



Ayurvedic INSIGHT ON HYPERTHYROIDISM AND ITS MANAGEMENT: A REVIEW OF *Bhasmaka Roga*

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ABSTRACT

Hyperthyroidism, characterized by an overactive thyroid gland and excessive secretion of T3 and T4 hormones, is a growing global health concern, particularly in developing nations. While Ayurvedic classics do not mention the thyroid gland by name, the clinical presentation of hyperthyroidism closely mirrors the conditions of *Bhasmaka Roga*. These conditions are fundamentally related to an exaggerated digestive fire (*Agni*) and metabolic state due to influence of *Pitta* and *Vata* Dosha. This article explores the Ayurvedic perspective on the clinical features (*Lakshanas*) of hyperthyroidism through the lens of *Bhasmaka Roga* by giving an analytical similarities between them with due considerations to functions of *Pitta* Dosha and thyroid hormones and consequences of their hyperactivity in the body. It further outlines comprehensive management strategies, including *Nidana Parivarjana* (avoidance of causative factors), *Shamsamana* (palliative therapy), dietary interventions (*Pathya Ahara*), and *Yogic* practices to restore metabolic balance.

KEYWORDS- *Pitta Vruddi, Atyagni, Ayurveda, Thyroid Gland, Hyperthyroidism, Endocrinology*

INTRODUCTION

Ayurveda, a holistic system of medicine, defines health as a state of equilibrium between the three *Dosha*. *Vata* is said to be responsible for all movements and acts as initiating and controlling factor. *Pitta* is said to be responsible for digestion, metabolism, heat production and hence is also called as *Agni*. *Kapha* performs functions like protection, strength, support, growth and resistance. The three coordinating systems of body as per human physiology are nervous, endocrine and immune system which can exactly be co-related with *Vata*, *Pitta* and *Kapha* respectively¹. A hyperactive state of *Dosha* can affect the respective function of that *Dosha* in the *Shareera* causing *Roga Lakshana*. The endocrine system especially thyroid gland and its secretion govern the overall metabolism of body, can be an analogue to *Pitta Dosha*. The hyper secretion of thyroid hormone is essentially a condition of *Pitta Prakopa* and *Tikshnagni*. In contemporary medicine, hyperthyroidism is an endocrine disorder where excessive thyroid hormone production leads to a state of hypermetabolism. Thyroid hormones are essential for growth, energy regulation, and neuronal development. However in excess, the hormone can lead to various health consequences, including high-output heart failure and dilated cardiomyopathy². The hormones T3 and T4 are often correlated to the functions of *Pitta* in the body. Hence an attempt is made to conceptually establish these assumptions and propound the principles required for correction of this condition.

REVIEW OF LITERATURE

Pitta denotes *Tapa* and it is having three meaning viz. *Tapa Dahe*, *Tapa Santape* and *Tapa Aiswarye*,³ which means 'to burn the ingested food, to generate heat and to attain the eight fold nature respectively. *Dahana* does not indicate burning here rather it should be understood as *Paaka* (Metabolism) and can be interpreted as responsible factor for *Parinama* i.e. conversion or transformation. *Pitta* is dominant in *Agni* and *Jala Mahabhoota*. Hence more of *Agni* functions in the *Shareera* is driven by *Pitta*⁴.

Functions of *Pitta* in the *Shareera* are *Pakthi*, *Ushma*, *Darshana*, *Kshuth*, *Trushna Ruchi*, *Prabha*, *Medha*, *Shaurya*, *Tanu Mardava*.⁵ *Pakthi* indicates digestion and metabolism, *Ushma* is the thermogenesis and maintenance of body temperature. *Kshuth* is the hunger demands indicative of proper metabolic activities especially in GIT, *Trushna* is thirst, a demand to maintain the water balance.

Pitta Vruddi- *Peeta Vit*, *Peeta Mutra*, *Peeta Netra*, *Kshuth*, *Trushna*, *Daha*, *Alpa Nidrata*.⁶ *Peeta Vit*, *Peeta Mutra*, *Peeta Netra* are indicators of hyperbilirubinaemia. While *Kshuth*, *Trushna*, *Daha*, *Alpa Nidrata* are the exaggerated metabolic responses.

