



Review Article

STUDY OF HYPOTHYROIDISM FROM THE PERCEPTIVE OF AGNI, KAPHA DOSHA AND RASADI DHATU

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ABSTRACT


Thyroid gland is major endocrine gland which controls the cellular metabolism. Its secretes hormone mainly Tri-iodothyronine, Thyroxine and Calcitonin. Insufficient synthesis and release of thyroid hormones are term as hypothyroidism. References of hormone are not available in Ayurvedic compendia but that doesn't make Ayurveda incomplete because Ayurveda has its own fundamental principles such as *Dosha, Dhatu, Mala* which control cellular metabolism. Balance state of *Dosh, Dhatu, Mala* and *Agni* along with balanced state of mind, soul and *Indriya* makes human being healthy. Root cause of all diseases according Ayurveda is decreased state of *Agni* which is called as *Agnimandya* (weak digestive fire). *Agni* regulates transformation and metabolism through *Pitta dosha*. *Agni* is categorized into three types - *Jatharagni, Dhatvagni* and *Panchamahabhutagni*. Though direct reference of thyroid gland and its hormone are not found in Ayurveda but *Acharya Charaka* has advised *Vikaronama kushalo Na jivhiyat kadachana! nahi sarvavikaranam namatoasti druvha stheetihi..! Ch su.18/44*. That's name of disease is not important rather diagnosis of disease can be done on the basis of manifestation of symptoms. So, the symptoms of the hypothyroidism can be analysed on the basis of status of *Agni, Kapha dosha* and *Rasadi Dhatu*. Hypothyroidism involves impairment of various systems i.e., *Strotasa*. In this review article attempt has been made to unwind the unsaid condition like hypothyroidism by comparing with symptoms of vitiation of *Rasadhatvagni* and *Kapha dosha* with the help of Ayurvedic and modern literatures.

INTRODUCTION

Thyroid gland is located just inferior to the larynx (voice box), anatomically location of thyroid gland can be compared with *Kantha Pradesha* (Throat)^[19] as it is a prime location of *Kapha dosha*. *Kapha dosha* and *Rasadi dhatu* (*Rasa, Mansa, Meda, Sukra*) are mutually connected with each other on the basis of *Panchabhautika* similarities. *Kapha dosha* is composed of *Jala* and *Pruthvi Mahabhuta*, while *Jala mahabhuta* is dominant in *Rasa, Med, Sukra dhatu*. So, balance or imbalanced state of *Kapha dosha* reflects immediately on first - *Rasa dhatu* and then after on other *Dhatu*.

Physiological Functions of Thyroid gland ^[1,2,3]

1. Thyroid hormone increases basal metabolic rate.
2. Thyroid hormone increases the synthesis of protein in the cells.
3. Thyroxine stimulates almost all process involved in the metabolism of carbohydrate.
4. Thyroxine decreases fat storage by converting into free fatty acid level in blood.
5. Thyroid hormones have general and specific effects on growth especially development of brain during fetal life.
6. It's essential for maintaining the body weight.
7. Thyroxine has effects on cardiovascular system, respiration system, central nervous system and on gastrointestinal tract.
8. Thyroxine maintains normal activity of skeletal muscle, sleep and has effects on another endocrine gland also. So, thyroid functions can be correlates with *Agni* and *Tridosha*. *Kapha dosha* which

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enhances development of body and *Agni* is one of the *Guna* of *Pitta dosha* helps in digestion and metabolism which increases the cardiac output and heart rate.

Symptoms of Hypothyroidism^[1-5]

1. Decreased BMR
2. Weight gain
3. Poor concentration
4. Somnolence, generalised lethargy, tiredness
5. Mental sluggishness, depression.
6. Body pain
7. Anaemia
8. Constipation
9. Cold intolerance
10. Peripheral oedema
11. Hair fall
12. Infertility

All the above symptoms of hypothyroidism are analysed on the basis of *Agni*, *Kapha dosha* and *Rasadi dhatu*.

Digestion of food is carried out by *Jatharagni* and *Panchabhautika agni* while transformation of absorbed nutrients are transformed into *Dhatu* by *Dhatvagni* and *Jatharagni*.

