



Review Article

ROLE OF *PATHYA* - *APATHYA* IN MANAGEMENT OF *GALAGANDA* (HYPOTHYROIDISM) - AN AYURVEDIC PERSPECTIVE

P.Neelima^{1*}, K.Srinivas², P. Sai Sudhakar³

¹Medical Officer, Government Ayurvedic Dispensary, Nidumolu, Krishna District, A.P., India.

²Assistant Professor, ³Professor & HOD, Department of Kayachikitsa, Dr.N.R.S.Govt. Ayurvedic College, Vijayawada, A.P., India.

ABSTRACT

Galaganda is a swelling which hangs over the region of *Gala* like *Mushka* either big or small in size and resembles the shape of a scrotal sac. It has been described as a disease entity of impaired *Vata*, *Kapha dosha* and *Medo dhatu* along with involvement of *Ama* and *Dhatvagnimandhya*. The concept of *Kaphavritavata* has also been discussed by some *Acharyas* with *Laskhanas* such as *Saitya*, *Gurutva*, *Sopha* which can be compared to symptoms like weight gain, edema etc in hypothyroidism with a specific feature of raised TSH levels, it is correlated to *Galaganda* in Ayurveda. Modernization leads to improper balance and disintegration of health and environment, body, mind and soul leading to lifestyle disorders. Hypothyroidism is one such lifestyle and metabolic disorder which is commonly encountered now days continuing to pose a major health issue. As it also responds to stress and stimuli the global incidence of hypothyroidism is more. The commonest cause of hypothyroidism is dietary deficiency of Iodine. *Pathya* and *Apathya* include materialistic substances and specific regimes which effect the body and mind. This article endeavors to put forward the management of hypothyroidism according to its *Nidana* in Ayurvedic perspective which would help in understanding the etiopathogenesis of the disease and appropriate management of the disease by following *Pathya* and avoiding *Apathya*.

KEYWORDS: *Galaganda*, Hypothyroidism, *Kaphavrita vata*, *Medodhatu*, *Vata kapha dosha*, *Pathya*, *Apathya*, lifestyle disorders.

INTRODUCTION

The impact of modernization and western dietary habits, lifestyle and stress has led to alterations in the activities of endocrine system leading to development of metabolic disorders in the body. Hypothyroidism is the commonest endocrine disorder encountered nowadays causing metabolic irregularity effecting pathophysiological changes in multiple organ systems. The prevalence of primary hypothyroidism is 1:100 but increases to 5:100 if patients with subclinical hypothyroidism (normal T₄ and raised TSH) are included. The female: male ration is approximately 6:1^[1].

The metabolic activities of the body done by thyroid hormones can be compared to functions of *Dhatvagnis*. Closely analyzing the signs and symptoms, primary hypothyroidism seems to correlate with hypo functioning of *Jataragani* which in turn effects *Dhatvagni* which is a basic factor for occurrence of the disease.

The disease *Galaganda* is explained by *Charaka*, *Susruta* and *Vagbhata* as a swelling around

the neck region.^[2,3,4] Taking into consideration the site, size and features as well this disease entity has been compared to hypothyroidism which involves certain features of swelling, heaviness etc. As the incidence of hypothyroidism is due to improper dietary habits and iodine deficiency changes in diet plays a major role in control of thyroid hormone levels. Ayurveda has given greater importance to *Nidana parivarjana* (cessation of causative factors) as the main treatment principle of any disease.^[5] It is also said that occurrence of all diseases is mainly due to *Mandagni*^[6] leading to improper digestion, metabolism and absorption.

AIMS AND OBJECTIVES

To explain the role of *Pathya* and *Apathya-Ahara*, *Vihara* and *Manasika* elements enumerated in ancient Ayurvedic texts which will be beneficial in management of Hypothyroidism.

MATERIALS AND METHODS

Classical Ayurvedic Texts, Research papers and online data are critically reviewed. All the

information has been analyzed in relation to hypothyroidism management.

