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Efficacy of Ayurvedic Dhoompana Therapy in the Management of Chronic Rhinosinusitis (Peenasa): A Single-Case Clinical Study

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Abstract

Background: Chronic rhino-sinusitis (CRS) is a prevalent inflammatory condition of the paranasal sinuses, characterized by persistent nasal congestion, facial pain, and recurrent infections. Conventional pharmacological interventions often provide transient symptomatic relief and may lead to complications such as rebound congestion. In Ayurveda, CRS closely correlates with Peenasa, a condition driven by Kapha-Vata imbalance, Aama (metabolic toxins), and Pranavaha Srotas Dushti (respiratory channel pathology).

To evaluate the clinical efficacy of Dhoompana (medicated smoke inhalation) therapy in a patient with treatment-resistant chronic sinusitis, assessing its viability as a sustainable Ayurvedic intervention.

A 28-year-old male with a five-year history of CRS, demonstrating dependency on topical decongestants and oral antihistamines, was enrolled. The patient underwent a three-week regimen of Dhoompana utilizing a specific formulation (Haridra, Yashtimadhu, Pippali, Vacha, and Tamalpatra), followed by Anu Taila Nasya. Clinical outcomes were evaluated using a standardized Sinusitis Severity Score (SSS) to track nasal congestion, headache, sneezing, and medication dependency at baseline, weekly intervals, and a one-month follow-up.

Following the 21-day intervention, the patient exhibited an 80% reduction in nasal airway resistance and a near-complete resolution of

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sinus headaches. Dependency on allopathic nasal sprays and antihistamines was completely eliminated by week two. These improvements were sustained at the one-month follow-up without relapse.

Dhoompana therapy effectively manages chronic sinusitis by facilitating Kapha expectoration, mitigating localized inflammation, and restoring nasal patency. This case demonstrates that targeted Ayurvedic inhalational therapy can serve as a potent, non-pharmacological alternative to long-term conventional medication, offering sustained respiratory relief.

Key words : Ayurveda, Chronic Rhinosinusitis, Dhoompana, Kapha-Vata Imbalance, Peenasa, Nasal Congestion, Inhalational Therapy.

Chronic rhinosinusitis (CRS) is a ubiquitous global health burden, fundamentally defined as the inflammation of the nose and paranasal sinuses lasting beyond 12 weeks. Clinical manifestations typically include nasal obstruction, rhinorrhea, facial pain or pressure, and olfactory dysfunction[1]. Beyond physiological discomfort, CRS exacts a heavy toll on sleep quality, cognitive focus, and overall workplace productivity, contributing to substantial healthcare expenditures.

Contemporary medical management protocols for CRS rely heavily on corticosteroids, antihistamines, and topical decongestants. While efficacious for acute symptomatic suppression, prolonged use of these agents is frequently accompanied by adverse effects, most notably rhinitis medicamentosa (rebound congestion), mucosal atrophy, and systemic tolerance[2]. Furthermore, recurrent prescriptions of broad-spectrum antibiotics for acute exacerbations contribute to the escalating crisis of antimicrobial resistance. The chronic, relapsing nature of CRS indicates a critical need for therapeutic modalities that address the underlying pathophysiology rather than merely suppressing symptoms.

In the Ayurvedic paradigm, chronic sinusitis correlates with Peenasa, a clinical entity arising from the vitiation of Kapha and Vata Doshas. The pathogenesis is characterized by aggravated Kapha inducing excessive mucus secretion and obstructing the Pranavaha Srotas (respiratory channels). Concurrently, vitiated Vata precipitates symptoms such as localized pain, headache, and mucosal dryness. The systemic accumulation of Aama (metabolic toxins) due to Mandagni (diminished digestive fire) exacerbates tissue-level inflammation. Consequently, a definitive therapeutic approach must prioritize Dosha pacification, clearance of Srotorodha (channel obstruction), and the restoration of Agni.

