



Review Article

MULTIDIMENSIONAL VIEW OF HYPOTHYROIDISM THROUGH AYURVEDA W.S.R TO  
ANUKTA VYADHI

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mandhya, Stress  
and Sedentary  
lifestyle.

ABSTRACT

Hypothyroidism is a condition characterized by a lack of thyroid hormone (T<sub>3</sub> and T<sub>4</sub>), which can be caused by a variety of factors. The prevalence of this condition is on the rise globally due to increased levels of stress and strain. The symptoms of hypothyroidism are studied in terms of imbalance of *Dosha*, *Dushya*, *Srotasa*, etc and an effort is made to obtain standard possible *Samprapti* and *Samprapti Ghataka* of the same disease. All *Srotas* are involved in the analysis of the signs and symptoms associated with hypothyroidism from the Ayurvedic perspective. The *Vata Dosha* and *Kapha Dosha Vriddhi* are elicited and *Pitta Dosha Kshaya* is seen. Here an attempt is made to understand hypothyroidism as a *Vyadhishankarya* from Ayurvedic point of view. **Aims and Objectives:** 1. To study the *Samprapti* of hypothyroidism through Ayurveda. 2. To study the *Samprapti Ghataka* of hypothyroidism through Ayurveda. **Material and Method:** Hypothyroidism has been studied using modern pathology textbooks from different authors, as well as looking up online medical research from places like PubMed, Google Scholar, and other national databases. The study of various Ayurvedic Samhita were made critically and an effort is made to understand the complete *Samprapti* and *Samprapti Ghataka* of hypothyroidism in terms of *Dosha*, *Dushya*, *Agni*, and *Srotas* etc. The modern lifestyle and sedentary lifestyle lead to aggravation of *Vata Dosha*, and *Kapha Dosha* cause the *Jathragnimandhya* with the formation of *Ama*, *Rasadhatavagni* depends on *Jatharagni*, so *Dhatvagnimandhya* occur and causes improper formation of *Sapta Dhatu* starting from *Rasa* to *Shukra* and improper *Dhatu Vriddhi* (especially *Meda Dhatu*). In *Dhatvagnimandhya* especially *Rasa Dhatvagnimandhya* leads to *Sama rasa Vriddhi* and over production of *Mala* of *Rasa Dhatu* i.e., *Mala rupa Kapha Dosha Vriddhi*. Majority of the *Nanatmaja Roga* of *Kapha Dosha* can be included as signs and symptoms of hypothyroidism.

INTRODUCTION

Changing lifestyle, stress, eating habits and pollution are some reasons contributing to the increase in endocrine disorders. This is because of the sedentary and stressful lifestyle that is prevalent in the modern era which causes the changes in activities of neuro endocrine system.

“Hypothyroidism is a hypometabolic clinical state resulting from inadequate production of thyroid hormones for a prolonged period, or rarely from resistance of the peripheral tissues to the effects of thyroid hormones.”<sup>[1]</sup> The thyroid hormone plays a major role in regulating the metabolism in the body and affects every cell in human body. It can cause a number of symptoms such as intolerance to cold fatigue, constipation, depression, weight gain, etc. Hypothyroidism is the most commonly found functional disorder of the thyroid gland seen in clinical practice. It has been estimated that about 42 million people in India suffers from the thyroid disease and hypothyroidism is the most common thyroid disorder in a country with a prevalence rate of 5.4% and in women the prevalence is higher at the 11.4% when

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compared with men in whom the prevalence is 6.2% where female and male ratio is approximately 6:1.<sup>[2]</sup>

According to Ayurveda, *रोगाः सर्वे अपि मन्दे अग्रौ...* That root for all diseases is *Manda Agni*.<sup>[3]</sup> This critical review is carried out to understand hypothyroidism according to the principle of Ayurveda.