Hypothyroidism

Hypothyroidism is a common endocrine disorder resulting from deficiency of thyroid hormone. It usually is a primary process in which the thyroid gland produces insufficient amounts of thyroid hormone. It can also be secondary – i.e. lack of thyroid hormone secretion due to inadequate

secretion of either Thyrotropin or Thyrotropin releasing hormone (TRH) from the hypothalamus (secondary or tertiary hypothyroidism). The patient's presentation may vary from asymptomatic to coma (rarely) with multisystem organ failure (myxoedema coma).[7]

The basic function of thyroid hormones in the body are enlisted in Table below:[8]

S.No.	Physiological function	Mode of action
1.	Oxidative metabolism	Increase O ₂ uptake of all the tissues (except brain, testis)
2.	Carbohydrate metabolism	Rapid uptake of glucose by cells, enhanced glycolysis, enhanced gluconeogenesis, increased rate of absorption from gastrointestinal tract, increased insulin secretion
3.	Lipid metabolism	Stimulates lipogenesis and lipolysis
4.	Protein metabolism	Potent protein anabolic effect
5.	Vitamin metabolism	Hepatic conversion of carotene to Vit -A

The above table reveals that the basic metabolic functions of the body like digestion, absorption, assimilation and metabolism of food are carried out by thyroid gland. Any imbalance in intake of food and nutrients may cause over activity or under activity of thyroid gland. Hence food plays a vital role in occurrence of thyroid disorders.

The normal regular requirement of dietary iodine in hypothyroid patients is 150mcg^[9]. Selenium is also one of the most important micronutrient which helps in immune endocrine function, metabolism and cellular homeostasis. It is present in highest concentrations in thyroid gland.^[10]

Acharya Charaka first mentioned the disease *Galaganda* in 20 varieties of *Sleshmavikaras*.^[11] He mentions about the presence of swelling on both sides of the neck. He has explained the *Rupa*, *Sadhya* *Asadhyata* and *Chikitsa* of *Galaganda* in *Swayadhuchikitsa*.^[12]

Susruta clearly mentioned the *Adhithana* of *Galaganda* as out of seven layers of the skin, the sixth layer known as *Rohini* is the site for establishment of disease *Galaganda*. *Galaganda* is classified into 3 types:

1. *Vataja galaganda*
2. *Kaphaja galaganda*
3. *Medoja galaganda*.^[13]

Galaganda is mainly due to *Kaphavritavata* presenting with *Lakshanas* such as *Saitya*, *Gaurava*, *Sopha* which can be correlated to weight gain, oedema etc of hypothyroidism.

Nidana

Due to intake of *Matsya*, *Mahisha*, and *Varaha mamsa*, unripened *Moolaka*, *Masharoopa*, buttermilk, milk, *Ikshurasa*, and *Phanita*. Improper sleeping position, avoidance of *Dantadhavanam*, not following the *Dhoomapana*, *Vamana*, *Gandoosha* and

Siravyadhanam adequately, by all these *Kaphadi dosha dushti* occurs and causes diseases.

Samprapthi

Due to intake of *Mithyahara viharasvata*, *Kapha* and *Medas* gets vitiated reaches *gala* and produces swelling with characteristics of their own specific *Gunas* causing *Galaganda*.^[14]

Samprapti Ghataka

- *Dosha – Kapha, Vata*
- *Dushya – Rasa, Meda*
- *Agni – Jatharagni, Dhatvagni*
- *Ama – Jatharagni mandhya janitha, Dhatvagni mandhya janitha.*
- *Srotas – Rasavah srotas and Medovaha srotas*
- *Srotodushti prakara – Sanga*
- *Udbhavastana – Amasaya*
- *Rogamarga – Bahya*

Concept of Pathya and Apathya

Patha means path. It can be considered as any path in the body like *Srotas* or channels which flow throughout the body supplying nutrition to all the *Dhatus* which maintains the life.^[15] *Pathya* (wholesome) and *Apathya* (unwholesome) include materialistic substances and specific regimes which affect the body and mind. It can also be considered as a path of wellbeing. Following a path of wellbeing will make the body free from diseases. Ayurveda has enumerated various paths of well being in various Ayurvedic texts.^[16]

