



REVIEW ON MANAGEMENT OF HYPOTHYROIDISM IN AN AYURVEDIC PERSPECTIVE

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ABSTRACT

Introduction: Hypothyroidism is the disorder of thyroid gland in which there is decreased secretion of thyroid hormones. It is the most common endocrinal disorder which is posing a major health issues in both developed as well as developing world. As there is no direct reference of hypothyroidism in Ayurvedic Samhitas, etiopathogenesis of hypothyroidism can be studied in terms of basic samprapti factors like agni, dosha, dushya, srotas, etc. In modern science there is no permanent solution for hypothyroidism and had many adverse effects. So there is a need of effective ayurvedic management of hypothyroidism. **Aim and Objectives:** 1) To understand the etiopathogenesis of hypothyroidism according to Ayurveda. 2) To study the management of hypothyroidism in ayurvedic perspective. **Materials and Methods:** This study is carried out by literary search through various ayurvedic samhitas and modern medical text books. **Observation:** Hypothyroidism is considered as a condition which results due to jatharagnimandya and dhatwagnimandya (especially rasa and medo dhatwagnimandya), amotpatti and kapha- vata dosha prakopa. **Conclusion:** As per Ayurveda, hypothyroidism can be treated by normalizing kapha-vata vriddhijanya agnimandya.

KEYWORDS: Hypothyroidism, Agnimandya, Ama, Chikitsa.

INTRODUCTION

We are in the era where the impact of modernization and western dietary habits, lifestyle and stress are leading to various lifestyle disorders and hormonal imbalances in our body. Among the endocrinal disorders, disorders of thyroid gland are common and are only next in frequency of diabetes mellitus.^[1] Hypothyroidism is the commonest endocrine disorder posing a major health issues in both developed as well as developing world. There is 4-5% prevalence of hypothyroidism in developed world.^[2] The prevalence of hypothyroidism in urban India is 10.95%. Incidence of hypothyroidism is more in females and elderly patients.^[3] Women are affected approximately six times more frequently than men.^[4]

Hypothyroidism is the disorder of thyroid gland in which there is decreased secretion of thyroid hormones that is T3 and T4. It is characterized by tiredness, weakness, dry skin, feeling cold, hair loss, constipation, weight gain with poor appetite, puffy face, bradycardia. It leads to a long life of pathological events and makes the affected person to remain dependent on hormonal replacement throughout his life. Most people with hypothyroidism symptoms are treated with a synthetic long-acting form

of thyroxine- Levothyroxine.^[5] But it has side effects on long term use.

In modern science, there is no permanent solution for hypothyroidism and has many side effects. So there is a need of safe and effective ayurvedic management of hypothyroidism. Ayurveda is the system of medicine which does not only treat the patient basing on the symptoms but tries to correct the whole system in a more natural way. There is no direct reference of hypothyroidism in ayurvedic samhitas. The ayurvedic literature clearly states that if an ayurvedic physician is well aware of the nidana, dosha, dushya, etc. then even though that disease is not named perfectly it can be managed successfully.^[6]

Agni is the unique concept of Ayurveda which can be correlated with metabolic actions of thyroid hormone. Vitiated agni is said to be the root cause of all the diseases in our body.^[7] On the basis of clinical presentation, etiopathogenesis of hypothyroidism can be studied in terms of imbalance of agni, dosha, dhatu, srotas, etc. So this review is carried out to understand hypothyroidism according to principles of Ayurveda and to find out an effective management for hypothyroidism.

AIM AND OBJECTIVES

1. To understand the etiopathogenesis of hypothyroidism according to Ayurveda.
2. To study the management of hypothyroidism in ayurvedic perspective.

MATERIALS AND METHODS

- This study is carried by various literature search and critical review of obtained facts.
- All the references for study of ayurvedic principles are studied from various ayurvedic Samhitas.
- References of hypothyroidism were studied from modern medical text books and related web sites.
- Search from various online medical research databases like PubMed, Google Scholar, etc. is made.

HYPOTHYROIDISM: MODERN ASPECT

Hypothyroidism is one of the most common metabolic endocrinal disorders resulting from deficiency of thyroid hormone. It can be either congenital or acquired. It may be either primary or secondary in nature. Primary hypothyroidism is due to the disease of thyroid gland and secondary hypothyroidism is due to the pathology in hypothalamic pituitary axis.