Biological transformation occurs at molecular level which are similar to action of *Bhutagni* and *Dhatvagni* which metabolise *Dhatuposhaka Ahara rasa* (nutrients of *Dhatu*) into two ways like *Prasada Paka* (development nutrients for *Dhatu*) and *Kitta Paka* (development of waste products). Balance and imbalance state of *Dhatvagni* is responsible for growth and degeneration of *Dhatu*.^[18,24]

So whatever tissue level and molecular level transportation is under the direct influence of balanced *Jatharagni*.

***Kapha Dosha* and *Rasadi Dhatu* mutual interdependence**^[13,20,21]

Balance and imbalance state of *Rasa dhatu* *Agni* affects on other *Dhatvagni* and *Kapha dosha* also^[18].

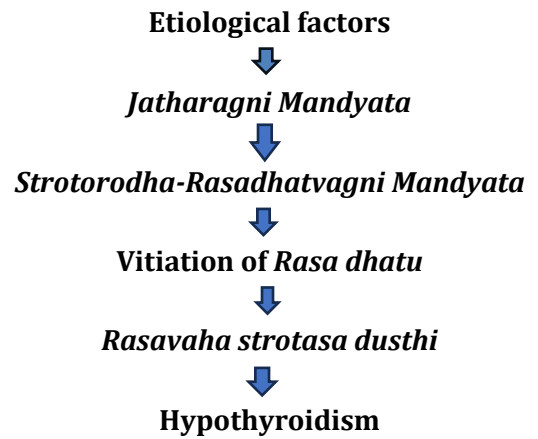
So, many of *Rasavaha strotasa dusthi* symptoms and *Kapha dosha dusthi* symptoms are similar to the clinical features of hypothyroidism.

Table 2: Correlation between Symptoms of Hypothyroidism, *Rasa dhatu* and *Kapha dosha dusthi* symptoms^[1-5, 15-17, 22]

S.No	Symptoms Hypothyroidism	Symptoms <i>Rasavahastrotasa dusthi</i>	<i>Kapha dosha dusthi</i> Symptoms
1	Decreased basal metabolic rate	<i>Agnimandya</i>	<i>Agnisadanam</i>
2	Lack of concentration	<i>Ashraddha</i>	<i>Moha</i>
3	Mental sluggishness	<i>Tandra</i>	<i>Tandra</i>
4	Body pain	<i>Angamarda</i>	<i>Angamarda</i>
5	Anemia	<i>Pandutvam</i>	<i>Swaitya</i>
6	Constipation, cold intolerance,	<i>Strotasamarodha</i>	<i>Strotapidhana, Shotha,</i>

There are many etiological factors like sedentary habits, excess consumption of sweets, lack of exercise are the factors responsible to *Jatharagni mandyata*.

Table 1: *Samprapti*



AIM

To study the status of *Agni* in hypothyroidism.

OBJECTIVES

1. To take review of hypothyroidism from modern literatures.
2. To elaborate the impact of hypothyroidism on the function of *Agni*.
3. To correlate the symptoms of hypothyroidism with *Kapha dosha* and *Rasadi dhatu*.

MATERIAL AND METHODS

According *Acharya charaka*, understanding the pathophysiology of disease is very important on the basis of *Dosha*, *Dhatu*, *Mala*. So, impact of hypothyroidism can be analysed on the basis of function of *Agni*.

References of primary hypothyroidism, *Agni*, *Rasadhatvagni*, *Rasadi dhatu*, *Kapha Dosha Dusthi* have been compiled, analysed and discussed from modern and Ayurvedic literatures.

A correlation has been made between symptoms of hypothyroidism with *Rasavaha strotasa dusthi* and *Kapha dosha dusthi* symptoms.

	peripheral oedema, hypersomnia		<i>Shaitya, Atinidra</i>
7	Hair fall	<i>Palita</i>	-
8	Infertility	<i>Klebyata</i>	<i>Klebyata</i>
9	Body pain	<i>Angasada</i>	<i>Angasada</i>
10	Weight gain	<i>Gouravata</i>	<i>Aalasya, Gouram</i>

DISCUSSION

Hypothyroidism is a condition which can derange result from deficiency of the thyroid hormone causes of hypothyroidism include iodine deficiency, chronic autoimmune thyroiditis, hereditary defect in thyroid hormone synthesis, underactive of thyroid gland, thyroid removal, radiation treatment of certain cancer diseases.