Pathya can be *Saririka* or *Manasika* and can be classified as *Aharaja pathya*, *Viharaja pathya* and *Manasika pathya*. *Aharaja pathya* includes dietary regimen, *Viharaja Pathya* includes physical activity and lifestyle and *Manasika pathya* includes code of conduct. *Pathya* of one person may be *Apathya* for another person. So *Pathya* always depends on *Matra*,

kala, Samskara kriya, Jangaladi bhumi bheda, Tridosha, Gurvadi guna avastha etc.^[17]

Aharaja Pathya – Apathya

As per *Taitthareeya* Upanishad food is the supreme or *Brahma*. *Acharya Charaka* emphasizes on importance of food. The healthy state or diseased states of the body are formed by wholesome or unwholesome diet. Highest importance has been given for intake of food at proper time for maintenance of positive health. It is described as one

of the *Triopasthambas* of life– *Ahara, Nidra* and *Brahmacharya*.^[18]

Acharya Charaka has enumerated eight factors to consider while taking food like *Prakriti, Karana, Samyoga, Rasi, Desa, Kala, Upayoga samstha, Upabhokta*.^[19] The duration of food digestion is also specified along with regular conducive diet (*Sadaa pathya* and *Apathya ahara*) and *Bhojana karma*.^[20]

Acharya Charaka has enlisted certain foods as *Sada Pathyahara*^[21] in any disease which can also be considered in management of hypothyroidism.

S.No	Pathya Ahara	Hypothyroid Diet
1.	<i>Rakta sali</i>	Cereals are rich in selenium ^[22]
2.	<i>Rohita matsya</i>	Fish – rich in selenium and iodine ^[22]
3.	<i>Saindhava salt</i>	Iodine rich salt is advised
4.	Cow's milk and Ghee	Cow milk is rich in iodine and selenium ^[23]
5.	Rain Water	Iodine rich water. Sea water contains 60ppb of iodine concentration. Iodine ends up in surface water through rains from evaporation ^[24]
6.	Fat of pig, hen, chuluki fish	Dietary supplement of iodine is also obtained from animals fed with iodine rich fodder

Selenium present in dietary food combats the oxidative stress and metabolism of thyroid hormones.^[25]

Considering *Apathya ahara* as main causative factor for arise of diseases different types of incompatible food (*Viruddhahara*) has also been specified like *Desa viruddha, Kala viruddha, Agni viruddha, Matra viruddha, Satmya viruddha, Sanskara viruddha, Virya viruddha, Kostha viruddha, Avastha viruddha, Karma viruddha, Parihara viruddha, Paka viruddha, Samyoga viruddha, Hridviruddha* and *Sampat viruddh*.^[26]

Viruddha ahara vitiates *Agni - Jataragni, Bhutagni* and *Dhatvagni*. *Agni* is *Paramasukshma* and transforms food substances into various forms of energy. Imbalance *Agni* leads to *Ama* formation leading to *Srotorodha* and vitiation of all the *Doshas* and *Dhatus* disturbing the metabolic processes and supply of proper nutrients to the body which are the causative factors for disease manifestation.^[27]

Apathya ahara includes *Yavaka, Masa*, river water in rainy season, *Usara*, mustard, beef, meat of young dove, frog, *Cilicima* fish, ghee and milk of sheep, *Kusumba taila*, fat of buffalo, *Kumbhira, Cataka*, elephant, *Nikucha* (artocarpus), alba, *Phanita*.^[28]

American Thyroid Association has certified certain foods like cabbage, broccoli, cauliflower etc belonging to cruciferaceae family, soy bean, alcohol, gluten found in bread, rice etc, excessively fatty and sugary food to cause thyroid disorders. Some agents called Goitrins are found in plants like cabbage, mustard and turnip which is the cause of goiter in

certain iodine deficient regions.^[29] It is understood that even the *Apathya ahara* enumerated by *Charaka* are also highly fatty like buffalo fat, beef etc. and mustard which contain goitrins which cannot be advised to hypothyroid patients.

