulate the secretion of mucus.<sup>8</sup> The treatment of choice in Yoga for Sinusitis is Kriyas and Pranayamas. The Kriyas like Kapalabhati, Sutraneti, Jalaneti and Kunjal help in reducing the hypersensitivity of the nasal mucosa and facilitate in draining the excessive mucosa stored up in the sinuses.<sup>11</sup> Its medications are Antibiotics, Painkillers, Decongestants, Allergy medicines and Steroids.<sup>9</sup>

**I.1. STATEMENT OF THE PROBLEM** - India is greatly afflicted by sinusitis, which is a condition that involves the inflaming of sinuses (the air cavities in the nasal passage) in our nose according to National Institute of Allergy and Infectious Diseases (NIAID). An estimated 134

million Indians suffer from chronic sinusitis,

**I.2. OBJECTIVE OF THE STUDY** - To study the effect of Jala neti and Nasya with Anu taila for the management of sinusitis without any adverse effect by comparative clinical study.

**I.3. HYPOTHESIS** - The combined therapies of Jala neti and Nasya with Anu taila are more effective than the individual therapy for the management of Sinusitis.

**I.4. SIGNIFICANCE OF THE STUDY** – This study is highly significant as this is based on the comparative clinical study of the effect of Jala neti and Nasya with anutaila on sinusitis without any adverse effect. This non-pharmacological method of management of sinusitis is safe, natural, cost effective and easy to practice, specifically for females.

## II. METHODS AND MATERIALS

**II.1. Type of Study:** Comparative clinical study (Clinical trial and Comparative study).

**II.2. Place of Study:** Divine Life Holistic Health Centre (DLHC), Basudev Complex, In front of Gauri Sankar Park, Choudhary Bazar, Cuttack, Odisha.

**II.3. Methods of Comparative clinical study:** Answering the Questionnaire and Direct clinical examination.

**II.4. Study Design:** The present clinical research work has been designed in the following manner. 90 patients of sinusitis are selected and divided into 3 groups – Shatkarma Group (SG), Panchakarma Group (PG) and Combined group (CG).

**A) Single Group:** SG (BT) → SG (AT), PG (BT) → PG (AT), CG (BT) → CG (AT)

**B) Double Group (AT):** SG → PG, SG → CG, PG → CG

**II.5. Method of Sampling:** Convenience sampling.

**II.6. Sample Design:** 90 patients suffering from sinusitis are selected by convenience sampling method. Then they are divided into 3 groups each having 30 patients - Shatkarma group (SG): 30 patients are treated with Shatkarma therapy (Jala neti), Panchakarma group (PG): 30 patients are treated with Panchakarma therapy (Nasya with Anu taila) and Combined group (CG): 30 patients are treated with both Jala neti and Nasya with Anu taila.

**II.7. Duration of treatment:** 1 month for each group.

**II.8. Clinical symptoms taken for study:** Purulent nasal discharge, Nasal congestion, Sinus pain, Facial pain, Headache, Sinus tenderness.

**II.9. Therapies given:** Shatkarma therapy given to Shatkarma Group - Neti (Jala neti), Panchakarma therapy given to Panchakarma Group – Nasya with Anu taila and combined therapies given to Panchakarma Group – both Jala neti and Nasya with Anu taila.

**II.10. Therapies given to Number Patients:** Each of the therapies is given to 30 patients.

**II.11. Therapies given for Disease** – Sinusitis.

**Frequency of the Therapies given:** Shatkarma therapy (Jala neti – once daily in morning for 1 month), Panchakarma therapy (Nasya with eight drops of Anu taila – once daily in the morning for 1 month) and combined therapies (both Jala neti and Nasya with Anu taila - once daily in the morning for 1 month).

**II.12. Diet** – Easily digestible vegetarian diet.

**III. 1. Inclusion criteria** – Age: Above 40 and below 45 years, Sex: Female, Clinical Features: Cases without complications and co-morbidities.

