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MANAGEMENT OF HYPOTHYROIDISM IN AYURVEDA

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ABSTRACT

Thyroid gland (*avatu granthi*) is one of the important endocrine Gland from where the thyroxine hormone is released that controls the metabolism. It easily responds to stress i.e. *psychosomatic-spiritual stress* can cause the hypothyroidism. Incidence of hypothyroidism is increasing day by day in the whole world. The principal function of thyroxine is to activate the cellular oxidative processes throughout the body. The exact mechanism by which it acts is not clearly understood. Excessive hormone induces significant rise in basal oxygen consumption by tissues(hyper-metabolism). In the reverse direction, an insufficiency of the hormone is followed by a reduction in the oxidative reaction. Cells in the body take stimulation from thyroxine. The amount of stimulation the cells receive from thyroxine will determine how quickly they perform their functions. It is more prevalent among the females. In modern science, the treatment of hypothyroidism is done by thyroxine hormone therapy but this medication can lead to several side effects or A.D.R. (Adverse drugs reaction) like chest pain or discomfort, irregular heartbeats, difficult or labored breathing, extreme fatigue, irritability etc. However, in recent times, in modern science, it has also been included in the autoimmune disorder, while in ayurveda it is considered as *aamaja vyadhi which* can be well managed by *Aamaja vyadhi chikitsa.*

KEYWORDS: *Avatu granthi*, metabolism, *psychosomatic-spiritual stress*, Hypothyroidism, A.D.R., auto immune disorder, *aamaja vyadhi, agni.*

INTRODUCTION

Thyroid gland (*avatu granthi*) is the important and sensitive endocrine gland, the major function of thyroid gland is to control the rate of metabolism.[1]

Hypothyroidism is the most common problem among the endocrine disorders presently seen worldwide. About 1 to 2% of the adult population is known to suffer from the thyroid disorders.[2] According to the World Health Assembly report, about 42 million people in India are suffering from thyroid disorders.[3] It is an endocrine disorder or metabolic disorder which can be assessed through - high TSH level and normal or low level of T3, T4 hormone. TSH is a pituitary hormone that stimulates the thyroid gland to produce tetra iodothyronine (T4) and tri iodothyronine (T3) which stimulates the metabolism of almost every tissue in the body. It is a glycoprotein hormone produced by thyrotrope cells in the anterior pituitary gland which regulates the endocrine function of the thyroid gland.

Hypothyroidism, depending upon the age of onset

It is divided into 2 forms

1. congenital hypothyroidism or cretinism (*Janmjata*) is the development of severe hypothyroidism during infancy and childhood.
2. Myxoedema is the adulthood hypothyroidism.

Samprapti as per *ayurveda*

Samprapti is defined as the manner in which the doshas are vitiated and transfers through channels to the body and produce the disease.[4] *Madhura, sheeta, guru, abhishandyadi ahara* and *divaswaapana*, lack of exercise (a*vyayam*) like vihara cause vitiation of *kapha dosha*. This vitiated *kapha dosha* is responsible for samprapti of hypothyroidism in following different perspectives.

1. Kledaka kapha vikruti
2. Jatharagnimandya - Formation of Ama
3. Sthansanshraya at galapradesha
4. Kaphavrita udana vayu
5. Rasavah, manovah, and medovah shrotas dushti.

Hetu Sevan

⬇

Kapha vikruti (Kledak kapha)

⬇

Jathargnimandya (Saman Vayu,pachak pitta Dusti)

⬇

Aama

⬇

Shrotoabrodha (Rasavah shrotas dushti)

⬇

Ama circulated to Galapradesh by rashavaha shrotas

⬇

Situated in Galapradesh and vitiated udana vayu

⬇

Udana avratt kapha(kledak)

⬇

Due to udana vayu vikruti dysfunction in chullika granthi

⬇

Dysfunction in Avatu granthi

⬇

Hypothyroidism

Role of *agni* in hypothyroidism

As per modern science iodine deficiencies or other malignancies are responsible for hypothyroidism, while in *ayurveda mandagni* is responsible for all types of metabolism. When the digestive juice or enzymes becomes slow or intense then two types of thyroid disorders are seen.

Hypothyroidism- due to *mandagni*

Hyperthyroidism- due to *tikshnagni*

dhatu is inversely proportional to *Dhatvaagni*.

dhatvagni directly proporsnal to *Jatharagni*

Due to *mandagni* aam *dosha* formed in the body which affects every part of the body including the thyroid gland. As a result there will be dicreased T3, T4 by which the secretion of TSH from the pituitary gland starts to become more than normal to stimulate the thyroid gland.

Due to *mandadhatwagni* aam accumulates in the muscles which disturbs the metabolism and reduces energy production.[5]

Etiopathogenesis of hypothyroidism

The causes of congenital hypothyroidism are as follows.