Viharaja Pathya - Apathya

It includes the physical activity and daily regimen to be followed incorporating a healthy life style. Many Ayurvedic texts have mentioned *Dinacharya, Rutucharya, Nidra, Dharaneeya* and *Adharaneeya vega*^[30] following which helps to improve personal and social hygiene hence improving the quality of life and maintaining a healthy, diseased free life. *Charaka* has mentioned the importance of physical exercise which brings about lightness, ability to work, stability, resistance to discomfort and alleviation of *Dosas*.^[31] *Asana* has been an integral part of *Astanga Yoga*. Certain *Asanas* have been postulated particularly for improving the functions of thyroid and pituitary glands like *Sirshasana, Suptavajrasana, Matsyasana*.^[32] Practicing these reduces the symptoms of weight gain, oedema, puffiness, lethargy in Hypothyroidism. *Viharaja Apathyas* like *Diwaswapna, Ratri jagarana, Vegadharana*^[33] have been specially mentioned as per *Ritu* and also *Pragnaparadaha* (self made mistakes) which are the causative factors for faulty and unhealthy lifestyles causing thyroid gland dysfunctions. Restraining from these keeps the person healthy.

Manasika Pathya - Apathya

Ayurveda has given a great importance to *Manas swaroopa*. *Manasika pathya* means maintaining a healthy state of mind. A person cannot

be completely healthy even though he is physically fit unless his mental health is maintained well. Ayurvedic Acharyas have formulated certain principles like *Acharya rasayana*, *Sadvritta*, *Sadachara* along with practice of meditation to prevent psychological disturbances and maintain *Indriyabhigraha* (sensory and motor perceptions and control) and *Svasyanigraha* (self control) restrain from *Chinta* (worrying), *Vichara* (thinking) *Krodha* (anger) *Soka* (grief) etc.^[34] Following these helps to lead a stress free life which is a major cause for all kinds of morbidities especially in hypothyroidism. As TSH is released in a pulsatile manner and exhibits a circardial rhythm, its highest levels occur at night, so proper sleep has also a great importance in management of hypothyroidism as improper sleep leads to disturbance in TSH regulation.^[35]

DISCUSSION

The fundamental treatment principle of Ayurveda is *Nidana Parivarjana*, avoiding the causative factors like improper *Ahara*, *Vihara* and *Manasika karanas*, which are the root causes for any disease to occur. The incidence of hypothyroidism may be due to iodine deficit dietary habits, intake of excess goitrogenic diet or diet less in selenium, inactivity of thyroid gland, toxins developed in the body by environmental pollution or auto immune mechanism. When understanding in Ayurvedic and modern perspective of managing hypothyroidism emphasis is given on *Nidana parivarjana* i.e. restraining from unhealthy food habits and lifestyles and maintaining a healthy dietary regimen (*Pathya ahara*) along with intake of proper amount of iodine in the food, avoiding goitrogenic food substances, incorporating in daily physical activities like exercise and *Yogas asanas* postulated in ancient Ayurvedic texts avoiding things that causes stress, maintaining proper sleep (*Vihara* and *Manasika pathya*) and practicing *Pranayama* which will help remove the thyrotoxins from the body and helps in improving the immune resistance which also helps in improving the autoimmune conditions of thyroid gland. Maintenance of proper blood circulation to thyroid gland in turn nourishes it with proper nutrient supply which controls the under activity or hyperactivity of thyroid gland.

CONCLUSION

Hypothyroidism is fast emerging lifestyle disorder which leads to metabolic disturbances in the body. Unhealthy dietary habits and lifestyle are the triggering factors of disease manifestation. Along with the intake of medication following principles of *Pathya - apathya* postulated in several ancient Ayurvedic texts leads to maintenance of healthy status of mind, body and soul and also helps in

leading a disease free life. Hence it is concluded that adopting strict lifestyle and healthy diet regimen may act as adjuvant in nullifying the adverse effects and also work synergistically with the medications to cure the disease and further prognosis of the disease.

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***Address for correspondence**

Dr P.Neelima

Medical Officer,
Government Ayurvedic Dispensary,
Nidumolu, Krishna District.
Ph: 8297802885
Email: drneelima.p@gmail.com

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