There is no direct evidence of hypothyroidism in Ayurvedic classics. As far as the name of disease is concerned, no specific term is found for hypothyroidism in Ayurvedic classics. Though many diseases of current era do not find mention in Ayurvedic texts, yet they can be successfully treated due to deep insight provided by the Ayurvedic principles. According to *Acharya Charaka*, given a concept of *Anukta Vyadhi* it is not necessary that every disease manifestation must have certain name, but it is more important to understand the possible *Samprapti* of the disease in terms of involved factors like *Dosha*,

## RESULT

**Table1: Showing the *Samprapti Ghataka* of Hypothyroidism**

Sr.no	<i>Samprapti Ghataka</i>	Probable <i>Samprapti Ghataka</i>
1	<i>Dosha</i>	<i>Vata Pradhana, Kapha</i>
2	<i>Dushya</i>	<i>Rasa, Rakta, Mamsa, Meda, Asthi, Majja, Shukra</i>
3	<i>Srotasa</i>	<i>Pranavaha, Annavaha, Rasavaha, Raktavaha, Mamsavaha, Medavaha, Asthivaha, Shukravaha, Purishavaha</i>
4	<i>Srotodushti</i>	<i>Sanga</i>
5	<i>Agni</i>	<i>Jathar Agni, Dhatvagni, Bhut Agni</i>
6	<i>Ama</i>	<i>Jatharagnimandhya, Dhatvagnimandhya, Bhutagnimandhya</i>
7	<i>Udabhav Sthan</i>	<i>Amashya</i>
8	<i>Adhistan</i>	<i>Gala Pradesh</i>
9	<i>Vyakta Sthan</i>	<i>Sarvanga sharira</i>
10	<i>Svabhav</i>	<i>Chirakari</i>
11	<i>Sadhya- Asadhyata</i>	<i>Yapya</i>

*Dushya* etc.<sup>[4]</sup> After knowing that, it can be successfully treated.