DEFINITION

Hypothyroidism is a hypometabolic clinical state resulting from inadequate production of thyroid

hormones for prolonged periods or rarely from resistance of the peripheral tissues to the effects of thyroid hormones.^[8]

CAUSES OF HYPOTHYROIDISM^[9]**Autoimmune**

Hashimoto's thyroiditis
Spontaneous atrophic hypothyroidism
Graves's disease with TSH receptor blocking antibodies

Iatrogenic

Radioactive iodine ablation
Thyroidectomy
Drugs- Carbimazole, Methimazole, Propylthiouracil

Transient thyroiditis

Subacute thyroiditis
Post-partum thyroiditis

Iodine deficiency

e.g. in mountainous region

Congenital – Dyshormonogenesis, Thyroid aplasia

Secondary hypothyroidism- TSH deficiency

CLINICAL FEATURES OF HYPOTHYROIDISM

Clinical presentation depends on the duration and severity of the hypothyroidism. Clinical features are listed in table below:^[10]

| Signs | Symptoms |
|-------------------------------|------------------------|
| Dry coarse skin | Fatigue |
| Cold extremities | Feeling cold |
| Myxoedema | Poor memory |
| Hair loss | Dyspepsia |
| Slow pulse rate | Constipation |
| Swelling of limbs | Weight gain |
| Delayed relaxation of tendons | Poor appetite |
| Pleural effusion | Shortness of breath |
| Pericardial effusion | Hoarseness of voice |
| | Irregular menstruation |
| | Reduced hearing |

TREATMENT

Hypothyroidism requires life-long replacement therapy. Most people with hypothyroidism symptoms are treated with a synthetic long acting form of thyroxine.^[11] Levothyroxine is a drug of choice. It has a half-life of 7 days, so it should be taken as a single daily dose. During treatment the patient TSH level must be monitored to ensure that the correct dose is given.

AYURVEDIC APPROACH OF HYPOTHYROIDISM

There is no direct mention of hypothyroidism in ayurvedic samhitas. But on the basis of its clinical presentation, it can be correlated with different entities which are explained either as symptoms or diseases. So it is difficult to give a single ayurvedic term for it. For understanding of any disease, the pathogenesis should

involve the basic samprapti factors like agni, ama, dosha, dushya, srotas, etc. So the etiopathogenesis of hypothyroidism can be studied in terms of agni, ama, dosha, dushya, srotas, etc.

AGNI

Agni is the unique concept of Ayurveda related to dhatupaka or metabolism. The agni brings about all transformations in the body. Ayu (age), varna (colour), bala (strength), swasthya (health), utsaha (spirit), prabha (glory), oja, teja, dhatwagni and bhutagni and prana (life) all are dependent on jatharagni (digestive fire). The functions of thyroid hormone have some similarity with the description of agni in Ayurveda. Majority of the body's metabolic activities are controlled by thyroid hormones according to modern science and through

jatharagni, dhatwagni and bhutagni according to Ayurveda. According to Ayurveda mandagni is the root

cause for all the diseases. So hypothyroidism can be considered as jatharagnimandya or dhatwagnimandya.

| Functions of Agni ^[12] | Functions of Thyroid Hormones ^[13] |
|-----------------------------------|---|
| Paka | Regulates metabolism of carbohydrate, proteins, fat |
| Bala | Essential for normal activity of skeletal muscles |
| Utsaha | Essential for normal sexual function |
| Matravata ushma | Induced thermogenesis |
| Kshudha | Increase secretion and movement of GI tract |
| Medha | Increase blood flow to brain |
| Varna | Necessary factor for erythropoiesis |

AMA

Ama is one of the concepts which take major role to produce variety of diseases. Ama denotes the abnormal or impaired process of digestion and metabolism that leads to build up toxicity by-products, which cannot be

neutralized or eliminated by the body. Ama production cause agnimandya and vice versa. Mainly kapha vardhaka ahara vihara lead to the formation of ama. This ama vitiates the first dhatu i.e. rasa dhatu. Lakshanas of ama are similar to symptoms of hypothyroidism.

| Lakshanas of ama ^[14] | Symptoms of hypothyroidism |
|----------------------------------|----------------------------|
| Balabhramsha | Fatigue |
| Gourav | Heaviness in body |
| Anil moodhata | Delayed tendon reflexes |
| Alasya | Lethargy |
| Apakti | Improper digestion |
| Malasang | Constipation |
| Aruchi | Poor appetite |
| Klama | Tiredness |

