

AYURVEDIC REVIEW OF HYPOTHYROIDISM**Rekharani Herakal*, Dr. Ananta S. Desai, Dr. Ahalya S.**

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Article Received on
20 April 2022,Revised on 10 May 2022,
Accepted on 31 May 2022

DOI: 10.20959/wjpr20227-24330

Corresponding Author*Dr. Rekharani Herakal**Govt. Ayurvedic Medical
College Bengaluru-09.**ABSTRACT**

Thyroid gland disorders are growing world wide health hazard now a days. Thyroid hormone regulates metabolic rate of the body. Failure of Thyroid hormone to maintain metabolic rate mainly produces Hypothyroidism. Thyroid disorders are characterized by physical and mental abnormality. There is no exact co relation of Thyroid gland in Ayurveda. But Ayurvedic system of medicine doesn't emphasize on naming the disease, rather than naming understanding the constitutional status of a disease and adopting an appropriate treatment principle. The main action of the Thyroid hormone is to act as a Spark

to start up body metabolism at a cellular level. In Ayurveda we can be correlate the things with the action of Agni. The Agni located in the Amashaya is responsible for digestion and absorption of the food. The Bhutagni is responsible of transformation of heterogeneous substance to homogeneous substances. The Dhatwagni along with Bhutangi are responsible for the metabolism. And also the symptoms of the Hypothyroidism can be correlated with imbalanced doshas. These concepts of Ayurveda could be considered to understand Thyroid disorders from Ayurvedic perspective. As modern treatment has many adverse effects, it is important to understand Thyroid disorders from Ayurvedic perspective to give safe and effective Ayurvedic management.

INTRODUCTION

Hypothyroidism is one of the Endocranial disorder. Thyroid is an Endocrinal gland secretes T3 and T4 hormones regulated by TSH which is secreted by pituitary gland. These hormones have two major effects on the body, to increase the overall metabolic rate in the body. To stimulate growth in children.^[1] Hypothyroidism is a condition where Thyroid gland does not produce enough Thyroid hormone to meet the need of the body. The Thyroid is underactive. Hypothyroidism is a common health issue in India. The highest prevalence of Hypothyroidism

is one in ten people.^[2] In Ayurveda there is no exact correlation to Hypothyroidism but by clinical features we consider it as Vyadhi Sankara. The management of Hypothyroidism involves two factors those are supplementation of hormones (L.Thyroxin) and surgery. Treating Hypothyroidism with a hormones may induce certain risk, primarily of cardiac and skeletal complications and exacerbation of several preexisting illness. Potential hazards of hormonal treatments are^[3] - Exacerbation or precipitation of Angina pectoris, Myocardial infraction, Osteoporosis, Altered insulin requirements in DM, Precipitation of addiction, Altered drug metabolism. Many times the Hypothyroidism is mis-diagnosed as the clinical features mimic depression and other common diseases. It is also known as hidden health issue.

MATERIALS AND METHOD

The study is carried out by literature search and critical review of the obtained facts. The study of various Ayurvedic texts were made critically and analysis made by different scholar, effort made to understand pathogenesis of Hypothyroidism.

T. No.1: Classification of Hypothyroidism with The Cause.

TYPES	DYSFUCTION	CAUSES
Primary	Thyroid gland	Hashimoto's Thyroiditis, Toxic Goiter, Excessive iodine intake, sub-acute thyroiditis.
Secondary	Pituitary gland	Adenoma, Radiation therapy, Pituitary destruction.
Tertiary	Hypothalamus	Rare

