

A SYSTEMIC REVIEW OF *DUSHTA PRATISHYAYA* W.S.R TO CHRONIC SINUSITIS

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ABSTRACT

Dushta Pratishyaya (Chronic Sinusitis) is a common clinical ailment in ENT clinics specially in dusty, smoky, humid, coastal area. Five types of *Pratishyaya* on the basis of vitiation of *Dosha* are described in Ayurvedic classics. *Vata* is the chief culprit and other *Dosha* are associated with it. *Dushta Pratishyaya* is considered as the complication of all types of *Pratishyaya*. Generally, *Dushta Pratishyaya* is said to be similar to Chronic sinusitis in modern science. Its prevalence is almost 15% in all over world. There are many research works carried out on it. Present study is aimed to review clinical research works which were carried out on *Dushta Pratishyaya*

in *Shalaky Tantra* Department of IPGT and RA, GAU, Jamnagar. In these studies *Varunadi Ghrita* and *Anu Taila Nasya*, *Trayodhashanga Kwatha* and *Pradhamana Nasya* of *Trikatu* and *Triphala Churna*, *Vyaghri Haritaki Avaleha* and *Anu Taila Nasya* were used as treatment. Overall effect of therapy of these study drugs on the disease showed highly significant results in relieving the signs and symptoms of this disease.

KEYWORDS: Chronic Sinusitis, *Dushta Pratishyaya*, *Nasya*, *Vyaghri Haritaki Avaleha*.

INTRODUCTION

Dushta Pratishyaya is a complicated condition due to patient's improper dietary and behavioral habits and if *Pratishyaya* is not managed properly. *Pratishyaya* by word itself indicates that it is recurrent in nature and can be precipitated by even minute etiological factors. *Vata* is the main *Dosha* and *Kapha*, *Pitta* and *Rakta* are associated *Dosha*.^[1] *Dushta Pratishyaya* is very difficult to treat (*Yapya/Krichhasadhya/Asadhya*)^[2] and causes lot of

complications like *Badhirya*(Deafness), *Andhata*(Blindness), *Ghrananasha*(Anosmia)etc.^[3] The features of the disease *Dushta Pratishyaya* in general are similar to that of chronic Rhino sinusitis in modern science. Chronic sinusitis is a long-term inflammation of the sinuses. Para nasal sinuses are a group of four paired air filled spaces that surround the nasal cavity.^[4] Normally, the sinuses drain through small openings (ostia) into inside of the nose. Obstruction of that flow due to any reason can cause disruption of mucus drainage which leads to sinusitis.^[5] Chronic Sinusitis is a common illness in all age group and is a leading cause of hospital visits worldwide so as in India. Chronic sinusitis is one of the most common chronic illnesses in people. According to the American Academy of Allergy, Asthma and Immunology, 11.1 million healthcare visits; 2,50,000 sinus surgery and 7.1% of all adult outpatient antibiotic prescriptions in the United States due to chronic sinusitis.^[6] Chronic sinusitis is diagnosed when symptoms of sinusitis persist for longer than 12 weeks despite of treatment.^[7] Nasal allergy, Deviated nasal septum, any growth in nasal cavity or Para nasal sinus, Cystic fibrosis etc. are predisposing factors of Chronic sinusitis as they alters sinus ventilation and drainage.^[8] Treatment of chronic sinusitis consist of medical treatment such as NSAIDs, antibiotics, nasal and oral corticosteroids, immunotherapy which causes many side effects like GI disturbance, allergic reactions, etc. and surgical treatment.^[9] However Choice of treatment is Surgery due to failure of medical treatment in most of the cases. So there is a need to find out a better treatment in other traditional medical system. There are many research work carried out on *Dushta Pratishyaya* (Chronic Sinusitis) in Ayurveda. Present study is aimed to highlight effectiveness of Ayurvedic Treatment protocol. In this study review of previous research works which were carried out in IPGT and RA, Gujarat Ayurved University, Jamnagar, under department of *Shalakya Tantra* on *Dushta Pratishyaya* (Chronic Sinusitis) is done. *Varunadi Ghrita*^[10] and *Anu Taila Nasya*^[11], *Trayodhashanga Kwatha*^[12] and *Pradhamana Nasya* with *Trikatu* and *Triphala Churna*^[13], *Vyaghri Haritaki Avaleha*^[14] and *Anu Taila Nasya* were used as treatment in these studies.