Pathophysiology of *Bhasmaka Roga/ Atyagni*



The core of *Ayurvedic* pathology lies in the dysfunction of *Agni*. According to *Acharya Charaka* it is a condition of decrease in *Kapha* and concomitant aggravation of *Vata* and *Pitta*. The aggravated *Pitta* due to its *Ushma Guna* drives *Agni* into a hyperactive state leading to a massive increase in *Jatharagni*. This state is known as *Atyagni*⁷, exaggerates *Pitta Dosha* functionally along with *Vata Dosha* results in rapid digestion and an insatiable appetite (*Kshuddhavridhi*). If the patient does not consume sufficient food to satisfy this fire, the *Agni* begins to digest the *Saptadhatus* (seven vital tissues), leading to *Dhatu-Pachana* and *Karshytwa* (tissue depletion and cachexia). *Acharya Bhavprakash* further noted that the intake of excessively dry food (*Atiruksha*) and excessive exercise (*Ativyayam*) causes the depletion of *Kapha*. This allows *Vata* and *Pitta* to increase unchecked, manifesting as *Bhasmaka Roga*.

Thyroid hormone functions⁸

Thyroid hormones concerned with metabolism are T3 (Triiodothyronine), T4 (Thyroxine) secreted to the blood stream by the endocrine thyroid gland. The secretions are regulated by TSH (Thyroid stimulating hormone) secreted from anterior pituitary gland by the influence of TRH (Thyrotropic releasing hormone) released by hypothalamus.

The thyroid gland plays a crucial role in regulating the body's metabolic processes, growth, and development. It also modulates functions of essential organs, including the heart, brain, kidneys, and liver. Its primary function involves stimulating the overall metabolic rate, establishing it as the body's key metabolic hormone. Thyroxine boosts metabolic activity in most tissues excluding the brain, retina, spleen, testes, and lungs by elevating basal metabolic rate (BMR) through increased tissue oxygen consumption, known as the calorogenic effect. It impacts substrate metabolism, including proteins, carbohydrates, and lipids: promoting protein anabolism via enhanced transcription and translation, while stimulating catabolism through lysosomal enzymes; aiding glucose absorption from the gastrointestinal tract (GIT), glycogen breakdown, and gluconeogenesis; mobilizing fat stores to raise blood free fatty acids, yet lowering plasma cholesterol and triglycerides. Thyroxine boosts enzyme synthesis, potentially increasing vitamin utilization as enzyme cofactors, and elevates heat production via accelerated cellular metabolism and BMR, termed thyroid hormone-induced thermogenesis. It drives body growth, particularly in children, aids weight maintenance, accelerates erythropoiesis and blood volume as a key erythropoietic factor, heightens appetite and GI secretions/motility, stimulates other endocrine glands' output due to metabolic demands, and supports sexual function. Additionally, it enhances cardiovascular activity (heart rate, blood pressure, vasodilation), respiratory rate and force, CNS development/maintenance critical in fetal and early postnatal life to avert mental retardation and acts as a CNS stimulant, especially for the brain. Thyroxine ensures normal muscle activity, with slight elevations boosting vigor, and maintains healthy sleep patterns.

Effects of hypersecretion of thyroid hormones- Clinical syndrome resulting from excess of thyroid hormones resulting in hypermetabolic state is called the hyperthyroidism. There are number of common symptoms and signs of hyperthyroid state. Severe and extreme hyperthyroid states are called Thyrotoxicosis and Thyrotoxic crisis, respectively.

Signs and Symptoms of Hyperthyroidism⁹

Common symptoms of thyrotoxicosis include hyperactivity-nervousness, restlessness, emotional lability/mood swings, increased appetite, heat intolerance, and decreased attention span-declining school performance, hand writing deterioration, excessive sweating, sleep disturbance-insomnia, restlessness, enuresis, fatigue-muscle weakness, and frequent loose stools.

