



## AN AYURVEDIC APPROACH IN THE MANAGEMENT OF HYPOTHYROIDISM-A CASE STUDY

Niveditha Somalapur<sup>1</sup>, Pooja Bhavi<sup>2</sup>

<sup>1</sup>Associate professor, <sup>2</sup>Final year PG Scholar, Department of prasuti tantra evumstreeroga, SJGAMC, Koppal, Karnataka, India.

Corresponding Author: [poojabhavi1403@gmail.com](mailto:poojabhavi1403@gmail.com)

<https://doi.org/10.46607/iamj5110092022>

(Published Online: September 2022)

### Open Access

© International Ayurvedic Medical Journal, India 2022

Article Received: 15/08/2022 - Peer Reviewed: 23/08/2022 - Accepted for Publication: 27/08/2022



### ABSTRACT

Thyroid disease is one of the most prevalent endocrine disorders worldwide. Hypothyroidism can result from a variety of abnormalities that lead to the insufficient synthesis of thyroid hormones. Thyroid dysfunction prevalence is rising at an alarming rate in the Indian population, more prevalent among females. In modern science, the treatment of hypothyroidism is done by Thyroxin hormone therapy. However, in recent times, hypothyroidism can be well managed with *ayurvedic* medication. *Ayurveda* emphasizes mainly stimulating the thyroid gland to release thyroxin hormone rather than hormone supplements. In the present study, the hypothyroid case has been treated successfully with *Kaklarakshak Yoga*. After 1 month of treatment, the patient shows a significant response in reduction of serum TSH level, reduced from 30.26mIU/L to 2.05 mIU/L. The present case study focuses on the effectiveness of *ayurvedic* medicines in primary hypothyroidism.

**Keywords:** Hypothyroidism, *Kaklarakshak yoga*.

### INTRODUCTION

Hypothyroidism may occur as a result of primary gland failure or insufficient thyroid gland stimulation by the hypothalamus or pituitary gland. Primary

gland failure can result from congenital abnormalities autoimmune destruction (Hashimoto disease), iodine deficiency, and infiltrative disease. Autoimmune

thyroid disease is the most common etiology of hypothyroidism in the United States. There are three types of hypothyroidism Primary, Secondary and Tertiary. Primary hypothyroidism is quite common, results from abnormalities of the thyroid gland. Approximately 95% of hypothyroidism cases are diagnosed as primary hypothyroidism<sup>1</sup>, secondary and tertiary hypothyroidism result from malfunctions of the pituitary and the hypothalamus, respectively, tertiary hypothyroidism is sometimes not distinguished from secondary hypothyroidism secondary and tertiary hypothyroidism are sometimes referred to as central hypothyroidism. The thyroid is an important part of the human endocrine system. Where thyroid hormones play a major role in the body's overall metabolic activity, growth, and development. The decreased levels of thyroid hormones lead to hypothyroidism. Early signs and symptoms include cold intolerance, weakness, fatigue, and constipation. Dry skin decreased sweating myxedema, puffiness of face with edematous eyelids, non-pitting tibial edema, pallor retarded nail growth, dry brittle hair, constipation, weight gain decreased libido and menstrual disturbances menorrhagia in common, oligomenorrhoea or amenorrhoea, etc. are found in long-standing cases. Complaints of muscle cramps, myalgia, fatigue depression, and loss of energy are common. Untreated hypothyroidism can contribute to hypertension, dyslipidemia, infertility, cognitive impairment, and neuromuscular dysfunction. It is a common disorder and the prevalence of overt hypothyroidism has been reported as 3.5%-4.2%<sup>2</sup>.