METHODS

All the research works carried out in IPGT and RA, Gujarat Ayurved University, Jamnagar, under department of *Shalakya Tantra* on *Dushta Pratishyaya* (Chronic sinusitis) from 2000 to 2016 were compiled and screened and cited to analyze the outcomes on the Ayurvedic lines of management on *Dushta Pratishyaya*. Details of these studies given in table 1.

Table 1: Details of three research works on *Dushta Pratishyaya* (Chronic sinusitis).

Study Number	Name of Researcher	Title of work	Year	Number of patients registered
1	Pillai Sreekumar	Pillai Sreekumar. Role of Anu-Taila Nasya and Varunadi Ghrita in the management of Pratishyaya-janya Shirah-Shoola w.s.r. to Chronic Sinusitis, Department of Shalakya Tantra, IPGT & RA, GAU, Jamnagar,2005.	2005	46
2	Varsha Chaudhari	Varsaha Chaudhari. Role of Pradhamana Nasya and Trayodashanaga Kwath in the management of Dushta Pratishyaya w.s.r. to Chronic Sinusitis, Department of Shalakya Tantra, IPGT & RA, GAU, Jamnagar,2009.	2009	37
3	Kunjal Bhatt	Role of Vyaghri Haritaki Avaleha and Anu Taila Nasya in the management of Dushta Pratishyaya (Chronic Sinusitis), Department of Shalakya Tantra, IPGT & RA, GAU, Jamnagar,2013.	2013	30

Table No 2: Details of intervention of three research works on *Dushta Pratisyaya* (Chronic sinusitis).

Study Number	Name of Researcher	Number of Groups	Details of intervention
1	Pillai Sreekumar	3	Group A- Three seating of <i>Anu Taila Mrasha Nasya</i> (8-10drops) for 7 days with gap of 7 days Group V- <i>Varunadi Ghrita</i> orally 10 gm twice a day after food with Luke warm water for 1 month Group C- Combined therapy of Group A and V
2	Varsha Chaudhari	3	Group A- <i>Trayodashanga Kwatha</i> orally 45 ml twice a day with honey for 45 days Group B- <i>Pradhamana Nasya</i> of <i>Trikatu</i> and <i>Triphala Churna</i> (250-750mg) for 7 days with interval of 1 day Group C- - <i>Pradhamana Nasya</i> as per Group B after then <i>Trayodashanga Kwatha</i> orally 45 ml twice a day with honey for 45 days was given
3	Kunjal Bhatt	2	Group A- <i>Vyaghri Haritaki Avaleha</i> 5-10 gm orally twice a day after food with Luke warm water with 3 seating of <i>Anu Taila Nasya</i> (8drops) followed by <i>Dhoompana</i> for 7 days with gap of 7 days Group C - <i>Pradhamana Nasya</i> Group B- <i>Vyaghri Haritaki Avaleha</i> 5-10 gm orally twice a day after food with Luke warm water

Drugs: All trial drugs were prepared in the Pharmacy of Gujarat Ayurved University, Jamnagar. Pharmacognostical and Analytical study of trial drugs were done in laboratories of IPGT & RA, GAU, Jamnagar.

Investigation: Routine hematological (Hb%, TC, DC, ESR & AEC), Urine Routine & Microscopic, Radiographs of Para nasal sinuses, Diagnostic Nasal Endoscopy, were done before and after treatment for assessment.

Criteria for Assessment: Assessment was done on the basis of clinical improvement of the patients in terms of relief in sign and symptoms of *Dushta Pratishyaya* (Chronic Sinusitis) like nasal discharge, nasal obstruction, heaviness in head, headache, post nasal discharge, change of voice, loss of smell, fever, cough, anorexia, halitosis, palpation, trans illumination test and radiographs of Para nasal sinus.