DOSHA

Majority of the nanatmaja roga of kapha dosha can be correlated with the signs and symptoms of hypothyroidism.

| Nanatmaja roga of kapha dosha ^[15] | Symptoms of hypothyroidism |
|---|----------------------------|
| Tandra | Lethargy |
| Nidradhikya | Excessive sleep |
| Gurugatrata | Heaviness in body |
| Alasya | Laziness |
| Balacak | Weakness |
| Hrudayopalepa | Pericardial effusion |
| Galaganda | Goitre |
| Atisthoulya | Weight gain |
| Shwetavabhasata | Pallor |

Among the tridoshas, vata is mainly responsible for the manifestation of diseases. Vata vyadhis manifest due to two reasons: 1) Dhatukshaya janya 2) Margavarodhajanya. In hypothyroidism, avarana plays a major role. Mithya ahara vihara lead to the vitiation of

tridoshas mainly kapha and vata dosha. Due to excess vitiation of kapha dosha, kapha obstructs the movement of vata dosha. Hence leads to a state of kapha avrutta vata. The symptoms of kapha avrutta vata are similar to hypothyroidism.

| Lakshana of Kapha avrutta vata ^[16] | Symptoms of Hypothyroidism |
|--|----------------------------|
| Shaitya | Cold intolerance |
| Gourav | Heaviness in the body |
| Shoatha | Myxoedema |

DUSHYA

There are seven dhatus in our body and each dhatu has its own dhatu-agni. Rasa dhatu is the first dhatu which is formed from ahara rasa by the action of agni which

circulates throughout the body. When rasa dushti occurs the normal functioning including nutrition are not performed properly leading to various systemic diseases. In pathogenesis of hypothyroidism dushti of rasa dhatu

plays a major role. Clinical features of hypothyroidism are similar to many rasadhatu dushti lakshanas. E.g. Ashraddha, aruchi (poor appetite), Gourav (heaviness), Angamarda (bodyache), Panduta (pallor), Klaibya (loss of libido), Palita (greying of hair), etc.^[17]

After rasa dhatu the next dhatu to be vitiated immediately is medo dhatu. This is because there is similarity in the features if Ama, rasa dhatu and medo dhatu. If there is hypofunctioning of medodhatwagni, there will be over accumulation of medo dhatu which acts as the basic factor for the manifestatons of hypothyroidism. Symptoms of medopradoshaja vikara which are prameha purvaroopo and ashtanindit purusha can be correlated with symptoms of hypothyroidism. E.g. Alasya (fatigue), Shithilangata (Lethargy), Ghanangata (weight gain), etc.^[18]

So the hypothyroidism is considered as a condition which results due to jatharagnimandya and dhatwagnimandya (especially rasa and medo dhatwagnimandya), amotpatti and kapha- vata dosha

prakopa. So far ayurvedic nidan is concerned the etiological factors related to agnimandya janaka, kapha- vata prakopaka and rasa and medo dhatupradoshajaka hetu will be responsible for genesis of hypothyroidism. The samprapti (etiopathogenesis) of hypothyroidism can be described in following different perspectives:

1. Jatharagnimandya
2. Formation of Ama
3. Kapha vikruti
4. Kaphavrutta vata
5. Rasavaha and medovaha srotas dushti

SAMPRAPTI GHATAK

Dosha – Kapha, Vata vruddhi

Dushya – All dhatu, predominantly Rasa and Medo dhatu

Agni – Jatharagnimandya, Dhatwagnimandya

Ama – Agnimandyajanit ama

Srotas – Rasavaha, Medovaha

Srotodushti – Sanga

Udbhavasthana – Amashaya

Adhishtan – Sarva sharir

PATHOGENESIS OF HYPOTHYROIDISM ACCORDING TO AYURVEDA



AYURVEDIC MANAGEMENT OF HYPOTHYROIDISM

Ayurveda is the system of medicine which does not only treat the patient basing on the symptoms but tries to correct the whole system in a more natural way. That's

why Ayurveda gives much importance to understanding of any disease basing on its own principles before starting the management of disease. Hypothyroidism can be well managed by ayurvedic medicines depending upon the symptoms. As per Ayurveda, hypothyroidism

can be treated by normalizing kapha-vata vriddhijanya agnimandya.