#### AYURVEDIC PERSPECTIVE ON HYPOTHYROIDISM.

There is no direct mention of the thyroid gland in *Ayurveda*, but a disease by the name *Galaganda*, characterized by neck swelling, is well known. The first description of neck swelling was mentioned in *Atharva Veda* by the name *Apachi*, *Charaka* mentioned the disease under 20 *sleshmavikaras*, *Sushruta* in *Shareera Sthana* has mentioned that of the seven layers of the skin, The sixth Layer *Rohini* is the seat of *Galaganda* in

*Nidana Sthana* he described *Galaganda* as two encapsulated small or big swellings in the anterior angle of the neck, which hang like Scrotum, whereas *Charaka* mentioned *Galaganda* as a solitary swelling<sup>3</sup>. The climatic conditions, water supply, dietary conditions, etc., are mentioned as the main etiological factors. *Sushruta* stated that the *himavatprabhavarivers* might give rise to the occurrence of *Galaganda*. *Bhela* described that *Sleepada* and *Galaganda* are more common in *prachyadesha* (eastern part) of the country and that persons consuming predominantly fish are liable to develop *Galaganda*. *Harita Samhitakar* described the role of *dushtambu* (contaminated water) and *krimi dosha* (infection) in the precipitation of *Galaganda*. *Kashyapa Samhita Kaara* added that any part of the country that is cold, damp, with densely grown long trees, water stagnation, and heavy rains may be prone to the development of *Galaganda*. From the above descriptions, it is tempting to associate *Galaganda* with goiter (abnormal swelling of the thyroid gland) where thyroid functions may or may not be compromised. But hypothyroidism is not just a localized disease. It has many symptoms related to many systems of the body. Thus, it is probably inaccurate to draw a parallel line between hypothyroidism and *Galaganda*.

#### CASE REPORT

A female patient of 33 years old, housewife came to OPD of SJGAMC Koppal, On 08<sup>th</sup> Aug 2019 with chief complaints of Irregular cycles, weakness, lethargy, puffiness of the face, and loss of hair, For 2 years.

**CLINICAL FINDINGS:** On interrogation she had Irregular cycles (1-2 days/3-4 months) Flow- 1 pad/day for 2 years. She had a non- consanguineous marriage with 14 yr of married life with P2L2 both (males) delivery uneventful, both alive and healthy. She usually prefers a vegetarian diet with decreased appetite, *mandaagni*, *madhyamakoshta*, *Prakritanidra*, regular bowel, and micturation habits. Her nature of work is hard manually standing and roaming and was stressed with the work schedule. Visit date: 08/08/2019

She attained menarche at the age of 13yr and had regular menstrual cycles lasting for 4-5days with an interval of 28-35 days, there was no pain, and no clots, during the menstrual cycle, for 2 years the patient is having Irregular cycles (1-2days/3-4months) Flow- 1pad/ day, no dysmenorrhoea, no clots, no other associated complaints. Coital history 2-3/ Weeks,

After taking proper history, the patient was advised to investigations of T3, T4, TSH, etc.

After seeing the report, the patient was diagnosed with hypothyroidism. the patient was first diagnosed here since her TSH was 30.26 mIU/L and T3 and T4 were within their normal limits. After diagnosis the patient herself was interested in *ayurvedic* treatment, she had no family history of similar conditions and no significant past history, she also had no history of hypertension, diabetes, Cardiac problem, or any other complicated diseases.

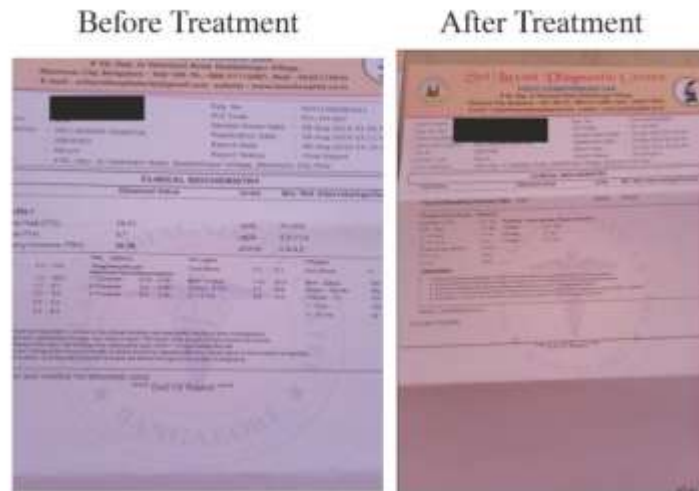
#### MATERIALS AND METHODS

The treatment was planned to see the state of *Rogabala* and *aturbala*. The treatment includes drugs having *amapachaka*, *Agnideepana*, *anulomana*, *medohara*, and *vatakaphanashaka* properties. *Anu*

*tailanasya* (*Pratimarshanasya*) and *Kaklarakshakavati* 2BD before food. The treatment was continued for 2 months. The patient was advised as per *ayurvedic* fundamental principles to avoid *apathyahara* and *vihara* like fast and junk food, cabbage, cauliflower, soyabean, excessive sleep, and other sedentary lifestyle, etc. she was advised to indulge in *pathyas* like a light diet, other green vegetables, sea food, old rice, barley, and aerobic exercises, etc.