PHYSIOLOGICAL ACTION THYROID HORMONE ON METABOLISM

- Protein metabolism-Increases synthesis of protein in cells
- Carbohydrate metabolism-Stimulates Glucose intake, Glucogenolysis and Gluconeogenesis to generate free glucose which provide energy to the body.
- Lipid metabolism-Help in fat metabolism by mobilizing lipids from adipose stores and accelerate oxidation of lipids to produce energy. Thyroxine decreases fat storage by mobilizing it from adipose tissue and fat depots, the mobilized fat is converted into free fatty acid and transport by blood. Thus thyroxine increases free fatty acid in blood.
- Action on body temperature-Increases heat production in the body by accelerating various cellular metabolism processes and increases BMR.
- Action on Growth-Accelerating especially in children.
- Action on CVS-Increasing heart rate by increasing force of contraction of heart.^[4]

AYURVEDIC VIEW

Through scattered references from the classics, we can describe this hormonal imbalance. Acharya Charaka explained Asthanindita, Avarana, Kaphajananatmaja Vikara, Bhasmaka roga and these are taken as functional disorders of endocrinal gland. Involvement of Agni, Dhatwagni mandhya and Ama lakshana are similar to those of symptoms of Hypothyroidism. Avatu means Thyroid gland in Sanskrit.^[5] Ojus is our innate vitality and immunity. A prolonged vata pitta imbalance depicts Ojus and causes vata to put kapha out of balance. In Hypothyroidism etiological factors mainly vitiate tridosha kapha predominance associated with vata vrudhi and pitta Kshaya leading to provoking Kapha. This tridosha vitiation invites derangement of Jatharagni ultimately leading to derangement of Dhatwagni and subsequently appearance of ama. This ama blocks the channels of body thereby affecting contents of channels causing vitiation of strotas and Dhātu and forming the symptoms which is similar like Hypothyroidism.

Table No.2: Symptoms With Dosha Involvement.^[6]

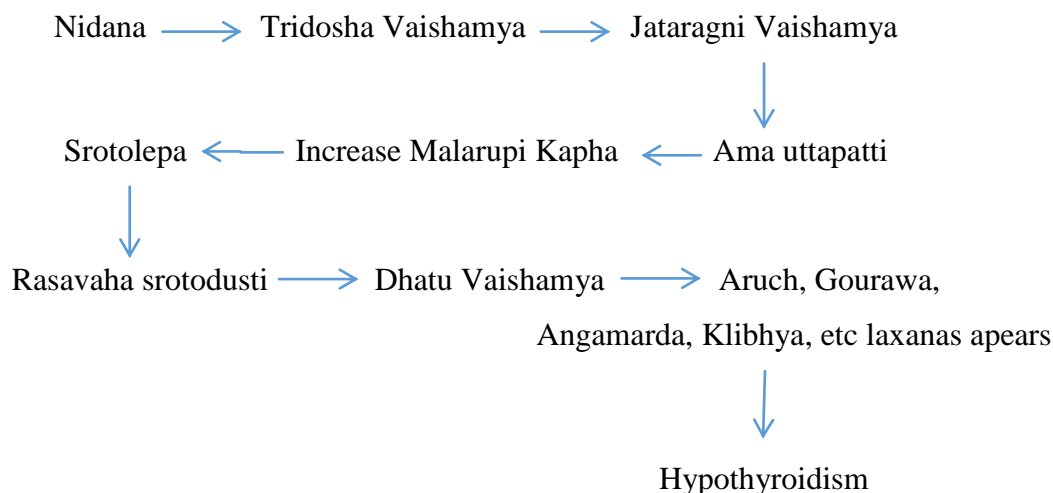
SYMPTOMS	Dosha Involvements
Weight gain	Kapha Vrudhi
Puffiness of Body	Kapha Vrudhi
Loss of appetite	Kapha Vrudhi, Pitta Kshaya
Dry and Coarse skin	Vata Vrudhi, Pitta Kshaya
Minimal or absent sweating	Pitta Kshaya
Constipation	vata Vrudhi
Hoarseness of voice	Kapha-Vata Vrudhi

Agni- The function of Jataragni is Ayu, Bala, Swasthya, Utsaha, Upachaya, Prabha, Oja and Teja impairment of this leads to disease.^[7]