Management of hypothyroidism includes

- Nidan parivarjan
- Treatment of agnimandya
- Treatment of kaphavrutta vata
- Dravyas acting on rasa & medo dhatu
- Panchakarma chikitsa

NIDAN PARIVARJAN

The prohibitory precautions, modifications in the lifestyle and dietary restrictions are very much required for the regularization of the general metabolism. The substances which causes low digestive fire, vitiates kapha- vata dosha should be avoided.

TREATMENT OF AGNIMANDYA

According to Ayurveda, the root cause of hypothyroidism is agnimandya along with kapha-vata vitiation. So drugs having properties like deepana, pachana, lekha, srotoshodhana, anulomana, kapha-vata shamak can be used.

TREATMENT OF KAPHAVRUTTA VATA

Java, meat of jangal animals & birds, old ghrta, sesame oil, mustard oil, tikshna swedan, niruha basti, vaman, virechan.^[19]

TREATMENT OF RASAPRADOSHAJA VIKARA

Langhan is the first line of treatment for rasa pradoshaja vikara.^[20]

TREATMENT OF MEDOPRADHOSHAJA VIKARA

Treatment mentioned for ashtanindita purusha is used in medopradoshaja vikara.^[21] As hypothyroidism can be santarpanjanya vyadhi, apatarpak dravyas should be used.

PANCHAKARMA CHIKITSA

Vaman- Vaman is the best treatment for kaphaja vikara. Also vaman is the type of langhana which is treatment of rasapradoshaja vikara.

Virechana – It helps in removing avarana (srotoshodhan) and increasing agni.

Basti – Lekhan basti is given in medoja vikara.

Nasya – It is a treatment for urdhwajatrugata vikara.

Shirodhara – As hypothyroidism is a psychosomatic disorder shirodhara will be beneficial.

PATHYA- APATHYA

Aharaj pathya

Kaphahara ahara, Ruksha katu dravya (dry & bitter substance), Deepana dravya (substances which increase appetite), drugs like Guggulu, Shilajatu, Purana ghrutpana, jeerna Lohita shali, Yava (Barley), Mudga (green gram), Patola, Rakta shigru, Rohit matsya (Rohu fish), Saidhava salt, cow's ghee and milk, Raktashali, Ushna jala, Madhu.

Viharaj pathya

Dincharya, Rutucharya, Nidra, Dharneeya vega, Adharneeya vega are all ayurvedic scriptures that when followed help to improve personal and social cleanliness, ultimately increasing the quality of life and preserving a healthy and disease free life.

Aharaj apathya

Viruddha ahar, kshirvikruti, ikshuvikruti, all types of mamsa ahar, anupa mamsa, pishta anna, madhura amla rasa, guru, abhishyandi dravya, yavaka, etc.

Viharaj apathya

Diwaswap, ratri jagran, vega dharan and pradnyaparadh are specially listed as causative factors for flawed and unhealthy lifestyles.

ASANA AND PRANAYAM

Asana – Sarvangasana is the most effective asana for the thyroid gland disorders. Matsyasana, Halasana, Dhanurasana, Bhujangasana, Surya namaskar are also found to be helpful in hypothyroidism.^[22] This asanas compress and stretch the throat area and stimulate the blood flow which provides nourishment to the cells and helps the thyroid to do its work properly.^[23]

Pranayam – The most effective pranayama for thyroid problems is Ujjayi. It acts on the throat area and has relaxing and stimulating effects. Anuloma-viloma and Kapalbhata is useful in increasing the metabolic rate of the body.

CONCLUSION

Hypothyroidism is an endocrinal disorder which produces group of symptoms. In Ayurveda it can be considered as a condition which results from agnimandya, amotapatti, kapha- vata dosha prakopa and rasavaha and medovaha srotas dushti. So during the treatment of hypothyroidism these pathogenetic factors has to be targeted. Drugs having deepana, pachana, lekha, srotoshodhana, anulomana, kapha-vata shamak properties which may help in normalizing kapha vata vriddhijanya agnimandya should be used in the treatment of hypothyroidism. So ayurvedic management of hypothyroidism is effective along with dietary rules and asana, pranayama described in Ayurvedic samhitas.

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