



Case Study

## CUSTOMIZED MANAGEMENT OF HYPOTHYROIDISM THROUGH AYURVEDIC INTERVENTION

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### ABSTRACT

Hypothyroidism is a condition characterized by decreased thyroid hormone production, resulting in diminished metabolic rate, manifesting as a spectrum of symptoms from subclinical hypothyroidism (SCH) to overt hypothyroidism, with associated physiological derangements. In this study *Anu taila Nasya* was used. A female patient age 22 years weight 58kg was diagnosed with Hypothyroidism from a clinical point of view. There was a dyspnoea, loss of appetite, weakness, weight gain in the last 2 months with irregular menstruation in the past 4 months. Blood report of TSH value shows 6.35µIU/ml. She was treated with *Panchakarma Anu taila Nasya* followed by *Shamana Chikitsa* for 6 months follow up. The result of patient was assessed on the basis of subjective and objective criteria. The TSH value after the treatment shows significant result of 4.65µIU/ml. Significant changes were also observed in the clinical features before and after the treatment. So, this study concludes, *Anu taila Nasya* has *Ushna Tikshna dravyas* and *Vata Kaphahara* properties which causes *Shodhana* and *Lekhana* of *Kapha doshas*, along with palliative treatment has shown good and significant result by its *Guna-dharma* and *Shodhana* action in hypothyroidism. Hence it can be used as a preferred treatment for hypothyroidism.

### INTRODUCTION

Thyroid gland is one of the endocrine glands located in the front of neck which synthesise the two hormones Thyroxin [T4] and Triiodothyronine [T3] which are crucial regulators of cellular differentiation during embryonic development and essential for maintaining the body's metabolic rate and thermal equilibrium. The causation of hypothyroidism is due to inadequate activity of thyroid gland and is known as 1<sup>o</sup> hypothyroidism or by insufficient stimulation by thyroid stimulating hormone (TSH) and is known as 2<sup>o</sup> hypothyroidism.<sup>[1]</sup> The prevalence rate of hypothyroidism in developed countries ranges about 4-5 %<sup>[2]</sup> and the rate in subclinical hypothyroidism ranges about 4-15%.<sup>[3]</sup> The striking contrast in the prevalence of Hypothyroidism is evident when comparing India, where a staggering 11% of the population is affected with the significantly lower rates

observed in the UK at 2% and the USA at 4.6 %.<sup>[4]</sup>

Subclinical hypothyroidism is a condition which is characterized by a high-rise value of TSH level ranging between 4.5-10 mIU/L normal T4 and T3 levels.<sup>[5]</sup> The patient with sub-clinical hypothyroidism having serum-TSH value below 10 mIU/L sums up to 80 percent.<sup>[6]</sup>

Hypothyroidism, it is a hypo-metabolic clinical condition resulting due to the decreased secretion of thyroid hormones but there is no direct co-relation of thyroid gland and hypothyroidism in Ayurveda classic text but it is consequential to understand the viable pathogenesis of the disease in terms of *Dosha-Dhatu-Mala and Agni* (digestive fire).<sup>[7]</sup> The hypometabolic condition of hypo-thyroidism can be described as *Agnimandya* mentioned in Ayurvedic text.

The development of hypothyroidism, which is described as a condition with improper diet and sedentary lifestyle which is now a day very common characterised by an impairment of the *Dhatvagni* (metabolic process) due to the aggravation of *Kapha Doshas* leading to the formation of *Aamdosha* and improper nourishment of the body's tissues, ultimately manifesting as symptoms of hypothyroidism along

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with swollen neck '*Galagand*' described by Acharya Charaka under *Shoth Vikar*.<sup>[8]</sup>

Considering *Agnimandya* (impaired digestive fire) as the root causes of hypothyroidism and can be compared with *Ama dosha lakshan* (undigested toxins) along with *Kapha- Vata Vridhi*.

The patient selected for this study was treated with *Panchakarma*. The *Anu taila Nasya* <sup>[9]</sup> (Nasal instillation therapy) was selected for the treatment of hypothyroidism as it is an *Urdhwajatrugata vyadhi* and *Nasya* (Nasal instillation therapy) also plays an important role in its treatment. Along with *Panchakarma*, *Shamana Chikitsa* (Palliative treatment) like *Arogyvardhini vati*, *Kanchanar Guggulu*, *Tab Thyset*, *Hanspadadi Kwatha*, *Sukhsarak vati* and suitable *Pathya- Apathya* were advised for the disease.