#### OBSERVATION AND RESULTS

The patient was advised to repeat T3, T4, TSH after the end of 1 month of treatment, the TSH levels were found within the normal limits (2.05 mIU/L). The patient felt better and improved symptoms after 1month, and the interval of symptoms gradually reduces after 1<sup>st</sup> month and 2<sup>nd</sup> month (with regular cycles). And no adverse effects were found throughout the treatment period. TSH reports are mentioned below, gradually recurring of the symptoms decreased and after 3months the symptoms were not observed. The patient appeared normal clinically; the patient was fully satisfied with the *ayurvedic* treatment.



#### Planning of Treatment:

“*Vikaranamakusalonajihriyatkadachananahisarvav  
ikaranamnamatoastidhrivasthitih*”.

*Ayurveda* doesn't emphasize the exact nomenclature of the disease: rather it insists on the diagnosis of the constitutional status of the disease as mentioned in *Charaka*.

Based on Ayurvedic Principles, the following are the main treatments for hypothyroidism.

1. Genetical and hereditary defects come under *Adibala Pravritta Vyadhis*, so no treatment is suggested.
2. Iodine deficiency is the main common cause of hypothyroidism. *Hrasaheturvisheshacha*.
3. If there is functional loss of thyroid tissue or functional defects, thyroid stimulatory drugs are beneficial.

4. Auto immunity is another common cause, so immune modulatory drugs are recommended here.

*Chikitsais* planned based on '*Samprapti Vighatana*', whatever may be the aetiology of the disease; it results in the under-active condition of the thyroid gland and ultimately the slowing down of the body's metabolism. So, the treatment should aim to stimulate the thyroid gland.

Tab *Kaklarakshak* of Dhootapapeshwarais advised for the patient.

DRUG & LATIN NAME	FAMILY	RASA	GUNA	VEERYA	VIPAKA	PRABHAVA & KARMA <sup>4,5</sup>
<b>Kanchanara</b> ( <i>Bauhinia Variegata</i> )	Caesalpiniaceae	<i>Kashaya</i>	<i>Ruksha, Laghu</i>	<i>Sheeta</i>	<i>Katu</i>	<i>Kapha-Pittahara, used in Gandamalaroga and in Medoroga.</i>
<b>Ashwagandha</b> ( <i>Withania Somnifera</i> )	Solanaceae	<i>Katu Tikta Madhura</i>	<i>Snigdha, Laghu</i>	<i>Ushna</i>	<i>Madhura</i>	<i>Kapha-Vatahara, Vajeekarana, garbhashayashothahara yoni shoolahara.</i>
<b>Guduchi<sup>6</sup></b> ( <i>Tinosporacardifolia</i> )	Menispermaceae	<i>Tikta Kashaya</i>	<i>Guru Snigdha</i>	<i>Ushna</i>	<i>Madhura</i>	<i>Tridoshashamaka, vrushyarasayana.</i>
<b>Chitraka</b> ( <i>Plumbago zeylenica</i> )	Plumbaginaceae	<i>Katu</i>	<i>Laghu, Ruksha, Tikshna</i>	<i>Usna</i>	<i>Katu</i>	<i>Vata-Kaphahara, Dipana-Pacana, Grahi, teevrargarbhashaya Sankochana, garbhasravakara, brushya</i>
<b>Katuka</b> ( <i>Picrorrhizakurroa</i> )	Scrophulariaceae	<i>Tikta</i>	<i>Ruksha, Laghu</i>	<i>Sheeta</i>	<i>Katu</i>	<i>Kaphapittaharashothahara, stanyashodhana</i>
<b>Guggulu</b> ( <i>Commiphora wightii</i> )	Burseraceae	<i>Tikta Katu</i>	<i>Ruksha, Laghu, Tikshna</i>	<i>Ushna</i>	<i>Katu</i>	<i>Vata-kaphahara</i>