Ama- Ama lakshana include obstruction of the channel, loss of strength, feeling of heaviness of body, inactivity, lassitude of digestive power, anorexia these merely correlates to symptoms of Hypothyroidism.^[8]

Table No.3: Involvement of Dhātu.^[9]

Rasa	Weight gain, Loss of appetite, Heaviness of body, Lethargy, Premature aging, Symptoms of menstrual disorders and Infertility.
Rakta	Dry skin, Slow pulse rate, Lethargy.
Mamsa	Heaviness in body, Muscle ache, Granthi, Galaganda.
Meda	Tiredness, Sleepiness, Sluggishness.
Asthi	Osteoporosis, OA.
Majja	Osteoporosis
Sukra	Loss of libido, Infertility.

SAMPRATI**Samprapti Ghatakas^[10]**

- Dosha - Kaphapradhana tridosha.
- Dushaya - All Dhatus mainly Rasadhatu,
- Agni - Jataragni, Dhatwagni
- Ama - Jataragni, Dhatwagnimandhya.
- Srotas - All Srotas.
- Srotodusti - Sanga, Vimargagamana.
- Adhithana - Gala pradesh.
- Udbhavasthana - Amashaya.
- Rogamarga - Bahya.
- Vyakta sthana - Sarva Sharira.

AYURVEDIC MANAGEMENT

In light of above discussion, the drugs that have their effect at Agni level and possess Kapha vata Shamaka Properties are supposed to be ideal agents for treating Hypothyroidism. The dietary rule and proper lifestyle-Dinacharya and Ritucharya as described in Ayurvedic texts should also be followed for proper control of Hypothyroidism. Ayurveda has advised three fundamental modalities to manage every disease those are Nidana Parivarjana, Samshodhana Chikitsa and Samshamana Chikitsa.

Nidana Parivarjana₁₁- It means avoidance of the various causative factors of the disease. It is First line of treatment of any disease. Hypothyroidism manifests as a result of Kapha

Pradhana tridosha vrudhi, Agnimandhya, Rasadi DhatuVaishamya and formation of Ama. Therefore, all the Dosha aggravating ahara-vihara should be avoided in Hypothyroidism.

SamShodhana Chikitsa- Because of its slow onset, Hypothyroidism is categorised as chronic disease where involved Dosha are at its maximum level. For Pravridha, Bahu-Dosha and Jirnavyadhi, Ayurveda always suggests Shodhana therapy.^[12] Due to the dominance of kapha Dosha in the pathogenesis of Hypothyroidism and Vamana Karma being specially prescribed for kapha Dosha^[13], so amongst Shodhna chikitsa, it may be effective for the patients of Hypothyroidism. Virechana can also be used in Shotha dominant feature. For proper evacuation of bowel and to regularize Agni. Niruva Basti should be administered in Malavridi conditions, Lekhana Basti can also be given.^[14] Nasya is a prime treatment modality in the management of Urdwajatrugataroga, Galaganda is one among Jartutwaroga, as it acts on endocrine system.

Samshamana Chikitsa - Selection of drugs may done in following ways:

- At Hypothalamo pituitary level - Anti stress drugs, Medhya, Rasayana drugs, Nasya karma may be beneficial.
- At Thyroid gland level - Thyroid stimulatory drugs are recommended.
- At Metabolism level^[15] - Deepana, Pachana, Anulomana, Srotoshadhaka, Kaphashamaka, and other drugs possess qualities of Ushna, Teekshna, Sukshma, Lekhana drugs which popup metabolism are recommended.
- Immuno-Modulatory drugs – Guduchi^[16] for Autoimmune related Hypothyroidism.
- Thyroid stimulatory drugs- Kanchanara Guggulu.^[17]
- Some Kashaya Yogas- Varunadi Kashaya, Asanadi Kashaya, Guggulutikta Kashaya
- Churna Kalpanas- Shaddharana churna, Vyoshadi Churna, Abhaya Churna.
- Vati Kalpana- Kanchanara Guggulu, Triphala Guggulu.
- Lepas- Nichuladi Lepa, Devadaru Vishala lepa, Sarshapadi Pralepa
- Rasayana-Shilajatu, Pippali, Chitraka.