### AIMS AND OBJECTIVE

To evaluate the efficacy of *Anu taila Nasya* along with *Shamana Aushadhi* in hypothyroidism.

### MATERIAL AND METHODS

- Study-design: A single case study
- Treatment was done after taking informed consent from the patient.
- Specific subjective and objective criteria were used and assessment was done according to them.
- The treatment of patient was done with *Anu taila Nasya* (Nasal instillation therapy) and *Shamana Chikitsa* (Palliative treatment).

### Case Report

On 25/06/2023, a female patient of age 22 years came to OPD of Shri Dhanwantari Ayurveda Chikitsalaya Super speciality *Panchakarma* Clinic with these following complaints:

### Chief Complaints

- Difficulty breathing
- Loss of appetite
- Weakness
- Weight gain
- Irregular menstruation

**Duration:** 4 months

### Present illness History

The patient came with the complaint of irregular menstruation from the last 4 months and increase in weight from 54kg to 58kg along with difficulty in breathing during daily life chores, loss of appetite and weakness all day for the past 2 months. Due to these complaints, she opted for complementary treatment (Ayurvedic).

### Past illness History

Not any specific history of illness/accident/fall.

**Occupational History:** Computer/Desk job

### General physical examination

BP- 110/70 mmHg

P/R- 88/min

Wt- 58 kg

Temp- Normal

### Systemic Examination

RS: B/L equal air entry with no added sound

CVS: S<sub>1</sub> and S<sub>2</sub>, normal

CNS: conscious & well-oriented

P/A: Soft & non-tenderness.

Menstrual History

Menarche: 13 years

Cycle: Irregular/ Painful

Interval: 45 days

Amount: 2-3 pads per day

**Table 1: Asthvidha Pariksha**

1.	<i>Nadi</i>	<i>Kapha Pradhana</i>
2.	<i>Mala</i>	<i>Samyaka</i>
3.	<i>Mutra</i>	<i>Samyaka</i>
4.	<i>Shabda</i>	<i>Spashta</i>
5.	<i>Sparsha</i>	<i>Anuushnata</i>
6.	<i>Druk</i>	<i>Spashta</i>
7.	<i>Aakruti</i>	<i>Sthoulya</i>
8.	<i>Jihva</i>	<i>Sama</i>

**Table 2: Dashvidha Pariksha**

1.	<i>Prakruti</i>	<i>Kaphaja</i>
2.	<i>Vikruti</i>	<i>Vata - Kapha</i>
3.	<i>Sara</i>	<i>Madhyama</i>
4.	<i>Samhana</i>	<i>Madhyama</i>
5.	<i>Satmaya</i>	<i>Madhyama</i>
6.	<i>Satva</i>	<i>Madhyama</i>
7.	<i>Ahara Shakti</i>	<i>Avara</i>
8.	<i>Vyayam Shakti</i>	<i>Avara</i>
9.	<i>Vaya</i>	<i>Madhyama</i>
10.	<i>Bala</i>	<i>Madhyama</i>

### Clinical Findings

Thyroid function test (TFT) was done on 26.06.2024.

TFT showed that TSH value was increased by **6.35µIU/mL** to its normal value i.e. (0.35-5.50)µIU/mL.

### Diagnostic Assessment

Hypothyroidism was confirmed as the final diagnosis on the basis of clinical characteristics and blood investigation.

**Therapeutic intervention****Panchakarma Intervention**

*Shodhana Nasya karma* [10] (Nasal instillation therapy) with *Anu Taila* [9] 8 drops in each nostril was advised for 7 days/month for 3 months.

**Procedure****1. Pre-Procedures**

- Make the patient stable, explained the whole procedures and consent was taken.
- Patient was lied down on the procedures table in supine position.
- Firstly, *Sthanika snehana* (local oleation) with *Tila taila* was given to neck, face, forehead. After that *Sthanika swedana* (fomentation) with hot towel was given to the patient.