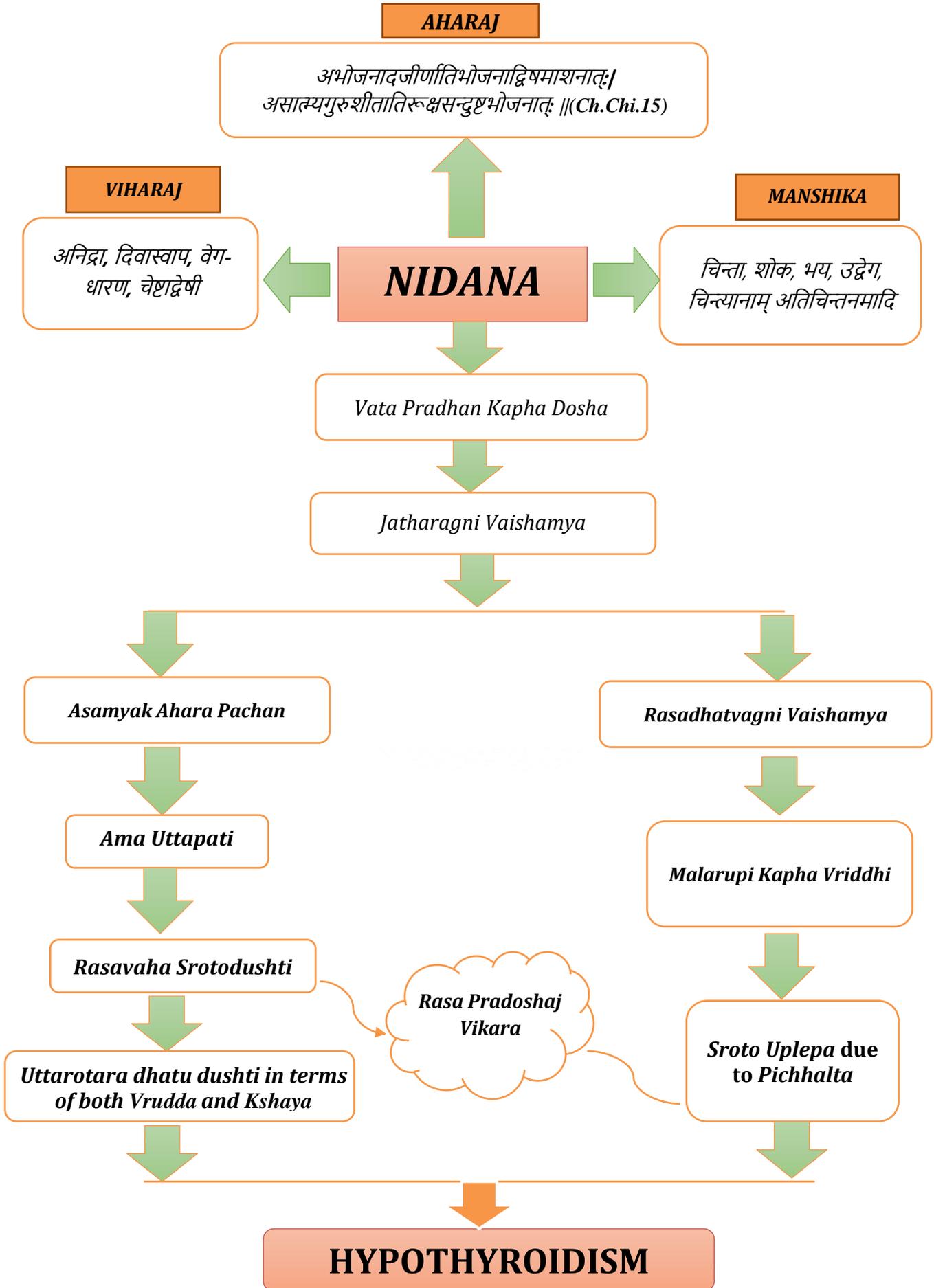
## AIMS AND OBJECTIVES

- To study the *Samprapti* of hypothyroidism through Ayurveda.
- To study the *Samprapti Ghataka* of hypothyroidism through Ayurveda.

## MATERIAL AND METHOD

The pathogenesis of hypothyroidism was studied from modern pathology textbooks of various authors and by searching various online medical research databases like PubMed, Google Scholar, and other national research databases. The study of various Ayurvedic *Samhita* was made critically and an effort is made to understand the complete *Samprapti* and *Samprapti Ghataka* of hypothyroidism in terms of *Dosha Dushya, Agni, and Srotasa* etc.

Flow chart: Understanding the *Samprapti* of Hypothyroidism from Ayurvedic point of view



**DISCUSSION****Table 1: Showing role of *Vata Pradhana Kaphanubandhi Dosha* in manifestation symptoms and signs of Hypothyroidism<sup>[5]</sup>**

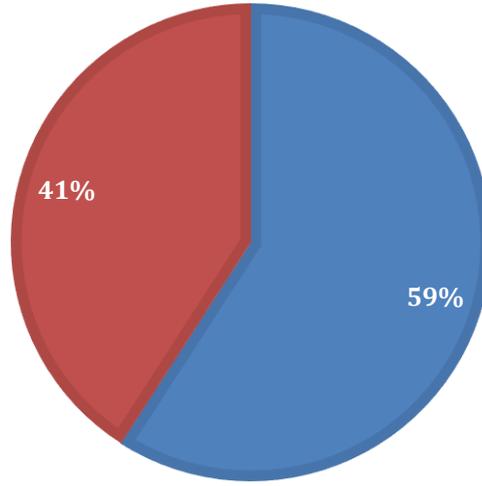
S.no	Symptoms of Hypothyroidism (descending order of frequency)	<i>Dosha Pradhanyata</i>
1	Tiredness, weakness	<i>Vata and Kapha Vriddhi</i>
2	Dry skin	<i>Vata Vriddhi</i>
3	Feeling of cold	<i>Kapha and Vata Vriddhi</i>
4	Hair loss	<i>Vata Vriddhi</i>
5	Difficulty to concentrating, poor memory and depression	<i>Vata Vriddhi</i>
6	Constipation	<i>Vata Vriddhi</i>
7	Weight gain with poor appetite	<i>Kapha Vriddhi</i>
8	Dyspnoea	<i>Kapha Vriddhi</i>
9	Hoarse of voice	<i>Vata Vriddhi</i>
10	Oligomenorrhoea	<i>Vata Vriddhi</i>
11	Paraesthesia	<i>Vata Vriddhi</i>
12	Impaired hearing	<i>Vata Vriddhi</i>
	<b>Signs of Hypothyroidism</b>	
1	Dry coarse skin; cool peripheral extremities	<i>Vata Vriddhi</i>
2	Puffy face, hands, and feet	<i>Kapha Vriddhi</i>
3	Bradycardia (<60/min)	<i>Kapha Vriddhi</i>
4	Voice hoarseness	<i>Vata Vriddhi</i>
5	Delayed tendon reflex relaxation	<i>Kapha Vriddhi</i>
6	Bradykinesia	<i>Kapha Vriddhi</i>
7	Mental impairment	<i>Vata Vriddhi</i>