PATYA-APATHYA^[18]

Pathya	Apathya
Purana Grita, Jeerna Lohita Shali, yava, Mudga, Patola, Rakta Shigru, Karaveillaka, Ruksha Katu Dravya, Deepana dravya and drugs like guggulu and Shilajatu.	Kshira Vikrutio, Ikshu Vikruti, all types of mamsa, Anupa mamsa, Pishta annam, Madhura amla rasa and Guru Abhishandhi dravya.

YOGASANAS^[19] - Halasana, Pashimothanasana, Matyaasana, Sarvangasana, Pavanamuktasana, Sarvangasana, Suryanamaskara and Pranayamas.

DISCUSSION

Through the exact terms of all the disease of thyroid diseases are not described in Ayurveda, the Signs and Symptoms produced due to thyroid dysfunction is described in Ayurveda under its classical terms and patho-physiology of all those diseases lies in the concept of Agni, as Agni is said to be the Prana of the living body. Vitiating of Doshas in balanced state, treatment of Agni is done.^[20] Hence in the diagnosis and treatment of diseases maximum consideration is given to the preservation of agni.^[21] A body is made up of Dosha, Dhātu and Mala nourishment of each of these solely depends on balance Agni of each Dhātu. Along with the macro function in the body and micro function of the body like immunity, Strength, Lusterless, Glow also depends on agni. According to modern medicine, metabolic processes, division and multiplication are going on in all cells of our body from birth till death. The cell is the functional unit of the body According to Charaka, the constituent parts of the body, if further divided into the atoms, are sure to become innumerable, as such cells or atoms are exceedingly numerous, very, minute and ultrasensitive. In the conjunction and disjunction of cells, the activating factors are Vata and Agni.^[22] In Shushruta, we can see how the “Avayavas” are formed from “various Dhatus”^[23] Thus, based on Charaka and Shushruta, the above cells can be considered as “Dhātu Paramanus”. For these constant processes in all cells, a biological energy is constantly essential, without which the survival of our body will be quite impossible. The same biological energy is provided by Agni in Ayurveda. Hence Agni act in the same way as the thyroid hormone dose for body metabolism.

CONCLUSION

Hypothyroidism can be considered as condition which results due to Agnidushti. Kapha Vata Dosha Vriddhi and Pitta Kshaya results due to Agnimandya. Dhatwagni-mandya especially Rasa and Medho Dhatwagni Mandya contributes to this condition. When approached Hypothyroidism with Dosha Pratyaneeka Chikitsa, will help to manage the condition better. Use of Rasayanas will help to managing the condition as it helps in Srotomukha Shodhana.

REFERENCES

1. K Sembulingam, Prema Sembulingam. Essentials of Medical Physiology, 5th edition reprint in. Published by Jaypee Brothers Medical Publisher(P)LTD. Endocrinology- Thyroid Gland, 2011; 376.

