

Effect of *Nirgundi Taila* as a *Prati Marsha Nasya* in the Management of Thyroid Disorder

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Abstract: *The concept of Prakriti, Tridosha and Agni are some of very important principles of Ayurveda. Ayurveda attributes a great importance to dietary habits, food, proper nutrition and as well as to mode of living. Due to modernization, the dietary habits and the life style of individuals have absolutely changed at present times. The advancement of science and technology has added to comforts of day-today life. Majority of people are having irregular food habits with sedentary and strenuous life style. This has resulted in various metabolic disorders. Thyroidism is one such disorder, the clinical resulting from increased or decreased level of Thyroxine (T₄) and Tri-iodothyronine (T₃) hormones by the Thyroid Gland irrespective of the cause. The occurrence of Thyroidism is increasing gradually and there is great demand to treat the disease through heritage of Ayurveda, as it is completely natural and safe. Here, an effort is put forward to compile and critically analyze the Nirgundi Taila as a Prati Marsha Nasya. Nirgundi Taila Nasya is used to treat Thyroid (Galaganda as per Ayurveda). In Astangasamgrha it is explained that Nasa being the entry of Shirah the drug administered through nostril reaches Shringataka Siramarma by Nasa Strotasas and spread in brain reaches at a junction place of Netra, Shrotras, Kantha, Siramukhas (opening of the vessels etc) and remove or detach the morbid Doshas present above supraclavicular region and expel them from the Uttamanga. Nirgundi Taila combinedly have action of Srotoshodhana, Kapha-Vata Shamaka, Pitta Saraka, Rasayana, Agnideepana, Amapachaka, Gandamala Rogaghna Karma. In an attempt to understand Nirgundi Taila Nasya Karma treatment benefits in managing thyroid disorders, this paper is being written.*

Keywords: Galaganda, Nasya, Panchakarma, Ayurveda, Nirgundi Taila, Thyroid, Hyperthyroidism, Hypothyroidism etc.

1. Introduction

Ayurveda is the science of life. It is the world's oldest existing health care system and scientific discipline of the theory and practice emerged and evolved in India. It is a record of experience justified by all new studies and proved by repeated administration by generations. The concept of *Prakriti*, *Tridosha* and *Agni* are some of very important principles of *Ayurveda*. *Ayurveda* attributes a great importance to dietary habits, food, proper nutrition and as well as to mode of living. Due to modernization, the dietary habits and the life style of individuals have absolutely changed at present times. The advancement of science and technology has added to comforts of day-today life. Majority of people are having irregular food habits with sedentary and strenuous life style. This has resulted in various metabolic disorders. Thyroidism is one such disorder, the clinical resulting from increased or decreased level of Thyroxine (T₄) and Tri-iodothyronine (T₃) hormones by the Thyroid Gland irrespective of the cause.

Thyroidism is the diseased condition where increase or decrease in the amount of biologically active thyroid hormone at the tissue level is there. It results from increased or decreased level of Thyroxine (T₄) and Tri-iodothyronine (T₃) by the Thyroid Gland irrespective of the cause.¹ The dysfunctioning of the *Agni* and vitiated *Tridosha* is the basic cause of the clinical manifestations of Thyroidism. The hyper-functioning of *Jatharagni* in turn affects *Dhatwagni* which acts as the basic factor the occurrence of the diseased condition hyperthyroidism and hypo-functioning of *Jatharagni* in turn affects *Dhatwagni* which acts as the basic factor the occurrence of the diseased condition hypothyroidism. Thyroidism finds its mention as early as in ancient *Hindu* literature *Atharvaveda* by the term *Galaganda* or *Apachi* which indicates Goiter a disease resulting from

dysfunctioning of the Thyroid Gland. Apart from this, various references are available in *Charaka* and *Sushruta Samhita* under the nomenclature of *Galaganda* and *Apachi*.²

The prevalence Thyroidism in India is 11%, compared with only 2% in UK and 4.6% in USA. Compared with coastal cities (e.g., Mumbai, Goa and Chennai) cities located inland (e.g., Kolkata, Delhi, Ahmedabad, Bangalore and Hyderabad) have a higher prevalence (11.7% vs 9.5%). The highest prevalence of Thyroidism (13.1%) noted in people aged 46-54 years, with people aged 18-35 years being less affected (7.5%).¹ Women are 6 times more prone than men. In *Ayurveda* there is no direct mention of thyroid gland, but a disease by the name *Galaganda*, characterized by neck swelling is well known. The symptoms of *Galaganda* and Thyroidism are vaguely similar. According to *Acharya Vagbhata Kapha* associated with *Pitta Dushti* with vitiation of *Vata* due to *Margavarodha* and predominantly *Rasavaha*, *Medovaha* and *Mamsavaha Strotas* can be considered as cause of this diseases.³