**Table 2: Showing the comparison of *Kapha Nanatmaja Vyadhi* vs symptoms of hypothyroidism<sup>[6]</sup>**

S. no	<i>Kaphaj Nanatmaja Vyadhi</i>	Symptoms
1	<i>Tandra</i>	Drowsiness
2	<i>Nidradikhya</i>	Excessive sleepiness
3	<i>Stemitya</i>	Weakness
4	<i>Gurugatrata</i>	Heaviness in body
5	<i>Alasya</i>	Lethargy
6	<i>Balasaka</i>	Puffiness of face
7	<i>Apakti</i>	Anorexia
8	<i>galaganda</i>	Goiter
9	<i>Atistolya</i>	Weight gain
10	<i>Shitagrita</i>	Intolerance of cold

## Probable *Dosha Vriddhi* in Hypothyroidism

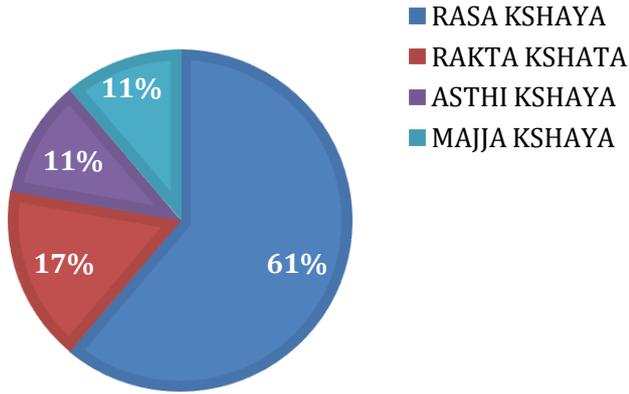
■ VATA DOSHA ■ KAPHA DOSHA



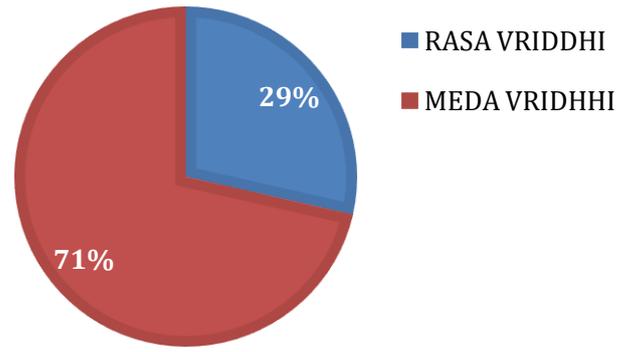
**Table 3: Showing probable *Dhatu Kshaya - Vriddhi* in Hypothyroidism**

S. no	Symptoms of Hypothyroidism (Descending order of frequency)	<i>Dhatu vriddhi/Kshaya</i>
1	Tiredness, weakness	<i>Rasa Kshaya</i>
2	Dry skin	<i>Rasa and Rakta Kshaya</i>
3	Feeling of cold	<i>Rasa Vriddhi</i>
4	Hair loss	<i>Asthi Kshaya</i>
5	Difficulty to concentrating, poor memory and depression	<i>Rasa and Majja Kshaya</i>
6	Constipation	<i>Rasa Kshaya</i>
7	Weight gain with poor appetite	<i>Rasa and Meda Vriddhi</i>
8	Dyspnoea	<i>Rasa and Meda Vriddhi</i>
9	Hoarse of voice	<i>Rasa Kshaya</i>
10	Oligomenorrhoea	<i>Rasa Kshaya</i>
11	Paraesthesia	<i>Rasa Kshaya</i>
12	Impaired hearing	<i>Rasa Kshaya</i>
	<b>Signs of Hypothyroidism</b>	
1	Dry coarse skin; cool peripheral extremities	<i>Asthi Kshaya</i>
2	Puffy face, hands, and feet	<i>Rasa and Meda Vriddhi</i>
3	Bradycardia (>60/min)	<i>Rasa and Rakta Kshaya</i>
4	Voice hoarseness	<i>Rasa Kshaya</i>
5	Delayed tendon reflex relaxation	<i>Meda Vriddhi</i>
6	Bradykinesia	<i>Meda Vriddhi</i>
7	Mental impairment	<i>Rasa and Majja Kshaya</i>

### Dhatu kshaya in Hypothyroidism



### Dhatu Vriddhi In Hypothyroidism



प्रीणनं जीवनं लेपः स्नेहो धारणपूरणेः। गर्भोत्पादश्च धातूनां श्रेष्ठं कर्म क्रमात्स्मृतम्॥<sup>[7]</sup>