2. Unnikrishnan AG, Kalra S, Sahay RK, Bantwal G, John M, Tewari N. Prevalence of hypothyroidism in adults: An epidemiological study in eight cities of India. *Indian J Endocr metab*, 2013; 17: 647-52.
3. Hertz C, Gestin, MD, FRCP-Risk Associated with treating Hypothyroidism. *Canadian Family Physician*, June 1992; 38.
4. Analysis of hypothyroidism in Ayurvedic view. Patil Prajakta, Wagh Surya kiran; *Ayurlog: National Journal of Research in Ayurveda Science*, 2020; (8)2: 01-06.
5. Dr. Marc Halpern *Clinical Ayurvedic Medicine* Sixth edition 7-3.
6. Analysis of hypothyroidism in Ayurvedic view. Patil Prajakta, Wagh Surya kiran; *Ayurlog: National Journal of Research in Ayurveda Science*, 2020; (8)2: 01-06.
7. Charaka Samhita of Agnivesh edited with 'Vaidhyamanorama' Hindi Commentary by Acharya Vidhyadharashukla and Prof. Ravi Datt Tripathi. Vol-2. Published by Chaukamba Sanskrit Pratisthan Delhi. *Grahani Chikitsa adhyaya* 15/3-4. 358.
8. Acharya Vagbhata, *Astanga Hridaya* with Sarvanga Sundara Commentary of Arunadatta and *Ayurveda Rasayana* Commentary of Hemadri, edited by Harishastri Paradkar Vaidya, Chaukhambha Orientalia, Varanasi, 2011; 188. A.Hr.Su 11/34.
9. Acharya Vagbhata, *Astanga Hridaya* with Sarvanga Sundara Commentary of Arunadatta and *Ayurveda Rasayana* Commentary of Hemadri, edited by Harishastri Paradkar Vaidya, Chaukhambha Orientalia, Varanasi, 2011; 216.
10. Aswathy Prakash C, Byaresh A. Review article on understanding Hypothyroidism in Ayurveda published by IAMJ, Nov, 2015; 3(11).
11. Davidson's Principles and Practice of Medicine. Churchill Livingstone Elsevier Publication. 20th edition, 2006; 20: 752.
12. Shastri Kashinath, Chaturvedi Gorkhmath edited Charak Samhita of Agnivesh, Revised by Charak and Dridhabala, Part I Chaukhamba Bharati Academy Varanasi. 2004; *Sutra Sthana*, 18/44-46: 383.
13. Charak, Charak Samhita *Sutra Sthana*. 20/7. V. ramaswamy and Sons, Madras. India.
14. *Susruta Samhita-Ayurveda-Tattva-Sandipika*, Hindi Commentary part-1, by Kaviraj Ambikadatt Shastri, *Sareera Sthana* 4/4, Chaukhambha Sanskrit Sansthan. Varanasi, 2001; 29.
15. Biswas C, Mukherjee G, Chattopadhyay A. Comparative Clinical Evaluation of Sunthi (*Zingiber officinale*) and Marica (*Piper nigrum*) in Hypothyroidism, *Aryavaidyan.*, Feb-Apr., 2010; XXIII(3): 165-169.

16. Aher Vaibhav D., Wahi Arun Kumar. Pharmacological Study of *Tinospora Cardifolia* as an Immunomodulator. *Int J Curr Pharm Res*, 2(4): 52-54.
17. Sharma Ajay Kumar, Keswani Prakash. Kankaran Komal. Evaluation of the efficacy of Kanchanara Guggulu and Pippali vardhaman Rasayana in the management of Hypothyroidism vis-a-vis Agnimandhya. *JR. A.S.*, 2005; XXVI(3-4): 6-22.
18. Muller B, Zulewski H, Huber P, et al: Impaired action of thyroid hormone associated with smoking in women with hypothyroidism. *N Engl J Med.*, 1995; 333: 964-969.
19. Bhavanani, et al, Effect of Yoga on Subclinical Hypothyroidism: A Case Report; *Yoga mimamsa*, July, 2011; XLIII(2): 102-107.
20. Charaka samhita By Dr. Bramhanand Tripathi, Sutrasthana, 28/15 Chaukhamba Prakashana, 1988.
21. Charaka samhita By Dr. Bramhanand Tripathi, Chikitsasthana, 5/163 Chaukhamba Prakashana, 1988.
22. Essentials of medical physiology- By K. Sembulingam & Prema sembulingam, Thyroid gland chap. 67, Sixth edition, Jaydeep brothers medical publishers (P) LTD, 2012.