



## HYPOTHYROIDISM:-MANAGEMENT BASED ON AYURVEDIC PERSPECTIVE

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**ABSTRACT**

The sedentary lifestyle and stress filled modern era has led to alterations in the activities of neuro endocrine system causing newer health challenges like thyroid disorder. Hypothyroidism is a commonly encountered health issue in day to day life and has continued to pose major health challenges in both developing and developed world. Hypothyroidism also known as underactive thyroid is a condition where the thyroid gland does not create enough thyroid hormone. Thyroid hormone regulates the way in which the body uses the energy-metabolism, and without enough of this hormone many of the body's functions slow down. In India, 42 million people are suffering from thyroid disorders; out of which hypothyroidism is most common with prevalence of 5.4%. In present era, people are disguised with hormonal therapy as it makes them slave of hormones. In this direction, to evaluate the actual efficacy of different Ayurvedic treatment modalities; The Ayurveda describe hypothyroidism as the state of imbalance of Tridoshas and suggest the treatment via use of herbal plant extracts, life style modifications like practicing yoga and various dietary supplements. The modern medicine practice define hypothyroidism as the disease state originated due to formation of antibodies against thyroid gland and hormonal imbalance and incorporate the use of hormone replacement i.e. Levothyroxine, antioxidants.

**KEYWORDS** : Hypothyroid, Tridosa, herbs and yoga,

**INTRODUCTION**

Hypothyroidism is the major endocrine disorder seen in general population. It is characterized by the deficiency of thyroid hormones to abnormal levels. This condition leads to the reduction in basal metabolic rate, affect physical and mental growth during infancy or childhood<sup>1</sup>. It is prevalent among every one from ten adults in india, nearly 10.95 % in major cities of with significantly females number outweighing the male i.e. (15.86% female and 5.02% males). This prevalence is 4.6 % in the developed world<sup>2</sup>. Main causes are Hashimoto's thyroiditis (autoimmune thyroiditis), deficiency of iodine, surgical removal of thyroid gland i.e. thyroidectomy, radioactive treatment etc<sup>3</sup>. Hypothyroidism is associated with various pathological states that render person dependent on hormone replacement therapy lifelong<sup>4</sup>. Hence, it calls for the understanding of ayurvedic concept of this disease and establishing the management of hypothyroidism through Ayurvedic principles.

The Ayurveda, considers the balanced state of agni(enzymatic activity), tridoshas(bodily humours), dhatu (metal) & mala (impurity) as the foundation for the orderly functioning and samavastha (homeostasis) of human body. If any of the element gets disturbed, it give rise to disease state. All these elements, also controls the working of thyroid gland, which is located in the neck region (Kantha) also, is the place (sthana) for Kaphadosha (mucous), Prana (breath) and Udana Vayu (vital air), Mamsa (flesh) and Medadhatu (fatty tissue)<sup>5</sup>. This review aims to discuss both Ayurvedic and modern medicine concept of hypothyroidism pathophysiology, line of treatment and future areas of research based on use of herbal plants or dietary supplements.

**ETIOLOGY (NIDANA)****Primary (thyroid gland) hypothyroidism:**

Autoimmune (Hashimoto thyroiditis or postpartum thyroiditis), iatrogenic (Thyroidectomy, thyroid surgery, radioactive iodine therapy and antithyroid medications), miscellaneous (Iodine deficiency and excess, other medication induced, exposure to radiations, moderate or severe systematic illness, thyroid agenesis, defective thyroid synthesis, resistance to thyroid hormone)<sup>7</sup>

**Secondary (Pituitary) hypothyroidism:**

It may occur due to pituitary tumors, infarcts or trauma, surgery, infiltrative disorders (eg sarcoidosis, histiocytosis, lymphoma,

hemochromatosis), lymphocytic hypophysitis, infection and medicate ons<sup>8</sup>

**Tertiary (hypothalamus) hypothyroidism;**

Infiltrative disorders (eg . Sarcoidosis, histiocytosis, lymphoma, hemochromatosis) and. Medication induced hypothyroidism, is a great matter of concern these days. These medications could be part of therapy for other ailments but may directly or indirectly affect the thyroid function. Glucocorticoids, Bromocriptine, Octreotide, Opiates, phentolamine, growth hormone etc., they contribute to hypothyroidism via decreasing Thyroid stimulation hormone (TSH) secretion. Some drugs could adversely affect the thyroid hormone synthesis and their secretion (Iodine, Amiodarone, thionamides, thiocyanates, aminoglutethimide, perchlorate ions, lithium and certain cytokines), some act via altering thyroid hormones metabolism (rifampicin, phenytoin, carbamazepine, barbiturates, tyrosine kinase inhibitors,  $\beta$ -blockers, iodinated contrast media etc.) and some via increasing thyroxine binding globulin (Mitotane, estrogens, 5-fluorouracil etc.), last but not the least affect the exogenous absorption of thyroid hormones (calcium compounds, sucralfate, ferrous compounds, colesvelam, antacids, coffee etc.)<sup>9</sup>.

**PATHOPHYSIOLOGY (SAMPRAPTI):**

In Ayurveda, it is considered as state of "Pitta kshya (decrease of pitta), Kaphavridhi (increase of kapha or mucous) and medodusthti (impairment of fat) thereby affecting the Srotas (channels) of body"<sup>5</sup>. Ayurveda also considers it, as a state of disbalance between mind, body and soul due to grief, fear, anger, sorrow, excessive sleep and excessive vigil despite adequate food intake<sup>10</sup>. Modern therapeutics take into consideration the derangements in gonadal hormones, leptin, and other feeding- and sleep-related hormones that disturbs hypothalamic-pituitary (HPT) feedback system thereby, disturbing thyroid hormone levels. Hashimoto thyroiditis, is the result of cell and antibody-mediated destruction of thyroid tissue i.e. antibodies to thyroperoxidase, thyroglobulin, Thyroid Stimulating Hormone (TSH) and its receptors<sup>11</sup>.