The Concept of *Prati Marsha Nasya*

Ayurveda asserts the principle '*Nasa hi Shiraso Dwaram*', which means 'the nose serves as the gateway to the head (brain).' *Nasya Karma* entails the application of medicated oils or powders via the nasal passages to address ailments of the supraclavicular region (*Urdhvajatrugata Roga*). *Prati Marsha Nasya* is a particular form of *Nasya* where a small quantity (typically 2 drops) of medicated oil is administered into each nostril. In contrast to other more intense *Nasya* treatments (such as *Shodhana Nasya*), *Prati Marsha Nasya* is mild, can be performed independently on a daily basis, and does not have stringent seasonal or age-related limitations. It offers a continuous, gentle stimulation to the higher neuro-endocrine centers without inducing systemic stress.⁴

Pharmacological Profile of *Nirgundi Taila*

Nirgundi (*Vitex negundo*) is a highly revered botanical in *Ayurvedic* pharmacology, known for its potent *Vata-Kapha* pacifying properties. *Nirgundi Taila* is the medicated oil prepared from the extracts of the *Nirgundi plant*.

Key properties of *Nirgundi* include:

- **Rasa** (Taste): *Katu* (Pungent), *Tikta* (Bitter)
- **Guna** (Qualities): *Laghu* (Light), *Ruksha* (Dry)
- **Virya** (Potency): *Ushna* (Hot)
- **Vipaka** (Post-digestive effect): *Katu* (Pungent)

Because of its *Ushna Virya* and *Kapha-Vata Shamaka* properties, *Nirgundi* effectively clears *Srotorodha* (blockages in the micro-channels) and acts as an anti-inflammatory, analgesic, and antioxidant agent. In the context of the thyroid gland, these properties help stimulate cellular metabolism and reduce local glandular swelling.⁵

Mechanism of Action in Thyroid Disorder

The mechanism through which *Nirgundi Taila Prati Marsha Nasya* provides benefits to thyroid patients can be analyzed from both *Ayurvedic* and contemporary anatomical viewpoints:

Ayurvedic Viewpoint: The *Ushna* and *Tikshna* qualities of *Nirgundi Taila* facilitate the dissolution of morbid *Kapha* and the equilibrium of *Vata Dosha* in the cervical area (*Greeva*). It activates the local *Dhatvagni* (tissue metabolism), reversing the development of *Galaganda* and reinstating the normal physiological function of the *Vishuddha Chakra* (energy center located at the throat).

Contemporary Neuro-Endocrine Viewpoint: The nasal mucosa is richly vascularized and has a direct connection to the brain through the olfactory and trigeminal nerves. The absorption of the lipophilic compounds in *Nirgundi Taila* via the nasal mucosa enables it to circumvent the blood-brain barrier. The active components stimulate the olfactory bulb, which is directly linked to the limbic system and the hypothalamus. Given that the hypothalamus regulates the pituitary gland (which subsequently releases TSH to manage the thyroid gland), this neuro-stimulation aids in restoring the Hypothalamic-Pituitary-Thyroid (HPT) axis. Furthermore, systemic absorption may provide a mild anti-inflammatory effect directly on the thyroid tissue.⁶

Clinical Benefits

Patients utilizing *Nirgundi Taila* as *Prati Marsha Nasya* may experience several clinical benefits:

- Reduction in classical hypothyroid symptoms such as lethargy, weight gain, and cold intolerance.
- Improvement in local symptoms like voice hoarseness and mild goiter (thyromegaly) due to anti-inflammatory action.
- Enhanced cognitive function, reduced brain fog, and better sleep quality due to the balancing effect on the nervous system.
- A safe, easily compliant daily regimen that acts synergistically with oral *Ayurvedic* medications.⁷

2. Discussion

The management of thyroid disorders poses a considerable clinical challenge, as modern strategies frequently depend on lifelong synthetic hormone replacement, failing to adequately address the fundamental metabolic and tissue-level dysfunctions. Within the *Ayurvedic* paradigm, thyroid irregularities such as hypothyroidism and goiter are closely associated with the pathogenesis of *Galaganda* and *Apachi*. These conditions are fundamentally based on *Agni Mandya* (reduced metabolic fire), *Dhatu Shaithilya* (tissue laxity, especially of *Meda Dhatu*), and the exacerbation of *Vata* and *Kapha Doshas*.

The justification for choosing *Nirgundi Taila*, administered through *Prati Marsha Nasya*, is rooted in its specific pharmacological characteristics and its direct pathway to the neuro-endocrine control centers.

