



REVIEW ARTICLE

Ayurvedic Approach in management of Hypothyroidism – A Review

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ABSTRACT:

Hypothyroidism is a common endocrine disorder seen daily in hospital OPDs of Nepal, in which the thyroid gland does not produce enough thyroid hormone. Levothyroxine is extensively used for the treatment of hypothyroidism but its treatment is unsatisfactory, considering its treatment is symptomatic and is for lifetime. Patients with hypothyroidism come to Ayurveda institutions seeking its treatment through Ayurveda because Ayurvedic management of hypothyroidism is considered much safe and effective and ayurveda attempts to heal the root imbalance of hypothyroidism as compared to modern management. In this article we have made an effort to have an ayurvedic insight over hypothyroidism and define optimal approach in its management. Based on our observation, we came to conclude that hypothyroidism can be very well managed with ayurvedic medicines, depending upon the symptoms but careful selection of drugs as per ayurveda and lifestyle management should be done. But extensive and intensive research for validation of Ayurveda management of hypothyroidism is need of current time.

Key Words: Ayurveda, Agnimandhya, Hypothyroidism, Thyroid disorders.

INTRODUCTION:

Hypothyroidism refers to any state that results in a deficiency of thyroid hormone, including hypothalamic or pituitary disease and generalized tissue resistance to thyroid hormone and disorders that affect the thyroid gland directly^[1,2]. It is a condition associated with deficiency in the thyroid hormones, free thyroxine (FT4) and free triiodothyronine (FT3).^[3,4] T4 is produced only from the thyroid, whereas T3 from the thyroid and from T4 de-iodination in extra-thyroidal tissues. T3 deficiency is responsible for the

clinical and biochemical manifestations of hypothyroidism. T4, which is the main product of the thyroid, circulates in plasma, is converted to T3. T4, being in many respects is considered as a prohormone for the more potent T3. ^[5] The condition of hypothyroidism can result from a defect anywhere in the hypothalamic-pituitary-thyroid axis, either insufficient TSH from the pituitary or insufficient TRH from the hypothalamus. In the vast majority of cases, it is primary hypothyroidism, which is decreased secretion of T4 and T3 by the gland itself, which results in a compensatory

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increase in TSH secretion. Thus, the combination of a low serum T4 and a high serum TSH concentration both confirm the diagnosis of hypothyroidism. Hypothyroidism can also be secondary due to the lack of thyroid hormone when hypothalamus secret deficient amount of either Thyrotropin or Thyrotropin releasing hormone (TRH). The patient's presentation may vary from asymptomatic to coma (rarely) with multisystem organ failure (myxoedema coma).^[6]

Studies have shown the tendency of hypothyroidism to increase with the age and being more common in women. Men are also affected, but less frequently. The diagnosis and treatment of hypothyroidism are often considered simple, but there is large group of people with this condition who are not treated adequately. And in the other hand, the treatment modalities of the hypothyroidism are also having many adverse effects. These are among the reasons why patients with abnormalities of thyroid gland function come to medical attention for several reasons seeking its treatment through Ayurveda. Therefore, it is the need of time to go for a safe and effective management for hypothyroidism for which the condition should be understood in terms of Ayurvedic principles.

METHODOLOGY:

This review is carried out with an objective to have an ayurvedic insight over hypothyroidism and define optimal approach in its management. The demonstration of hypothyroidism in classical ayurvedic texts, various online and offline peer-reviewed journals had been searched, reviewed, compiled and drawn a conclusion in brief for an evidence-based study.

OBSERVATION:

Although there is no exact mention of any disease condition which is similar to Hypothyroidism in ayurvedic classical texts, a disease by the name *Galaganda*, characterized by neck swelling, is a common symptom in both. The first description of neck swelling was mentioned in Atharva Veda by the name Apachi. Charaka mentioned the condition under 20 *sleshma vikaras*.^[7] Acharya Susruta also has clearly mentioned the Adhisthana of *Galaganda* as out of seven layers of the skin, the sixth layer known as Rohini is the site for establishment of disease *Galaganda*.^[8] And at the other end, *Galaganda* is closely associated with goiter (abnormal swelling of the thyroid gland). But hypothyroidism is not just a localized disease because it is presented with a number of symptoms related to many systems of the body. As a symptom of thyroid disease, a goiter is generally associated with hyperthyroidism but can also occur with

hypothyroidism.^[9] Thus, it is possibly insignificant to draw a correlation between hypothyroidism and *Galaganda*.

Looking the symptoms; malaise, lethargy, slow speech, slow pulse, low appetite, weight gain, thick skin, menorrhagia, macroglossia, goiter, and puffy eyes and face simply represent a *kapha* vitiation. Similarly, symptoms like fatigue, constipation, muscle cramps, amenorrhea, PCOD, weakness, dry skin and hair, and hoarseness of the voice are classically associated with *vata* vitiation.