Common signs of thyrotoxicosis include restless-short attention span, weight loss despite increased appetite, on cardiovascular examination-tachycardia or atrial arrhythmia (fibrillation), systolic hypertension with wide pulse pressure, on ocular examination-prominence of eye, stare, lid lag, and more advance. eye changes called Graves' ophthalmopathy. on hand examination-warm, moist, smooth skin with fine tremor, muscle weakness-shoulder, pelvic girdle muscle. There is variation in presentation of thyrotoxicosis depending on age at presentation. Younger patients show symptoms of sympathetic activation such as anxiety, hyperactivity, and tremor. Older patients show more cardiovascular symptoms such as dyspnea and atrial fibrillation and unexplained weight loss. Neonates show irritability, flashing, poor weight gain, tachycardia, hypertension, goiter, and exophthalmos.

Causes of Hyperthyroidism

Excessive secretion of thyroid hormones resulting from autoimmune disorders, such as Graves' disease. Other conditions like Toxic adenoma of thyroid gland, subacute thyroiditis also causes hyperthyroidism. Iatrogenic causes like exogenous intake of hormone. Other causes like pituitary adenoma, iodine ingestion/ radiation exposures.

Diagnosis of Hyperthyroidism¹⁰

Hormone study includes: Coupled hormone test: FT4 and FT3, coupled with TSH is the hormone test for all people with clinical features suggestive of hyperthyroidism. A suppressed TSH (<.01 IU/mL) plus high FT4, and FT3 is the hallmark of primary hyperthyroidism.

Treatment- Antithyroid drugs like carbimazole and prophyllthiouracil, Beta blockers, Radioablation and surgical removal thyroidectomy as per the severity and clinical signs.

DISCUSSION

Functions of thyroid hormone in the body are similar to that of functions of *Pitta* and *Agni* in the body with respect to the metabolic activities. *Bhasmaka Roga*, a condition of hyperactive *Agni* driven by aggravated *Pitta* and *Vata* with decreased *Kapha*, mirrors hyperthyroidism's hypermetabolic state from excess thyroid hormones like T3 and T4. Both feature intensified



metabolism viz. Pitta's *Ushma Guna* causes *Tikshnagni*, intense *Jatharagni* activity, and insatiable *Kshuth* (hunger), akin to thyrotoxicosis's elevated BMR, voracious appetite despite weight loss, and calorogenic effects boosting oxygen consumption, thermogenesis, and tissue catabolism. Heat-related symptoms align in both cases. *Daha* (burning sensation) as seen in *Pitta Vruddi* parallels heat intolerance, excessive sweating, and thyroid-induced thermogenesis. *Alpa Nidrata* (Insomnia) matches sleep disturbances and restlessness; *Dhatu-Pachana* and *Karshytwa* (tissue depletion, cachexia) reflects muscle weakness and wasting from unchecked *Agni* digesting *Saptadhatus*, similar to protein catabolism and fat mobilization in hyperthyroidism. Heightened GI motility causes frequent loose stools similar to in

case of *Mrudu Koshta*, soft bowel movements due to influence of *Pitta*. While cardiovascular parallels include tachycardia and hypertension from *Pitta*-driven activity, evoking thyrotoxic sympathetic overdrive. Nervousness, emotional lability, and fatigue in both underscore CNS overstimulation. If unquenched, *Bhaskama's Agni* consumes *Dhatus* like hyperthyroidism's unchecked hormone excess, leading to exhaustion highlighting a shared pathophysiology of metabolic "fire" imbalance.