- ***Dhoompana :*** The therapeutic inhalation of medicated smoke—is extensively documented in classical Ayurvedic treatises such as the Charaka Samhita and Sharangadhara Samhita for the management of Urdhwajat rugata Rogas (supraclavicular diseases)[3]. The pharmacological rationale for employing Dhoompana in Peenasa rests upon its

targeted Kapha Chhedana (mucolytic), Vata Anulomana (carminative/regulating), and Shodhana (purificatory) properties. The volatile principles of the herbs penetrate deep into the sinus cavities, mechanically and chemically liquefying stagnant Kapha and stimulating ciliary clearance. This study documents the successful management of a chronic, medication-dependent CRS case using a standardized Dhoompana protocol, evaluating its potential as a sustainable alternative therapy.

- *Patient Profile :*
  A 28-year-old male IT professional presented to the outpatient department with a confirmed five-year history of chronic sinusitis.

- ***Chief Complaints :*** Persistent, severe nasal congestion, recurrent throbbing frontal and periorbital headaches, and frequent paroxysmal sneezing exacerbated by exposure to cold environments and dust.

- ***Medical History :*** The patient reported a severely diminished quality of life, noting profound sleep disturbances and cognitive fatigue. Over the preceding three years, he had developed a reliance on daily over-the-counter antihistamines (Cetirizine 10mg) and topical decongestants (Xylometazoline). These agents yielded only transient relief (lasting 3–4 hours) followed by pronounced rebound congestion. Past medical records indicated multiple unsuccessful courses of oral antibiotics. No significant history of surgical interventions or systemic chronic illnesses was noted.

Diagnostic Assessment (Ayurvedic & Clinical):

- Prakriti: Kapha-Vata
- Vikriti: Kapha-Vata Pradhana Dushti with Aama accumulation and Pranavaha Srotas Dushti.
- Clinical Examination: Nadi (Pulse) was Vata-Kapha dominant. Jihwa (Tongue) exhibited a distinct whitish coating indicative of Aama.
- Modern Diagnosis: Chronic Rhinosinusitis (CRS) without nasal polyposis. A previous radiographic evaluation (Paranasal Sinus X-ray, 24 months prior) revealed mucosal thickening in the maxillary and ethmoid sinuses.

Therapeutic Intervention :

A 21-day continuous regimen of Dhoompana was initiated, administered twice daily (morning and evening) following a light meal.

Formulation (Dhooma Varti Composition):

- Haridra (Curcuma longa) – Rhizome powder
- Yashtimadhu (Glycyrrhiza glabra) – Root powder
- Pippali (Piper longum) – Fruit powder
- Vacha (Acorus calamus) – Rhizome powder
- Tamalpatra (Cinnamomum tamala) – Leaf powder

Rationale for Herb Selection: The synergistic blend was selected for its Shothahara (anti-inflammatory) and Deepana-Pachana capabilities. Haridra and Pippali exhibit potent mucolytic effects and stimulate local microcirculation[4,5]. Yashtimadhu serves as a mucosal demulcent[6], mitigating potential irritation from the smoke, while Vacha provides targeted central nervous system and respiratory channel clearance[7].

Administration Procedure :

The standardized herbal mixture was rolled into a Dhooma Varti (medicated wick) and ignited within a classical Dhoompana Yantra. The patient inhaled the therapeutic smoke through one nostril (while occluding the other) and exhaled exclusively through the mouth to prevent ocular irritation, per classical injunctions. Each session comprised 3–5 gentle inhalations per nostril, lasting approximately 5 minutes.

Post-Treatment (Paschat Karma):

Immediately following inhalation, Pratimarsha Nasya using two drops of Anu Taila was administered bilaterally to soothe the nasal mucosa, counteract dryness (Rukshata), and prevent Vata aggravation.

Evaluation Criteria :

Symptom severity was quantified using a customized Sinusitis Severity Score (SSS) on a visual analog scale from 0 (asymptomatic) to 10 (maximum severity) for nasal congestion and headache. Medication dependency and sleep quality were recorded qualitatively.

Observations & outcome :

The patient's clinical response was monitored rigorously throughout the 21-day trial and at a 30-day post-treatment follow-up.

Baseline (Day 0): The patient exhibited an SSS of 9/10 for nasal congestion and 8/10 for headaches. Medication dependency was daily for both topical sprays and antihistamines.