**2. Procedures**

- After proper (Nasal instillation therapy) *Sthanika snehana* and *Swedana* the *Anu taila Nasya karma* was done.
- Neck of the patient was put in *Pralambita* position i.e., slightly tilted upward at 45°.
- *Anu taila* was lukewarm by immersing it in hot water.

- Then the tip of nose of patient was raised with middle finger and 8 drops of *Anu taila* was poured in the nostril while using the index and ring finger to close the alternate nostril.
- Patient was advised to inhale the oil slowly.
- The whole procedures repeated in the other nostril.[11]

**3. Post Procedures**

- After *Nasya*, *Swedana* was done and patient was asked to spit out the sputum.
- Wiped off the oil from the face with help of cotton cloth.
- After that *Dhumpana* (fumigation therapy) was done to extract out the remaining *Kapha*.
- Patient was advised to follow *Pathya-Apathya* (proper diet regimen).

**Shamana Chikitsa (Palliative treatment)**

Ayurvedic *Aushadhi Aarogyvardhani vati* (*Rasendrasara sangraha jwararogadhikara 13/105*, [12] *Kanchanar Guggulu*, [13] *Tab Thyset*, [14] *Hansapadadi Kwath*, [15] *Sukhsaraka Vati*, [16] was given to the patient. *Aarogyvardhani vati*, *Kanchanar Guggulu*, *Hansapadadi Kwath*, *Suksaraka Vati* was bought from Ayurveda Rasashala Pharmacy and *tab Thyset* was bought from Harsh products.

**Treatment Regimen****Table 3: Panchakarma Intervention**

S.No	Panchakarma	Dosage	Duration
1	<i>Anu taila Nasya</i>	8° - 8°	1/7/2023- 7/7/2023
2	<i>Anu taila Nasya</i>	8° - 8°	1/8/2023- 7/8/2023
3	<i>Anu taila Nasya</i>	8° - 8°	1/9/2023- 7/9/2023

**Table 4: Shamana Chikitsa (Palliative treatment) (6 months)**

S.No	Shamana Aushadhi (Palliative treatment)	Dose	Frequency	Duration
1	<i>Aarogyvardhini-vati</i>	250 mg	BD (two times a day), with lukewarm water before meal	1 month
2	<i>Kanchanar-Guggulu</i>	250 mg	BD (two times a day), with lukewarm water after meal	6 months
3	Tab. Thyset	250 mg	BD (two times a day), with lukewarm water after meal	6 months
4	<i>Hanspadadi-Kwatha</i>	250 mg	BD (two times a day), with lukewarm water after meal	6 months
5	<i>Sukhsarak-Vati</i>	250 mg	BD (two times a day), with lukewarm water after meal	6 months

**RESULT**

After 6 months of treatment patient got relief in symptoms of difficulty in breathing, had good appetite, regular menstruation from last 2 months and reduction in weight by 6kg. Patient weight was 52kg post-treatment. So, it can be evaluated that after the complete treatment the patient got improved result.

**Table 5: Assessment-chart of TFT pre-therapy and post-therapy**

S.No	TFT	Pre-therapy	Post-therapy	Normal range
1	T <sub>3</sub>	112.9	144	60-181ng/dL
2	T <sub>4</sub>	6.9	7.0	3.20-12.6µg/dL
3	TSH	6.35	4.65	0.32-5.50µIU/ml

## DISCUSSION

Hypothyroidism condition occurs when the body lacks sufficient thyroid hormones, potentially affecting almost all bodily systems. The thyroid gland produces thyroxine, a hormone containing iodine, which plays a crucial role in promoting growth and enhancing cellular metabolic process. Iodine can be considered as *Tejo-mahabhuta* and its main content of thyroid hormones. So, it can be said that thyroid hormones have *Agni Amsha*. Hypothyroidism in Ayurveda can be considered under a disease arising from malfunction of Agni as *Agni-dushti*.

Hypothyroidism is largely a *Kapha* imbalance disease in which *Jatharagni mandya* causes *Dhatva-agni mandya*. So, medication with *Kapha-Vata shamaka* properties had been chosen.