Comparative Analysis of *Lakshanas* (Symptoms)

The clinical features of Hyperthyroidism and *Bhaskama Roga* show significant overlap, reinforcing their clinical correlation:

Clinical features of Hyperthyroidism	<i>Lakshana of Bhaskama Roga</i>
Excessive Thirst	<i>Trishna</i>
Heat Intolerance / Burning Sensation	<i>Daha / Santapa</i>
Increased Appetite	<i>Kshuddhavridhi</i>
Excessive Sweating	<i>Swedadhikya</i>
Tremors	<i>Kampa</i>
Nervousness, Irritability	<i>Moha / Arati</i>
Weight Loss	<i>Karshya</i>
Palpitation	<i>Hriddrava</i>

Table 1 – Features of Hyperthyroidism and *Bhaskama Roga*

Ayurvedic Management Strategies

Bhaskama Roga due to *Pitta Vruddi* causes *Atyagni* which in the body increases the rate of metabolism exhibiting features similar to that of hyper secretion of thyroid. Excess *Pitta* heats up *Agni*, causing fast digestion, too much hunger, burning feeling, thirst, and sleeplessness. Hyperthyroidism also speeds up the body's metabolism with too much thyroid hormone, leading to big appetite but weight loss, heat intolerance, sweating, loose stools, fast heart rate, and tiredness. Both make the body burn too hot, digesting tissues if not controlled, like a fire eating everything. Hence the primary goal of management is to pacify the aggravated *Pitta* and *Vata* while stabilizing the *Tikshnagni* with due considerations to symptomatic management.

Nidana Parivarjana¹¹-The first line of treatment is avoiding *Pitta* and *Vata* aggravating diets and lifestyles.

Shodhana

- *Snigdha Virechana* to remove excess *Pitta* using *Trivruth* Post *virechana* should be fed with *Ksheerayuktha Yavagu*.
- *Basti*: Medicated enemas using oil, ghee, or milk to balance *Vata*.

Shamsamana Chikitsa-

- *Shamana Snehapana- Mahatikta Ghrita*, *Shatavari Ghrita* and *Ksheerabala Ghrita* alleviates *pitta* and stabilizes BMR
- *Shirodhara*- Pouring medicated oils like *Himasagara Taila*, *Ksheerabala Taila*, *Chandanadi Taila* on the forehead to alleviate neurological symptoms like anxiety and insomnia.

- *Shadanga Paneeya*, *Dhanyaka Hima*, *Usheerasava*, *Sareevadhyaasava*, *Chandandhyaasava* to reduce *Daha*, *Trishna*
- *Drakshadi avaleha*, *Kushmanada avaleha* can be given as nutrition supplement.
- *Muktha Pishti*, *Pravala Pishti*, *Kamadugha Rasa* will help in reduction of symptoms.

Pathya Ahara- To pacify the intense *Agni*, the diet should include foods with *Guru*, *Snigdha Sheetha* and *Madhura Rasa*. Frequent meals should be consumed to prevent the tissue burnout by excess catabolism.

Payasa (milk pudding), *Krishara* (thick gruel), and jaggery products, *Snigdha* and heavy substances like wheat flour mixed with milk and ghee. Milk medicated with *Jeevaniya* herbs. *Dadhi* with *Ghritha*, Bark of *Udumbara* mixed with human milk is specifically mentioned to pacify *Atyagni*. Also *Utkarika*, preparation containing powders of sesame, almonds and peanuts can be given.¹¹

Yoga and Lifestyle: Yoga therapy targeting the *Vishuddha* (throat) chakra is highly beneficial. Recommended poses include *Sarvangasana* (shoulder stand), *Matsyasana* (fish pose), and *Halasana* (plough pose). Pranayama techniques like *Sheetali* and *Sheetkari* help cool the body and reduce *Pitta*.¹²

CONCLUSION

Hyperthyroidism is a complex metabolic disorder that finds a profound clinical parallel in the *Ayurvedic* description of *Bhaskama Roga* and *Tikshnagni*. The disease is driven by the vitiation of *Pitta* and *Vata*, leading to an overactive digestive fire



that eventually depletes the body's tissues. By employing a multi-faceted approach incorporating *Pitta*-pacifying diets, unctuous palliative treatments, specific Yogic postures, and cooling breathing exercises offer a safe and effective alternative for managing hyperthyroidism without the severe side effects often associated with long-term contemporary therapies.

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