Week 1: Initial responses indicated a drop in nasal congestion (SSS: 6/10) and headache severity (SSS: 5/10). Sleep architecture improved, and the patient voluntarily reduced topical decongestant use to 2–3 times per week.

Week 2: Marked clinical improvement was observed. Nasal breathing was unobstructed for the majority of the day (SSS: 3/10). The patient completely ceased the use of xylometazoline sprays. Headaches became negligible (SSS: 2/10).

Week 3 (End of Intervention): The patient achieved an 80% global improvement. Nasal congestion and headaches were effectively resolved (SSS: 1/10). Antihistamine dependency was fully eliminated without any manifestation of rebound allergic symptoms.

Table-1. Clinical Progression and Symptom Severity Scoring

Clinical Parameter	Baseline (Day 0)	End of Week 1	End of Week 2	End of Week 3	1-Month Follow-Up
Nasal congestion	9/10	6/10	3/10	1/10	1/10
Headache	8/10	5/10	2/10	1/10	1/10
Sneezing frequency	Frequent (Daily)	Reduced	Infrequent	Minimal	Minimal
Decongestant	Daily	2–3 times/	Zero	Zero	Zero
Spray use		week			
Antihistamine use	Daily	Daily	Daily	Zero	Zero
Sleep quality	Severely Disturbed	Improved	Considerably improved	Normal	Normal

Follow-up (30 Days Post-Treatment): The therapeutic gains were successfully maintained. The patient reported sustained, unassisted nasal patency, complete independence from allopathic symptom modifiers, and the restoration of olfactory function.

This clinical case highlights the significant therapeutic efficacy of Dhoompana in treating refractory chronic rhinosinusitis. For five years, the patient experienced a cycle of temporary suppression and rebound pathology typical of prolonged sympathomimetic amine (decongestant) usage. The administration of Dhoompana provided a definitive interruption to this cycle.

Pharmacodynamic Mechanisms (Ayurvedic Perspective):

The efficacy of this intervention lies in the Ushna (hot), Tikshna (sharp), and Laghu (light) biomolecular properties of the inhaled medicated smoke. These physical properties are diametrically opposed to the Sheeta (cold) and Picchila (slimy) nature of the morbid Kapha. The thermal and chemical stimulation of the sinonasal mucosa by herbs like Haridra and Pippali promotes localized vasodilation, liquefies inspissated mucus, and facilitates its expectoration (Kapha Chhedana).

Furthermore, the Vata Anulomana action rectifies the disrupted aerodynamics of the nasal cavity, providing rapid analgesia for frontal headaches. Incorporating Anu Taila Nasya post-inhalation was critical; it provided the necessary Snigdha (unctuous) quality to repair the mucosal barrier, preventing the hyper-dryness that can trigger reactive hypersecretion.

Clinical Significance and Modern Context:

While allopathic modalities act primarily through localized vasoconstriction or histamine receptor antagonism[2], the Ayurvedic approach fundamentally alters the mucosal microenvironment. By targeting the Aama through the Deepana properties of the smoke, the intervention addresses the root inflammatory trigger. The successful weaning of the patient from chronic medication highlights Dhoompana as not merely a complementary therapy, but a highly potent, standalone alternative for breaking pharmacological dependency in CRS.

Limitations :

As a single-case report, the findings are inherently limited in their generalizability. Further large-scale, randomized controlled trials are necessitated to statistically validate these outcomes and standardize specific Dhooma Varti formulations against standard modern care protocols.

The systematic administration of Dhoompana therapy, followed by Anu Taila Nasya, demonstrated profound clinical efficacy in a 28-year-old male suffering from chronic rhinosinusitis (Peenasa). Over a 21-day period, the intervention successfully reversed a five-year dependency on modern pharmacological decongestants and antihistamines, achieving near-total resolution of nasal airway obstruction and sinus headaches. By aggressively targeting the underlying Kapha-Vata pathology and localized Aama, Dhoompana proves to be a highly viable, holistic, and sustainable therapeutic strategy for the long-term management of chronic respiratory channel disorders.

Declarations :

- Informed Consent: Written informed consent was obtained from the patient for the publication of this case report and any accompanying clinical data.

- Conflicts of Interest: The author declares no conflicts of interest regarding the publication of this paper.

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