**SIGNS & SYMPTOMS:**

Clinical signs may include goiter (Galaganda), nonpitting edema, brittle nails, macroglossia, slowed relaxation phase of reflexes, psychosis, bruising/bleeding, pericardial or Pleural effusion, ascites, hypothermia, hypotension, hypoglycaemia, altered mental status/coma<sup>12</sup>. Ayurveda, describes the symptoms of

hypothyroidism in terms of tridoshas i.e. gastro intestinal symptoms i.e. weight gain (Kaphadosha), constipation, anaemia (Pitta dosha); Cardiorespiratory symptoms i.e. Bradycardia, hypertension (Vatadosha), neuromuscular symptoms i.e. muscle/joint pain, memory impairment, depression, weakness in extremities, difficulty with concentration, myalgias and arthralgias, paresthesias (Vatadosha); dermatological symptoms i.e. dry skin and hair, reduction in scalp, pubic and axillary hairs (Vata-Kaphadosha); reproductive symptoms i.e. irregular menses and/or menorrhagia, sexual dysfunction, impaired fertility (Vata – pitta dosha); Ocular symptoms i.e. blurred vision (pitta dosha); Ear-nose-throat (ENT) symptoms i.e. hearing problems (vatadosha), feeling of fullness in throat (kaphadosha), hoarseness of voice (Vatadosha); other general symptoms like fatigue, cold intolerance, sleepiness (Kaphadosha)<sup>13</sup>

#### Ayurvedic principles of treatment:

In ayurveda, thyroid gland is defined as a lymphatic Channel (rasaVahasrotas). The treatment follows holistic approach towards mind, behaviour, body and overall environment. Its main aim is to clear the blocked channels in body before initiating any oral therapy so as to balance tridoshas and then switch to rasayana (rejuvenative) therapy. According to one of the basic principle i.e. "SaamanyavisheshSiddhanta", similar conditions, aggravate the disease condition, whereas, dissimilar things alleviate, this treatment methodology facilitate the decrease in kapha by the use of kapha inhibiting drugs, increase dhatugata (tissue level) i.e. pitta by the use of pitta enhancing drugs and lowers the meda (fat) by the use of meda neutralizing drugs. All these methods help, restores the homeostasis and metabolic activity in body which was altered by the blockage of channels by kapha<sup>14</sup>.

#### Dietary supplements:

Basic ayurvedic theory suggests that a proper diet and lifestyle ensures proper digestion, the end result of which is ojas. Ojas is what is left over when digestion of food is done and the body has done a great job. Sweet foods build ojas, but not unless they are Digested properly<sup>15</sup>. Ojas is preserved when sweets foods are eaten with spicy foods. Spiciness and therefore proper digestion of any food can be created with dipanas, which is for digestive spices like cinnamon, fennel, ginger, turmeric, and cardamom. A mono Diet of khichadi (classic mung bean and rice porridge) with pachana (toxic build up reducing spices/herbs like cumin and ginger) and lekhanas (thermogenic herbs like ginger and black pepper) help with weight loss. Decreasing the intake of raw cruciferous vegetables, particularly radishes and other goitrogenic foods is also advised. Adding onions, garlic, and ginger, as well as teas of sage, thyme and strawberry leaf may also be useful.<sup>16</sup>

**Herbs** Regulating agni (digestive power) with dipanas (digestive herbs) to increase metabolism is essential, followed with clearing ama (toxic buildup in the body) with herbs known aspachanas. Lekhanas (thermogenic herbs) may be used to reduce excess weight, including chitrak and Guggulu<sup>17</sup>. All of these herbs, helpful as they may be, are heating and thus may aggravate pitta and deplete ojas; adjusting the dosages of these herbs according to the volume of food intake will prevent this loss of reserve energy. Lower dosages or cooler rasayanas (ojas building herbs) like guduchi and licorice may be used if pitta is vitiated. Secondary symptoms may require other categories of herbs laxatives can be used for constipation. Kachnar (Bauhinia tomentosa) is another herb used in both enlargement of the thyroid as well as hypothyroidism. It is typically mixed with another herb well known for the thyroid, Guggulu (Commiphora mukul), in the form of Kachnar guggulu. Guggulu is also a fat burning herb due to its light, dry, and sharp nature<sup>18</sup>. As a dipana, pachana, and lekhanas, 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<sup>19</sup>.

The asana, useful in managing hypothyroidism are Sarvangasana (standing erect on shoulders), Hlasana (plough posture), Matsyasana (fish like posture), Naukasana (boat like posture), Suryanamskar (salutation to sun), and some other useful pranayams include Suryabhedana (breathing from single nostril), Anulom-bilom (breathing from alternate nostril) and Ujjayi (means victorious form of breathing)<sup>20</sup>

#### Conclusion

Ayurveda attempts to heal the root imbalance of hypothyroidism rather than treat symptoms For the remainder of a patient's life. The research indicates that if a patient is willing to reduce their stress through lifestyle changes and take key therapeutic herbs, healing from this chronic disease seems possible. To appear vata and pitta, making necessary lifestyle changes must include slowing down in a society that is fast paced and demanding. This would reduce anxiety and depression, which may be prodromal symptoms of hypothyroidism, and would pacify vata and pitta in the body. Changing our lifestyle from multitasking and getting things done will certainly prove difficult in this modern era but it is clear from there search that for those who are dedicated enough to do what it takes to get result will find success.

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**Yoga** is believed to be useful art to rejuvenate your body and soul.