Anatomically thyroid gland is situated in one of the prime locations of *Kapha dosha* i.e., *Kantha Pradesh* hence *Jatharagni* and *Kapha Dosha* can be one of the important factors to control thyroid gland function

From the symptoms of hypothyroidism, etiopathogenesis of *Agni, Dosha, Dhatu, Mala* can be analysed.

Hypothyroidism is primarily a under activity of *Agni*. Various etiological factors causes under activity of *Jatharagni (Mandyata)* which is responsible for production of indigested food material called as *Aama* (toxins) which obstructs *Rasvaha strotasa* in the beginning leading to *Rasa dhatvagni mandyata*. Vitiating of *Rasa dhatu* often remain subclinical which result in successive involvement of *Mansa, Meda, Majja* and *Sukra dhatu*.

Features of Hypothyroidism and Impact on *Agni*

[2,3,7,8,14,15,23]

1. BMR.- Low BMR in hypothyroidism are indicates weak state of all types of *Agni* which enhances formation of *Aama*.
2. Poor concentration is due to weak state of *Rasagni* and increase *Kapha dosha*.
3. Mental sluggishness, somnolence is due to *Kapha dosha* and *Rasa dhatu dusthi*.
4. Cold intolerance is due to less metabolic activity and imbalance state of *Kapha dosha* and *Rasa dhatu*.
5. Body pain in hypothyroidism is due to *Agni mandyata* responsible to produce *Aama* (toxin) and that affects body pain.
6. Anemia in hypothyroidism is due to inadequate absorption of nutrients of *Rakta dhatu* from G.I. tract as result of *Jatharagni mandyata* and *Rasa-Raktagni mandyata*.
7. Constipation is found in hypothyroidism due to lack of digestive enzymes.
8. Hair fall is one of the symptoms found in hypothyroidism due to *Rasa dhatu dusthi*.

9. Infertility in hypothyroidism from *Ayurvedic* perceptive can be correlated with *Agnimandya, Kapha dosha dusthi* and severe deranged state of all *Dhatvagni* which affects *Sukra dhatu* and its development.

10. Lethargy is found in hypothyroidism is due to *Aama* produced through *Agnimandya*.

11. Weight gain in hypothyroidism can be understood by disseminating and correlating weak state of *Jatharagni, Rasa Dhatvagni* and *Medodhatvagni mandyata*.

So, basically thyroid hormone has impact on almost every system, same way *Agni* is responsible for digestion, growth and development of body and has impact on metabolism of all *Dhatu*.

Proper lifestyle, diet, sleep and exercise are closely related to maintaining thyroid functions. Hypothyroidism is disease caused due to lack of exercise, sedentary habits and stress full lifestyle. This all reasons deranged the functions of *Agni* and vitiating to first *Rasa dhatu Agni*. This creates blockages in *Rasa dhatu*, results into inappropriate development of *Rasa dhatu, Kapha dosha* and further development of other *Dhatu*. This procedure is explained in Table no1 and Table no 2.

Retrospective study of functions and dysfunctions of thyroid gland is essential to understand Thyroid gland from Ayurvedic point of view. Metabolism is basically a transformation process which involves *Jatharagni* and *Dhatvagni*. Considering all these factors we can say that thyroid activity or endocrine activity are the products of balanced state of *Agni* and *Dosha*.

CONCLUSION

Hypothyroidism has impact on all body including other endocrine gland, same way imbalance state of *Agni* has impact on every *Dhatu*. As we seen that Symptoms of Hypothyroidism is almost similar to the vitiating state of *Rasa dhatu Agni, Kapha dosha* and its mutual interdependence *Dhatu*.

So, this study will helpful in treating hypothyroidism patient with respect to *Agni, Kapha dosha* and *Rasadi dhatu*.

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