Table 4: Showing Function of *Dhatvagni* and Thyroid Hormone

S.no	Dhatu	Functions of Dhatu	Thyroid Hormones Functions
1	Rasa	Prinana	Metabolites cause vasodilation so blood flow increases
2	Rakta	Jivana	Necessary factor for erythropoiesis
3	Mamsa	Lepa	Essential for normal activity of skeletal muscles
4	Meda	Sneha	1. Maintaining the weight of body 2. Decreases cholesterol, and triglycerides levels in plasma
5	Asthi	Dharana	Closure of epiphysis under the influence of thyroxine
6	Majja	Purana	Stimulating factor for central nervous system
7	Shukra	Gabhotpadaka	Essential for normal sexual function

Table 5: Showing Involvement of *Srotas* in manifestation of hypothyroidism

S. no	Srotasa Name	Lakshana (Symptoms)
1	Pranavaha	Dyspnoea
2	Annavaha	Loss of appetite
3	Rasavaha	Loss of appetite, heaviness of body, lethargy, weakness, somnolence, premature aging symptoms like hair loss, cold intolerance, puffiness, oligomenorrhea, infertility
4	Raktavaha	Bradycardia, dry skin, slowing of mental activity, lethargy
5	Mamsavaha	Periorbital oedema, Galaganda (goiter)
6	Medavaha	Weight gain, tiredness, sleepiness, sluggishness, dyspnoea on exertion
7	Asthivaha	Hair loss
8	Majjavaha	Difficulty to concentrating and poor memory
9	Shukravaha	Loss of libido, infertility
10	Purishvaha	Constipation
11	Svedavaha	Dry and coarse skin

Table 6: Showing *Sroto Dushti* in manifestation of Hypothyroidism

Sroto Dushti Prakara	Probable Reason
Sanga	When a person does <i>Nidana sevana</i> , <i>Vata Pradhana Kapha Dosha</i> becomes aggravated which leads to <i>Agni mandhya</i> which leads to produce <i>Ama</i> , obstruction in <i>Srotas</i> and as a result of this the formation of <i>Dhatu</i> s doesn't occur properly. The <i>Uttarotara Dhatu</i> don't form properly which leads to the clinical manifestations of signs and symptoms seen in hypothyroidism.

**Table 7: Table Showing the Possible Correlation of Functions of Agni with Physiological Functions of Thyroid Hormone [8]**

S no	Functions of Agni	Thyroid hormone function	Hypothyroidism
1	<i>Paka</i>	This action of <i>Agni</i> can be correlated with calorogenic action of thyroid hormone which helps in regulation of metabolism of carbohydrates, proteins and fats.	As <i>Agni</i> gets hampered in thyroxine hormone disorders its functions also get abnormal. In hypothyroidism, Body Metabolism Rate (BMR) falls by 20-40% leading to improper metabolism i.e., <i>Agnimandya</i> .
2	<i>Raga</i>	Thyroxine accelerates erythropoietic activity and increases blood volume. It is one of the important general factors necessary for erythropoiesis.	Therefore, due to deficiency of thyroid hormones, its results in anemia.
3	<i>Utsaha</i>	This action of <i>Agni</i> is seen in thyroid hormone as it is essential for normal sexual function which gets hampered in thyroid hormone disorders due to alterations in normal <i>Agni</i> status.	Therefore, in hypothyroidism, loss of libido and lethargy is seen.
4	<i>Ushma</i>	Thyroid hormone increases the heat production in the body, by accelerating various cellular metabolic processes and increasing BMR. It is called thyroid hormone induced thermogenesis.	Therefore, in hypothyroidism, cold intolerance is seen.
5	<i>Kshuda</i>	This action of <i>Agni</i> is seen in thyroid hormone as it increases the secretions and movements of gastro-intestinal tract.	This function of <i>Agni</i> gets hampered in thyroid hormone disorders which lead to decreased appetite in hypothyroidism.
6	<i>Medha</i>	This action of <i>Agni</i> resembles with thyroid hormone function as it is a stimulating factor for the central nervous system, particularly the brain. Hence, the normal functioning of the brain needs the presence of thyroid hormones. Thyroxine also increases the blood flow to brain	Hyposecretion of thyroxine leads to impaired memory and inability to concentrate lethargy and somnolence (excess sleep).