**III. 2. Exclusion Criteria** - Age: Below 40 and above 45 years, Sex: Male, Clinical features: Cases with complications and co-morbidities.

#### IV. STATISTICAL TECHNIQUES

**Tools of Data Collection:** Clinical observation and semi structured interview.

**Data collection Procedure:** Data is collected from the Divine Life Holistic Health Centre (DLHC), Basudev Complex, In front of Gauri Sankar Park, Choudhary Bazar, Cuttack, Odisha.

**Data analysis** – Assessment of Patients (after completion of trial period, the clinical improvement will be assessed following the subjective and objective sign and symptoms of Sinusitis), assessment of result (the improvement of clinical symptoms will be examined closely and thoroughly, separated and compared after the trial period: Marked improvement: > 75%, Moderate improvement: 50 – 75%, Mild improvement: 25 – 50% and Unsatisfactory: <25%), and statistical analysis (in order to prove the effect of Jala neti, Nasya with Anu taila and combination of both the therapies scientifically all the assessment will be statistically analyzed, and the derived mean value will be shown). In the statistical analysis the mean  $\pm$  S.D. improvement in number of clinical signs and symptoms of SG, PG and CG before treatment will be compared with mean  $\pm$  S.D. after treatment. The effect of the therapies on clinical signs and symptoms will be assessed through the Z - test.

**Clinical Observation and Analysis - Z -test** on differences in number of clinical symptoms in SG (BT and AT), PG (BT and AT), CG (BT and AT) and number clinical symptoms across the groups (AT).

$$\bar{x}_1$$

- Average number of clinical symptoms of patients after treatment.

$$\bar{x}_2$$

- Average number of clinical symptoms of patients before treatment.

$n_1$   $X_1$  &  $n_2$   $X_2$  - Number of patients in the group.

$$S.D_{X_1}$$

- Standard deviation (the square root of the means of squared deviations from arithmetic mean) of number of clinical symptoms after treatment.

$$S.D_{X_2}$$

- Standard deviation (the square root of the means of squared deviations from arithmetic mean) of number of clinical symptoms before treatment.

$\sigma$  (Sigma) = Standard deviation = positive square root of the mean sum of squares of deviations of the variant values from arithmetic mean.

$$\bar{x}_1 = \bar{x}_2$$

**Null Hypothesis; H<sub>0</sub>:** -

i.e, there is no significant difference in the average number of clinical symptoms in PG before and after the treatment.

**Alternative Hypothesis; H<sub>1</sub>:**

$$\bar{x}_1 < \bar{x}_2$$

I.e. average of number of clinical symptoms in PG after treatment is smaller than before treatment. (Left tailed test)

$$Z = \frac{\bar{X}_1 - \bar{X}_2}{\sqrt{\frac{S.D X_1^2}{n_{X_1}} + \frac{S.D X_2^2}{n_{X_2}}}}$$

Then the value of 'Z' will be calculated. If it is less than the table value at 5 % level of significance and calculated value of Z will lies within the rejection region, the Null Hypothesis will be rejected. Then the observed difference in the number of clinical symptoms will be statistically highly significant. Thus, the average number of clinical symptoms of patients will be significantly decreased after treatment.

**Discussion on improvement of clinical sign and symptoms of Sinusitis** – The improvement of in the clinical sign and symptoms of SG, PG and CG will be discussed.

**Discussion on result** – The result of treatment for sinusitis by Jala neti and Nasya with Anu taila of SG, PG and CG will be discussed.

**Discussion on therapies** – The effect of Jala neti and Nasya with Anu taila for the management of Sinusitis on CG will be discussed.<sup>12</sup>

## V. CONCLUSION AND EXPECTED OUTCOME

**Conclusion** - Both Jala neti and nasya with anu taila are very effective to relieve symptoms as without any adverse effects and to cure sinusitis clinically.

**Outcome** - The combined therapies of Jala neti and Nasya with Anu taila will be more effective than the individual therapy to relieve symptoms to cure sinusitis clinically.

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