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## ‘Ayurvedic Insights Into Hypothyroidism: Effective Management Strategies’

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### **ABSTRACT**

Contemporary lifestyles characterized by alterations in dietary practices, gradual weight accumulation, heightened stress levels, environmental pollution, tobacco consumption, and a lack of physical activity contribute to a rise in lifestyle-related disorders. Hypothyroidism is one such disorder associated with these lifestyle changes. Hypothyroidism which is also known as under active thyroid, where thyroid gland fails to produce and secrete enough thyroid hormone into the blood stream. Hypothyroidism specifically, is the most common of thyroid disorders in India, affecting one in ten adults [1]. It is more prevalent among females. A defect at any point within the Hypothalamic-Pituitary-Thyroid axis may lead to this condition. In such cases, there will be an elevation in TSH levels, as the pituitary gland increases TSH production in an effort to stimulate the thyroid to generate additional thyroid hormones. Thyroid gland produces two hormones Thyroxine(T4) and Triiodothyronine(T3) playing an important role in metabolism, growth and development of the body. In *Ayurveda* classics there is no direct co relation of hypothyroidism. But its clinical manifestation can be co related with *Dhatwagnimandya*. Thyroxine hormone therapy is the standard treatment in contemporary medicine, necessitating lifelong administration and accompanied by a range of potential side effects. Thus, it is necessary to modulate an *Ayurvedic* approach towards the disease. *Deepana*, *Panchana*, *Srotoshodhana* and *Kapha Vata Shamana* can be considered as main line of management.

**KEYWORDS-** Hypothyroidism, *Ayurveda*, *Dhatwagnimandya*, *Srotoshodhana*

## **INTRODUCTION**

The metabolic processes within the human body are regulated by thyroid hormones. Thyroid gland is one of the largest endocrine gland in human body. The thyroid is a small, butterfly-shaped gland located at the base of the neck, just below the Adam's apple. The thyroid gland makes two main hormones: thyroxine (T-4) and triiodothyronine (T-3). These hormones affect every cell in the body. The primary function of the thyroid gland is to facilitate the maintenance of oxidative metabolism. Thyroid disorder is one of the most prevalent endocrine disorders worldwide. It affects upto 5% of general population with a further estimated 5% being undiagnosed [2]. The prevalence of hypothyroidism is notably high among various thyroid-related disorders, primarily attributed to lifestyle changes and factors such as stress.

Hypothyroidism is a disorder of absolute or relative deficiency of thyroid hormone due to dysfunction of thyroid gland or pituitary gland. The combination of a low serum T4 and a high serum TSH concentration both conforms the diagnosis of hypothyroidism. The symptoms include weight gain, periorbital puffiness, lethargy, cold intolerance, loss of hair, dry skin, hoarseness of voice, constipation, irregular menstrual cycle. *Ayurveda*, an integrative approach to wellness, primarily aims to enhance human health. *Ayurveda* does not specifically outline any disease conditions that closely resemble hypothyroidism; however, there are numerous references to related concepts found throughout various texts. In *Ayurveda* eight type of *Nindita Purushas* viz. *Atidirgha*, *Atihrusva*, *Atiloma*, *Aloma*, *Atigaura*, *Atikrishna*, *Atisthula*, *Atikrishna* have been discussed which can be taken as functional disorders of endocrine gland. Metabolism can be correlated with function's of *Agni* which are transformation, transportation and assimilation of substrate. There is no direct co-relation of hypothyroidism in *Ayurveda* but its clinical presentation can be co related with *Dhatvagnimandya*. *Acharya Vagbhata* has given direct relation between *Dhatvagni* & *Jatharagni*. All the *Dhatu*s has their separate *Agni* called *Dhatvagni* & are nothing but part of *Jatharagni*. So, with *Jatharagni*, *Dhatvagni* also gets *Manda* (impaired).<sup>[3]</sup>

The disruption of metabolic elements, including bio-fire, *rasa* and *Meda Dhatu*s, as well as the underactivity of *Pitta Dosha*, leads to the development of *Ama*, which is characterized by a state of incomplete transformation. This process occurs at three distinct levels, specifically within *Jatharagni* (~GI biofire) level, *Bhutagni* (~Cellular biofire) level, and *Dhatvagni* (~Tissue biofire) level. Looking into its *Doshika* dominance, *Kapha* associated *Pitta Dushti* with vitiation of *Vayu* due to *Margavarana* and predominantly *Annavaha*, *Rasavaha* and *Medovaha Srotodushti* can be considered as cause of the disease. The line of management involves *Agni Deepana Aama Pachana*, *Srotoshodhana* and *KaphaVata Shamana* along with *Shodhana Chiktisa* including *Vamana* (induced vomiting) and *Virechana* (induced purgation).