Overall Assessment: An assessment scale was made to assess the rate of improvement. At the end of treatment, the result in view of percentage of relief was classified.

Statistical Analysis: The obtained data were analyzed statistically. The values were expressed as percentage of relief and Standard Error Mean. The data was analyzed statistically by paired and unpaired 't' test.

DISCUSSION

Sreekumar Pillai et al (2005) in his study reported that Group C i.e. (combined therapy of *Anu Taila Marsha Nasya* with *Varunadi Ghrita* orally) showed better result than Group A and Group V in almost all cardinal and associated symptoms and signs. Comparison study of Group C and Group A showed statistically insignificant difference ($p>0.05$) in all sign and symptoms but percentage wise better result was found in Group C. Comparison of Group C and Group V showed statistically significant difference in post nasal drip ($p<0.05$) and *Shirogaurava* ($p<0.05$). Group C showed good percentage of relief than Group V in other symptoms like *Nasasrava*, *Kshavathu*, *Nasa Avarodha* and *Mukha Daurgandhya*.

Varsha Chaudhari et al (2009) in her study reported that comparison study of Group C (combined group of *Trayodashanga Kwatha* orally and *Pradhamana Nasya* of *Trikatu* & *Triphla Churna*) with Group A (*Trayodashanga Kwatha* group) showed that insignificant difference ($p>0.05$) was found in all Symptoms and signs. It reveals that both groups have almost similar effect on *Dushta Pratishyaya* (Chronic Sinusitis). But on analyzing the

percentage of relief, Group C has given more results in *Shirahshula* (Headache), post nasal drip, *Shirogaurava* (Heaviness in head), *Kasa* (Cough), *Aruchi* (Anorexia) and *Mukha Daurgandhya* (Halitosis) than Group A. On comparison of Group C (combined group) with Group B (*Pradhamana Nasya* group), Group C showed highly significant results in *Kasa* (Cough) ($p < 0.001$) and *Mukha Daurgandhya* (Halitosis) ($p < 0.001$) whereas significant results in post nasal discharge ($p < 0.05$). The other symptoms showed statistically insignificant difference ($p > 0.05$) but percentage wise gives more results in *Nasasrava* (Nasal discharge), *Shirogaurava* (Heavyness in head) and *Aruchi* (Anorexia) in Group C than Group B.

Kunjil Bhatt *et al* (2012) in her study reported that in all chief and associated symptoms both group showed almost equal effect. In Paired 't' Test statistically highly significant ($p < 0.001$) result were found in almost all chief complaints in both Groups but percentage wise better result was found in Group B i.e. *Vyaghri Haritaki Avaleha* orally. In Unpaired 't' test both the Groups showed equal effect in chief and associated complaints except *Nasasrava*, which was significant ($p < 0.05$) in Group A. Both the groups showed equal effect in tenderness of sinuses and radiological findings of Para nasal sinuses.

Table No: 3 Overall effect of therapy in study of Sreekumar pillai *et al.*

Overall effect	Group A (%)	Group V (%)	Group C (%)
Complete relief	00%	00%	00%
Marked relief	10%	00%	25%
Moderate relief	80%	70%	66.67%
Mild relief	10%	20%	08.33%
Unchanged	0%	10%	00%

Table No: 4 Overall effect of therapy in study of Varsha Chaudhari *et al.*

Overall effect	Group A (%)	Group B (%)	Group C (%)
Complete relief	10%	00%	00%
Marked relief	70%	81.82%	60%
Moderate relief	20%	18.18%	30%
Mild relief	00%	00%	10%
Unchanged	00%	00%	00%

Table No: 5 Overall effect of therapy in study of Kunjal Bhatt *et al.*

Overall effect	Group A (%)	Group B (%)
Complete relief	00%	00%
Marked relief	46.15%	53.85%
Moderate relief	38.46%	23.08%
Mild relief	15.38%	23.08%
Unchanged	00%	00%