To alleviate these symptoms, the patient underwent *Panchakarma* and *Shamana Chikitsa (Palliative treatment)* which comes under Ayurvedic management. Within these 6 months treatment, the patient received remarkable relief in clinical symptoms and also seen decrease value of TSH level in blood investigation.

### Probable Mode of Action

#### • *Anu taila Nasya*

The primary pathology in hypo-thyroidism is present in thyroid gland which is located in *Urdhava-jatru* (upper clavicle region) and predominant *Doshas* involved are *Kapha* and *Vata* for which *Nasya* is considered to be an ideal cure.<sup>[17]</sup> In *Nasya*, *Shodhana-Nasya* is said to be helpful in management of the *Kaphaja-urdhavajatru-gata vikaras*.

*Anu taila* contains *Ushna*, *Tikshna dravyas* and *Vata-Kapha hara* property which causes *Shodhana* and *Lekhana* of *Kapha dosha*. Thus, *Nasya* with *Anu taila* was advised.

#### • *Arogyvardhini vati*

It contains of *Tamra Bhasma*, *Loha Bhasma*, *Triphala*, *Katuki*, *Shilajatu*, *Chitrakmula*. It is *Tridosahara* in nature and acts as *Deepan pachana*, *Medhonashaka*, *Malasudhikara*. It also acts on *Medodhatva agni* which is mainly useful in hypothyroidism patient. Certain components may help reduce inflammation, which could be beneficial for autoimmune thyroid conditions.

#### • *Kanchanar Guggulu*

It contains *Kanchanar twaka (Bauhinia variegata)*, *Shunthi (Zingiber officinal)*, *Pippali (Piper longum)*, *Tamala patra (Cinnamomum tamala)*, *Ela (Elettaria cardamomum)*, *Guggulu (Commiphora wightii)*.

*Kanchanar* is a drug choice of *Granthi vikar* and *Galganda*. It helps to balance the excess *Pitta* and

*Kapha doshas* in body. Its breakdown the deep seated *Kapha* and support the deep seated *kapha* and support the digestive fire.<sup>[18]</sup>

*Guggulu* act as *Vata* and *Medo-hara*. *Trikatu*, mainly have *Ushana-Tikshna-Laghu-Rukasha-guna*, *Katuu-rasa*, *Katuu-Vipaaka* & *Ushana-veerya* and have *Kapha-vata shaamaka*, *Deepan-paachan*, *Srotosodhana* and *Sothhara* properties. It is efficacious in restoring the dysregulation of *agni* observed in hypothyroidism.

- **Tab. Thyset:** Improves iodine metabolism and thyroid disorders.
- **Hanspadadi Kwath:** It contains *Hanspadi (Adiantum lunulatum)*, *Amrita (Tinospora cordifolia)*, *Nimba (Azadirachta indica)*, *Pippali (Piper longum)*, *Vasa (Adhatoda Vasa)*. These ingredients helps to pacify *Vata and Kapha doshas* and helps to optimize metabolism.
- **Sukhsarak Vati-** It helps to regulate smooth bowel movements and acts as laxative.

## CONCLUSION

This single case study demonstrates the potential efficacy of Ayurvedic treatment, specifically *Panchakarma* and *Shamana Chikitsa*, in managing hypothyroidism. After 6 months of treatment involving *Anu taila Nasya* (nasal instillation therapy) and various Ayurvedic medications, the patient experienced significant improvement in her symptoms. The treatment regimen included *Anu taila Nasya* for 7 days per month for 3 months, along with oral medications such as *Arogyvardhini vati*, *Kanchanar Guggulu*, *Tab Thyset*, *Hanspadadi Kwath*, and *Sukhsarak Vati* for 6 months. The patient reported relief in breathing difficulties, improved appetite, regularization of menstruation, and a 6kg weight reduction. Notably, her TSH levels decreased from 6.35 $\mu$ IU/ml to 4.65 $\mu$ IU/ml, falling within the normal range.

While this case study shows promising results, it is important to note that larger, controlled studies are required to establish the efficacy of this Ayurvedic *intervention* for hypothyroidism. Nevertheless, this case highlights the potential of integrating traditional Ayurvedic practices with modern diagnostic methods in managing endocrine disorders like Hypothyroidism.

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