## **HYPOTHYROIDISM IN AYURVEDA**

In *Ayurveda*, hypothyroidism cannot be classified as a singular disease, as its *Dushti Lakshanas* manifest throughout the entire body, indicating that a patient with hypothyroidism will exhibit symptoms affecting multiple bodily systems. *Acharya Charaka* has described that there is a solid structure in the neck named as "*Avatu*". It is probably the description of thyroid gland [4]. As hypothyroidism is a metabolic disorder.

Involving multisystemic disorder characterized by a diverse array of clinical manifestations, including psychological symptoms. *Ayurveda* describes a comparable concept called *Agni*, which plays a role in digestion, transformation, and metabolism. Thyroid hormones indicate underlying functions of *Agni*. According to *Ayurveda*, a diminished *Agni* is identified as the primary cause of nearly all health issues. The occurrence of *Kapha Pradhana Dosha Prakopa* is attributed to *Nidana Sevana*, resulting in *Dhatwagnimandya*. Impaired functioning of the *Jatharagni* (digestive capacity) influences the *Dhatavagni* (digestive capacity of tissues) and *Medoagni* (digestive capacity of adipose tissue), leading to a series of pathological consequences.

### Types

On the basis of etiology:

- 1.Primary hypothyroidism (thyroid gland defects)
- 2.Secondary hypothyroidism (pituitary gland defects)
- 3.Tertiary hypothyroidism (hypothalamic defects)

On the basis of time of occurrence:

- 1.Adult onset hypothyroidism
- 2.Congenital hypothyroidism

On the basis of severity:

- 1.Subclinical hypothyroidism
- 2.Overt hypothyroidism

### NIDANA

Contemporary lifestyle factors are significantly associated with hypothyroidism. The consumption of cruciferous vegetables such as cabbage, cauliflower, and broccoli can hinder iodine absorption by the thyroid gland, thereby impairing the synthesis of thyroid hormones. *Ayurvedic* texts assert that the body is a product of our dietary choices, and these same foods can also impact the onset of diseases [5]. It is widely recognized that the imbalance of *Doshas* results from the food consumed. All the aforementioned factors fall under the category of *Doshabalapravritta Hetu*, which includes *Sthoulya Nidana*, *Kapha Prakopaka Nidana*, and others.

The conditions resulting from the impairment of sperm and ovum are classified as *Adibalapravritta Vyadhi*. Abnormal or improperly developed organs are associated with *Janmabalapravritta Vyadhi*. Congenital hypothyroidism, also known as cretinism, may be included in this category. Additionally, genetic factors that induce mutations in genes, as seen in disorders such as thyroid dyshormonogenesis, are relevant to this discussion.

### MANAGEMENT

*Ayurveda* prioritize identifying the *Prakriti* and *Vikriti* (constitution and imbalance) of an individual, rather than solely relying on conventional disease nomenclature [6], as stated by *Acharya Charaka*. *Ayurvedic* treatment aims to disintegrate pathological factors contributing to hypothyroidism, addressing the root cause of slowed thyroid function and metabolism which is known as *Samprapti Vighatana*. So, the treatment should

focus on stimulating thyroid function and addressing symptoms. Symptomatic relief is tailored to each individual case, targeting tissue like *Sthaulya* (obesity) i.e. *Apatarpana chikitsa*, etc.

Since *Agni* parallels thyroid function, hypothyroidism can manifest as *Agnimandhya*.

Treatment should focus kindling *Agni* to restore metabolic balance. The drugs which can do *Dipana*, *Pachana* and *Dipana-Pachana* drugs. So depending upon symptoms and manifestation of disease and *Dhatu* level involved the drugs should be selected.

### **SANSHAMANA MEDICANAL COMBINATIONS**

- *Kanchanar Guggulu* :- Reduces *Kapha* imbalance.
- *Arogyavardini Vati*:- It enhance tissue metabolism (*Dhatvagni Vardhan*), promotes waste elimination(*Malashodhaka*), and cleanses the bowel (*Pakwashaya Dushti Nashak*), supporting overall digestive and detoxification processes.<sup>[7]</sup>
- *Chandraprabhavati*:- Balances the three *Doshas* (*Tridhoshaghana*), enhances strength (*Balya*), boosts vitality and libido (*Vrushya*), promotes overall rejuvenation (*Rasayana*), nourishes tissue (*Dhatuposhaka*), stimulates appetite (*Agnimandhyanashaka*) and supports heart health.
- *Laghmalinivasanti Vati* :- it rejuvenates and nourishes the body, particularly targeting and benefiting the plasma and blood tissues.
- *Triphalyadi Guggulu* :- Mentioned by *Yogratnakar*, and advised in the treatment of *Gandamala*. Mainly acts as *Deepan Pachana*.