**Table 8: Showing different level Ama utpati in manifestation of Hypothyroidism**

S. no	Agni	Probable Reason
1	<i>Jatharagnimandhya Ama</i>	<i>Hetu sevana</i> leads to <i>Agnimandhya</i> as a result <i>Rasa Dhatu</i> is not formed properly i.e., the <i>Rasa Dhatu</i> formed is <i>Vikruta</i> in nature thus the <i>Mala</i> of <i>Rasa dhatu</i> i.e., <i>Kapha Vikruta</i> is observed.
2	<i>Dhatvagnimandhya Ama</i>	<i>Dushti</i> of <i>Rasa Dhatu</i> plays a major role in pathogenesis. Many of <i>Rasajavikaras</i> as mentioned by <i>Acharya Charak</i> are similar to the clinical features of Subclinical Hypothyroidism, Likewise, <i>Rasa Dhatvagnimandya</i> (hypofunctioning <i>Rasa Dhatu</i> ) leads to <i>Rasavridhi</i> and over production of <i>Mala</i> of <i>Rasa Dhatu</i> i.e., <i>Mala Kapha Vriddhi</i> .
3	<i>Bhutagnimandhya Ama</i>	Due to <i>Ama</i> condition the <i>Rasadi Dhatus</i> are not formed properly which will hamper the cellular metabolism. As iodide is absorbed from gut flora and the absorption of iodide from <i>Pakvashya</i> won't be absorbed properly due to <i>Bhutagnimandhya</i> which will result into iodine deficiency induces hypothyroidism.

स्रोतरोधबलभ्रंशगौरवानिलमूढताः।

आलस्यापक्तिनिष्ठीवमलसङ्गारुचिक्लमाः॥

लिङ्गं मलानां सामानां, निरामाणां विपर्ययः॥<sup>[9]</sup>

**Table 9: Showing the possible comparison of Ama Lakshana with symptoms of hypothyroidism**

Sr no	Ama Lakshana	Symptoms of hypothyroidism
1	Srotorodha	Hoarseness of voice
2	Balabhramsha	Feeling of weakness, tiredness
3	Gaurava	Weight gain, swollen, puffy and oedematous face, feeling of heaviness
4	Anila mudhata	Bradycardia, irregular menses, inability to concentrate, decrease hearing, cold intolerance, depression
5	Alasya	Lethargy, excessive sleepiness
6	Apakti	Reduced appetite
7	Aruchi	Anorexia
8	MalaSanga	Constipation
9	Klama	Fatigue, loss of energy, inability to concentrate, slowdown thought process

**Table 10: Shows the possible Vyadhi udbhava sthana for hypothyroidism**

Amashya	Hetu sevanas leads to Agnimandhya as a result in Rasa Dhatu is formed Vikruta in nature thus the Mala of Rasa Dhatu i.e., Kapha will be Vikruta by nature.
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**Table 11: Shows Adhistan and Vyakta sthana in Hypothyroidism**

Adhistan	Rohini layer of Tvacha <sup>[10]</sup>
Vyakta Sthana	Sarvanga sharira

**Table 12: Shows Svabhava and Sadhya-Asadhyata of hypothyroidism**

Svabhava	Chirakari
Sadhya-Asadhyata	According to Acharya Sushruta and Madhava nidana explained that if Rogi having the following features than Rogi is Asadhya like; 1) संवत्सरातीत 2) अरोचक 3) भिन्नस्वरं These three features seen commonly in hypothyroidism that's why hypothyroidism is Yasya Vyadhi. <sup>[11]</sup>

## CONCLUSION

Hypothyroidism is a clinical syndrome results in a generalized slowing down of metabolic processes. As per Ayurvedic principles, hypothyroidism occurs due to Jatharagnimandhya Dhatvagnimandhya and Bhutagni mandhya along with Vata and Kapha Prakropa. Here Agni becomes diminished at the level of Dhatus and Sanga srotasa which results in impairment of Dhatu function and leads to the symptoms as seen in hypothyroidism both being physical as well as mental symptoms. With respect Dosha in hypothyroidism is Vata and Kapha dominant. This results in Dosha and Dushya samurchana and produces symptoms at different levels. Here we come upon the conclusion that Agni plays a major role in pathogenesis in hypothyroidism. The presented work above is a example of work for understanding any diseases with respect to Anukta Vyadhi at the level of Samprapti Ghataka which will help in diagnosis and Samprapti vighatana of a disease.

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