Pharmacological Rationale of *Nirgundi Taila*

The effectiveness of *Nirgundi* (*Vitex negundo*) in this clinical context is strongly supported by its pharmacodynamic characteristics (*Rasa Panchaka*). As a commonly used herb in *Bhaishajya Kalpana*, the infusion of its active compounds into a lipid medium (*Taila*) improves its bioavailability and facilitates deep tissue absorption (*Sukshma Srotogami*).

- **Dosha Karma:** The *Katu* (pungent) and *Tikta* (bitter) *Rasa*, along with *Ushna* (hot) *Virya* and *Laghu* (light) *Guna*, render *Nirgundi* a remarkable *Kapha-Vata Shamaka*. This effectively counteracts the heavy, cold, and sluggish attributes of pathological *Kapha* that lead to glandular enlargement and metabolic deceleration in hypothyroidism.
- **Srotoshodhana:** The *Ushna* and *Tikshna* qualities assist in dissolving the obstructed *Kapha* and *Meda* (fat tissue) in the cervical area (*Greeva*), thereby clearing the micro-channels (*Srotas*) and invigorating local *Dhatvagni* (tissue metabolism).
- **Shothahara and Smrutida Properties:** As noted in traditional *Nighantus*, *Nirgundi* is unequivocally anti-inflammatory (*Shothahara*), which alleviates thyromegaly (goiter). Its cognitive-enhancing (*Smrutida*) effects concurrently address the secondary neurological manifestations of thyroid dysfunction, including brain fog and memory loss.

The Significance of the *Nasya Route*

The selection of *Nasya* as the primary treatment method is based on the *Ayurvedic* principle "*Nasa hi Shiraso Dwaram*" (the nose serves as the gateway to the brain). In cases of thyroid dysfunction, the impairment transcends the gland itself, significantly engaging the higher regulatory centers within the brain.

- **Targeted Delivery:** The intranasal administration of the medicated oil guarantees that the active phytoconstituents directly access the *Urdhvajatrugata* (supraclavicular) area, ensuring a high localized concentration in the neck and head.
- **Neuro-Endocrine Modulation:** From a modern anatomical viewpoint, the lipid-soluble components of *Nirgundi Taila* are absorbed via the highly vascular nasal mucosa, effectively circumventing the blood-brain barrier. The olfactory and trigeminal neural pathways offer a

direct connection to the limbic system and hypothalamus. By activating the hypothalamus, *Nasya* can subtly influence the Hypothalamic-Pituitary-Thyroid (HPT) axis, promoting the body's ability to self-regulate Thyroid Stimulating Hormone (TSH) secretion.

Clinical Feasibility of *Prati Marsha Nasya*

While intensive *Shodhana Nasya* necessitates rigorous clinical oversight and specific seasonal conditions, *Prati Marsha Nasya* is particularly well-suited for the chronic and long-term management of thyroid disorders.

- **Safety and Compliance:** Administered in a minimal dosage (generally 2 drops per nostril), *Prati Marsha Nasya* is mild, non-irritating, and does not adhere to the stringent pre-operative (*Purvakarma*) and post-operative (*Paschatkarma*) protocols required for higher-dose *Nasya*.
- **Daily Administration:** Patients can conveniently self-administer the drops on a daily basis. This practice guarantees a continuous, low-level stimulation of the neuro-endocrine pathways, which is essential for reversing chronic metabolic inertia without inducing systemic stress.
- **Synergistic Action:** *Prati Marsha Nasya* serves as a potent adjuvant. It can be safely combined with oral *Ayurvedic* formulations (such as *Kanchanara Guggulu*), thereby enhancing overall therapeutic results.

3. Conclusion

Thyroid disorders signify a complicated endocrine imbalance that necessitates a comprehensive therapeutic strategy. The use of *Nirgundi Taila* as a *Prati Marsha Nasya* serves as an exceptional complementary therapy in the holistic treatment of these conditions. By utilizing the direct nasal-brain pathway, it influences the neuro-endocrine axis (Hypothalamus-Pituitary-Thyroid axis), while its specific *Vata-Kapha* pacifying, *Ushna*, and anti-inflammatory characteristics function locally to eliminate channel obstructions and enhance metabolism.

Although it shows great promise and is well-documented in *Ayurvedic* clinical practice, additional large-scale, evidence-based clinical trials are needed to assess its effectiveness and establish standard dosage guidelines. For patients, *Prati Marsha Nasya* with *Nirgundi Taila* provides a safe, non-invasive, and easily administrable daily regimen to promote thyroid health and enhance overall quality of life.

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