1. Developmental anomalies e.g. thyroid agenesis and ectopic thyroid.
2. Genetic (Beejdusti janya) defect in thyroid hormone synthesis e.g. defect in iodine trapping, oxidation, iodination, coupling and thyroglobulin synthesis.
3. Foetal exposure to iodides and antithyroid drugs.
4. Endemic cretinism in regions with endemic goiter due to dietary lack of iodine (sporadic cretinism, on the other hand, is due to developmental anomalies and genetic defects in thyroid hormone synthesis).

There are several causes of myxoedema listed below but the first two are the most common causes.

1. Thyroid gland operated by surgery (avatu granthi shalya karma) or radiation.
2. Autoimmune (lymphocytic) thyroiditis (termed primary idiopathic myxoedema).
3. Endemic or sporadic goiter.
4. Hypothalamic-pituitary lesions.
5. Thyroid cancer.
6. Prolonged administration of antithyroid drugs.
7. Mild developmental anomalies and dyshormonogenesis.

Inflammation of the thyroid, ‘thyroiditis’ is more often due to non-infectious causes and is classified on the basis of onset and duration of disease into acute, subacute and chronic as under.

I. Acute thyroiditis

1. Bacterial infection e. g. Staphylococcus, Streptococcus.
2. Fungal infection e. g. Aspergillus, Histoplasma, Pneumocystis.
3. Radiation injury.

II. Subacute thyroiditis

1. Subacute granulomatous thyroiditis (De Quervain’s thyroiditis, giant cell thyroiditis, viral thyroiditis).

2. Subacute lymphocytic (postpartum, silent) thyroiditis.

3. Tuberculous thyroiditis.

III. Chronic thyroiditis

1. Autoimmune thyroiditis (Hashimoto's thyroiditis or chronic lymphocytic thyroiditis)

2. Riedel's thyroiditis (or invasive fibrous thyroiditis).

While acute infectious thyroiditis is uncommon, some of the morphologically important forms of thyroiditis from the above list are discussed below.

Hashimoto's (Autoimmune, Chronic Lymphocytic Thyroiditis)

Hashimoto's thyroiditis, also called diffuse lymphocytic thyroiditis, struma lymphomatosa or goitrous autoimmune thyroiditis, is characterised by 3 principal features.

1. Diffuse goitrous enlargement of the thyroid.

2. Lymphocytic infiltration of the thyroid gland.

3. Occurrence of thyroid autoantibodies.

RIEDEL'S THYROIDITIS

Riedel's thyroiditis, also called Riedel's struma or invasive fibrous thyroiditis, is a rare chronic disease characterized by stony-hard thyroid that is densely adherent to the adjacent structures in the neck.[6]

Symptoms

The striking features are cold intolerance, mental and physical lethargy, constipation, slowing of speech and intellectual function, puffiness of face, loss of hair and altered texture of the skin etc.

Correlation of doshas with symptoms.

S.no.	Symptoms of Hypothyroidism	Dosha predominance
1	Fatigue	Vata, kapha
2	Weight gain	Kapha
3	Increased cold sensitivity	Kapha, vata
4	Dry skin	Vata
5	Puffiness of face	Kapha, vata
6	Weakness in muscles, muscle ache, tenderness, stiffness	Vata, kapha
7	Pain, stiffness and swelling in joints	Kapha, vata
8	Constipation	Vata
9	Hoarseness of the voice	Vata
10	Thinning of hair, hair vata	Vata

11	Slow heart rate	Kapha
12	Elevated blood cholesterol level	Kapha
13	Enlarged thyroid gland	Kapha, vata
14	Irregular/heavy menstrual periods	Vata, kapha
15	Depression	Kapha
16	Impaired memory	Kapha, vata

Management

Though hypothyroidism is an *amaja vyadhi*.[7] so the treatment should be to pacify *ama.* Therefore *vaman karma* followed by *Dipana-Pachana* will subside the vitiated kapha which results to a decrease TSH level.

Another cause of hypothyroidism is mental stress which leads to *Pratiloma gati* of *vata* and *agnimandya* leading to incoordination of pituitary function and increase in TSH level. After purification by doing *vamana karma*, along with *Dipana-pachana medicine*, the use of drugs of the *medhya varga* proves beneficial in ending hypothyroidism example - *brahmi, shankhpuspi,*

***Rasayan chikitsa* -** Shilajit[8], Bhallathaka[9]

Pathya ahara

Cow's milk, Cheese, Yogurt, Eggs, Saltwater fish, Seaweed etc.

Yoga

Sarvangasana and Halasana are suggested to treat the Hypothyroidism. It stimulates blood flow to the glands in the upper body. These posture will redused the accumulated vitiated kapha in galapradesh, As a result the hypothyroidism will be subside.[10]

CONCLUSION

However the exact term of hypothyroidism is not given in samhitas. But as acharya charaka said that it is impossible to name all the diseases in the world. The reason is that the some vitiated dosha causes various disorders according to variation in etiology and location. Hence one should initiate treatment after having complete knowledge about the nature of the disorder, location and etiological factors.

There is no permanent cure of hypothyroidism in modern science, that’s why we need to pay attention to Ayurvedic treatment so that people can be healthy and happy.

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