Probable mode of action of *Anu Taila Marsha Nasya*

Anu Taila works as *Strotoshodhaka* due to its *Katu, Tikta Rasa, Laghu, Ruksha Guna, Ushna Virya* and *Katu Vipaka*.^[15] It has capacity to penetrate micro channels due to its *Sukhsma* and *Vyavayi Guna*. By these properties *Nasya* drug removes obstruction of sinus ostia and facilitate drainage and ventilation of sinus. It increases general and local immunity as it is *Indriyadardhyakarvatva, Balya, Brimhana, Preenana*. These immunomodulation will reduce inflammatory process in nasal cavity and sinuses. Majority of drugs having anti inflammatory activity which also protect inflammatory process. The drug cause local irritation which liquefy purulent discharge and ultimately expelled out. Bacteriostatic property of ingredients will arrest the secondary infection.

Probable mode of action of *Varunadi Ghrita*

Most of ingredients having *Katu, Tikta Rasa, Laghu, Ruksha Guna, Ushna Virya, Katu Vipaka* and *Kapha Medohara* properties which are useful to remove *Strotorodha* and promote expulsion of vitiated *Kapha* from Sinuses. *Antarvidhradhiharatva* of drug promote drainage of retained discharge.^[16] *Kapha Medohara* property of drug will remove *Avarana* of *Vayu* and retain its *Anuloma Gati*. Anti inflammatory activity of ingredients will reduce inflammatory process in nose and Para nasal sinuses and anti bacterial activity protects from secondary infections which prevents recurrence of disease.

Probable mode of action of *Trikatu and Tiphala Churna Pradhamana Nasya*

Katu Rasa, Laghu, Tikshna Guna, Ushna Virya and *Katu Vipaka; Strotosodhana, Vatanulomana, Shothahara, Kaphanisaraka* and *Lekhana* properties cause *Strotomukhavishodhana* which removes obstruction of natural sinus ostia and facilitate the drainage of sinuses. Majority of ingredients possess anti-inflammatory activity which also prevent the inflammatory process. The local irritation made by the drug is helpful to liquefy the purulent sputum and ultimately expelled it out from the sinus. Antimicrobial property of ingredients will arrest the secondary infection.

Probable mode of action of *Trayodashanga Kwatha*

Most of the drugs in *Trayodashanaga Kwatha* are having *Katu, Tikta Rasa; Laghu, Ruksha, Tikshna Guna, Ushna Virya, Katu Vipaka, Vatanulomana, Shothahara* and *Strotosodhana* properties. All these properties are useful to remove *Strotorodha* and promote the expulsion of vitiated *Kapha* from sinuses. Anti inflammatory activity of ingredients will reduce the inflammatory process in nose and Para nasal sinuses. *Deepana* and *Pachana* property of

Kwatha causes *Agni Deepana* and *Amapachana* which ultimately leads to *Sara Dhatu* Formation and provide *Vyadhikshamatva*. Antibacterial activity arrests the secondary infection and prevents recurrence of disease.

Probable mode of action of *Vyaghri Haritaki Avaleha*

Vyaghri Haritaki Avaleha acts by rectifying *Vayu* due to its *Ushna Virya*, *Madhura Rasa* and *Anulomana property* and *Strotoshodhana* by *Ushna Virya*, *Katu-Tikta-Kashaya Rasa*, *Ushna Virya* and *Katu Vipaka*, thus it breaks the *Samprapti*. It will open obstructed path like sinus ostia and facilitate drainage of collected discharge. Its two main contains *Kantakari* and *Haritaki* have *Rasayana*, *Shothahara*, Immunomodulatory and immunostimulating effect which promote health, immunity and longevity. *Prakshepa Dravya Trikatu* and *Chaturjata* have *Ushna*, *Tikshna* properties which promote *Agni*, indirectly help in absorption and metabolism of active principle. Its having *Madhura Rasa Dravya* which increases *Bala* of patient.

CONCLUSION

Ayurvedic treatment protocol has specific utility in management of *Dushta Pratishyaya* (Chronic Sinusitis). On analyzing overall effect of therapy of three studies it can be said that from these drugs *Trayodashanga Kwatha* is more effective and from percentage wise result it can be said that combined therapy orally as well as *Nasya* therapy is more effective in management of *Dushta Pratishyaya* (Chronic Sinusitis).

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