Inherited disorders of enzyme abnormality would seem to correlate with an issue with the *agni* in thyroid gland. *Dehagni* or *Jatharagni* or the body fire is the responsible for the lifespan, colour, complexion, strength, health, enthusiasm, plumpness, immunity, energy, heat-processes and vital breath. One can even die with the extinction of this *Jatharagni* and one can also live a long healthy life without disorder with the proper functioning of the *agni*. Hence, its impairment gives rise to diseases. The food we intake nourishes the *dhatu*s, *ojas*, strength, complexion and so on which ultimately depends upon the *agni*.^[10]

Oxidative metabolism, Carbohydrate, Lipid, Protein and Vitamin metabolism are among the basic physiological functions of thyroid hormones in the body which discloses that the thyroid gland is also responsible for basic metabolic functions like digestion, absorption, assimilation and metabolism of food. Any imbalance in intake of food and nutrients may cause over activity or under activity of thyroid gland. Hence food plays a vital role in occurrence of thyroid disorder. And, this can undoubtedly relate that *viruddha ahara* vitiates the *agni*.^[11] Regulating *agni* with *dipana dravyas* to increase metabolism is very essential, followed by clearing the *ama*. *Lekhanas* may also be used to reduce excess weight.^[12]

Chronic deficiency of iodine can also cause goitrous hypothyroidism.^[13] In fact, there is evidence that too much iodine can cause as much trouble for the thyroid as too little.^[14] The principle of '*sarvatha sarva bhavanam samanyam vridhikaranam*' is applied in the case.^[15]

There are a number of herbs which are very effective in managing hypothyroidism. *Kanchnar* (*Bauhinia tormentosa*) is considered as a drug of choice in both enlargement of the thyroid as well as hypothyroidism.^[16] It is typically mixed with another herb, *Guggulu* (*Commiphora mukul*), in the form of *Kachnar guggulu*. *Guggulu* is also a fat burning herb due to its light, dry, and sharp nature. As a *dipana*, *pachana*, and *lekhana* property, it alleviates both *vata* and *kapha* and regulates the *agni*. It also appears to alleviate several

indicators of heart disease, common amongst hypothyroid patients, including high cholesterol and high blood pressure.^[17] Brahmi (*Bacopa monnieri*) was found to stimulate thyroid functioning, increasing T4 by 41%.^[18] Brahmi is well known herb for memory loss, a symptom of hypothyroidism.

Similarly, another research shows that extracts of ashwagandha (*Withania sonifera*) along with *Bauhinia purpurea* are capable of stimulating thyroid function in female mice.^[19] *Bauhinia purpurea* enhanced both T3 and T4 hormones, but Ashwagandha only increased T4.^[20] Ashwagandha alone was found to stimulate thyroid function increasing serum T3 and T4.^[21] A study done on patients with bipolar disorder found that Ashwagandha root unexpectedly healed subclinical hypothyroidism.^[22] Decoction of Varuna root with honey is also recommended in management of Gandamala. Varuna also possesses anti-tumor property which makes it beneficial in extra growths of thyroid as well as in hypertrophy of prostate. Grinded root of Nirgundi with water is used for Nasya in treatment of Gandamala.^[23]

Yoga can also help in managing hypothyroidism with few asanas and pranayams. The yogasanas can help in strengthening muscles and also reducing effects of hypothyroidism on the body. Suryanamaskar, Naukasana, Matsyasana, Bhujangasana, Ustrasana, Halasana and Sarvangasana are among asanas and Suryabhedana, Anulomilom and Ujjayi are among the beneficial pranayams.^[24]

DISCUSSION:

Hypothyroidism is being a major issue in today's context, and meanwhile the treatment modalities and medicines available are not helping much in resolving the underlying pathology instead reoccurrence rate is raising high with notable side effects. This is why, it has become most to rule out the case through ayurvedic principles. The fundamental treatment principle of Ayurveda is Nidana Parivarjana, avoiding the causative factors like improper Ahara, Vihara and Manasika karanas, which are the root causes for any disease to occur. The incidence of hypothyroidism may be due to iodine deficit dietary habits, intake of excess goitrogenic diet, inactivity of thyroid gland, toxins developed in the body by environmental pollution or auto-immune mechanism. When understanding in Ayurvedic and modern perspective of managing hypothyroidism emphasis is given on Nidana parivarjana i.e. restraining from unhealthy food habits and lifestyles and maintaining a healthy dietary regimen (Pathya ahara). Practicing Yogas asanas mentioned in ancient Ayurvedic texts, avoiding things that causes stress,

maintaining proper sleep (Vihara and Manasika pathya) and practicing Pranayama will help remove the thyro-toxins from the body and helps in improving the immune resistance which also helps in improving the autoimmune conditions of thyroid gland. Maintenance of proper blood circulation to thyroid gland in turn nourishes it with proper nutrient supply which controls the under activity or hyperactivity of thyroid gland.

The conceptual analysis of symptomatology of hypothyroidism aids us to identify it as kapha pradhana tridosha vyadhi with rasa and medo dushti predominantly resulting due to agni dusti. The treatment can be planned based on Dosha Pratyaneeka Chikitsa than Vyadhi Pratyaneeka Chikitsa. Use of rasayanas will also bring a good result in managing the condition. Formulations to resolve the Agnimandhya condition should be prescribed. The Sodhana Chikitsa also helps in improving the Agni. The majority of the herbs recommended for this condition not only provide relief in various symptoms but also directly alter the secretions of the hormones involved in pathogenesis of the disease and stimulate the normal functioning of thyroid gland. Still, a number of clinical researches on the above herbs are necessary to further certify their efficacy in normalizing thyroid dysfunction which will provide the practitioners to have options to treat disease.

CONCLUSION:

With this review, we can conclude that hypothyroidism can be very well managed with ayurvedic medicines, depending upon the symptoms, and careful selection of drugs as ayurveda attempts to heal the root imbalance of hypothyroidism. Herbal extracts possess natural antioxidants, which not only help in curing the diseases, but also improve the body's defense system. Extensive randomized control trials should be done for scientific validation of Ayurveda drugs along with life style management should be focused.

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