**SINGLE HERBS** :- *Jalkumbhi* (*Pistia stratiotes*) *Guduchi* (*Tinisporoa cordifolia*), *Vidanga* (*Embelia ribes*), *Punarava* (*Boerhavia diffusa*), *Varuna* (*Crataeva nurvala*), *Pippali* (*Piper longum*). All these herbs calm the mind while boosting appetite (*Agni Deepan*), reducing fat (*Medohara*) and clearing obstruction (*Avarna-Nashaka*) and supporting holistic health.

### **PATHYAPATHYA**

#### ***Ahara:***

- A balanced diet for hypothyroidism should be high in fibre, low in calories and rich in protein, healthy fats, minerals, and vitamins. However, if constipation is a symptom, protein intake should be moderated to avoid exacerbating it.
- Daily fat intake should not exceed 30gm. Limit salt to 1-2 tsp per day. Avoid high sodium foods like salted chips and pickles.
- Limit foods with natural goitrogens such as cruciferous veggies (cabbage, broccoli, cauliflower), soybeans and others as they may impact thyroid functions. Cooking can reduce goitrogenic effects so its best to consumed this foods cooked rather than raw.

- Limit intake of fat, sugar, salt, red meat and caffeine (found in coffee, cola, etc) as they disrupt thyroid function and adrenal hormone balance.
- Smoking can worsen hypothyroidism, while nicotine boosts  $T_3/T_4$  production. Alcohol and opiates can increase  $T_3$  levels by reducing its breakdown, leading to mood elevation and potential addiction.

Focus on iodine rich foods such as beets, radish, parsley, potatoes, fish, oats and bananas in diet. However certain supplements (iron, calcium) and medications (antacids, cholesterol-lowering drugs such as cholestyramine and colestipol <sup>8</sup>) can interfere with thyroid hormone absorption.

### ***Vihar:***

- Regular exercise is crucial for hypothyroidism management. Aim for 15-20 minutes daily activities like walking, swimming, running, or cycling can enhance thyroid function and tissue sensitivity towards it.
- Hypothyroidism patients should be mindful of joint vulnerability and potential cognitive impairments. Avoid activities with high injury risk, such as contact sports or heavy machinery operation, especially if symptoms are uncontrolled.
- Physical and emotional stress can impact thyroid health by lowering hormone production, stress reduction is essential for optimal thyroid function <sup>9</sup>

### ***YOGA***<sup>8</sup>

*Yoga* practices like *Sarvangasana*, *Pawanmuktasana* and backward bends can support thyroid functions by enhancing blood flow and gland stimulation. Gentle approaches should be taken for Goitre patients.

### ***PRANAYAMA***

*Ujjayi* and *Nadi Shodhana Pranayama* are beneficial for thyroid functions. *Ujjayi's* throat- focused breathing stimulates reflex pathways, while *Nadi Shodhana* helps regulate metabolism

### **DISCUSSION**

Hypothyroidism is a growing concern and while modern medicines are available they often come with side effects and high recurrence rates. Traditional herbal remedies offer a promising alternative, being safer and more cost effective. *Ayurveda* views hyperthyroidism as an imbalance of *Jatharagni* and *Dhatwagni* involving *Kapha* and *Vata Doshas* and affecting various bodily systems. Herbs targeting these factors can alleviate symptoms, regulate hormone secretion and support thyroid function. However, further clinical their efficacy and provide more treatment options.

## **CONCLUSION**

*Dhatwagni* (tissue metabolism) relies on *Jatharagni* (digestive fire). Weakened *Jatharagni* leads to *Dhatwagni* imbalance, causing improper formation of bodily tissues and potentially triggering hypothyroidism symptoms. *Ayurvedic* management including diet, herbs (with properties like *Deepan*, *Pachana* and *Lekhana*) and practices like Yoga and Pranayama, can effectively address hypothyroidism by balancing *Kapha* and *Vata Doshas* and restoring *Dhatwagni* balance.

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