### MODE OF ACTION OF NASYA

According to almost all classical references, *nasa* is the gateway to the *shiras*, so the drug administered through the nose supposedly reaches the brain and eliminates the morbid *doshas* responsible for various diseases. In *Ashtangasangraha*, it is clearly mentioned that the drug administered through the nose reaches *shringataka*, which is *siramarma* that spreads in the *shiras* which is said to be the junction of routes from *netra*, *srotra*, *kantha*, and *nasa*, the

drug reaching *shringataka* dislodges the morbid *doshas* from the head or *jatruridwa* region. The irritating effect of administered drugs increases blood circulation of the brain and the accumulated morbid *doshas* are expelled out. The drug administered enters into the systemic circulation by diffusion and also direct pooling into the intracranial region by vascular path<sup>7</sup>. Diffusion-lipid soluble substances have a greater affinity for passive absorption through the cell walls of the nasal mucosa and pass the blood-brain barrier. Vascular path-vascular path transportation is feasible through the pooling of nasal blood into the

vena fascialis. This can be accelerated by *purvakarma*. It freely communicates with intracranial circulation. Such a pooling of blood from the nasal veins to the venous sinuses of the brain will occur more in lowered head position due to gravity.

#### **Effect on the neuroendocrine level.**

The peripheral olfactory nerves are chemoreceptors in nature, the olfactory nerve is phylogenetically closely related to the brain, and however, it is known that these nerves are connected with the limbic system of the brain including the hypothalamus is having control over endocrine secretions. It is considered that the stimulation of olfactory nerves causes stimulation in certain cells of the hypothalamus and amygdaloidal complex. There are adjacent nerves called terminal nerves which line the olfactory nerves. They are connected with the limbic system of the brain. The limbic system is related to the behavioral aspects of human beings and also has control over endocrine secretions. In *streeroganasya karma* is beneficial in triggering the hypothalamus and pituitary which in turn regularizes the HPO axis, from recent studies it is clear that nasal administration does a tremendous effect in stimulating GnRH factor, once GnRH is secreted in a pulsatile manner the ovulation and menstruation can be normalized in the absence of other organic pathologies hence *Nasya karma* may offer the best remedy in regularizing the cycles.

#### **Mode of Action of Kaklarakshak Yoga**

Hypothyroidism mainly occurs due to vitiation of *vata* and *kaphadoshas*. The vitiated *jatharagni* derange *doshas*, ultimately leading to the production of *Ama*, and lastly vitiates *Medadhatu*. This *Ama* does *srotorodha* in the body. Lethargy, fatigue, weight gain, weakness, and glandular enlargement, etc symptoms are mainly occurred due to accumulation of *kapha* and *meda dhatu*, *Srotorodha*, muscle pain loss of libido, amenorrhea, etc mainly seen due to vitiated *vatadosha* by *avarana*<sup>8</sup>. The primary ingredients of KAKLARAKSHAK YOGA are *Kanchanara*- *Kanchanara* is the best plant for reducing growth in the body and for strengthening the glandular systems. It has *Rukshalaghugunas*, *kashaya*

*rasa*, and *katuvipaka* but its *prabhavais Gandamalanashana* (effective in cervical lymphadenitis, thyroid, glandular enlargements, etc.) *Kanchanara* has a great ability to dry up the vitiated *kapha* and *meda* because of its potent astringent property. Its *grahi* property helps to remove excess fluid from swollen tissues. It helps to correct the thyroid imbalance by removing *kapha* in the body. It is considered a drug of choice for all kinds of *Granthivikara* and *galagandain ayurveda*. *Guggulu* is said to be the best *vata* and *medohara* drug in *ayurveda*, it has *rukshalaghu* and *sukshmagunas*, *ushnaveerya* and *katuvipaka*, and *lekhana* properties, so it is effective in the management of *kapha-medas* predominant disorders in hypothyroidism. So, it helps to reduce body weight. Overall *Kaklarakshakyoga* subsides the *kapha* and *medodushti* and helps to reduce the swelling in the thyroid gland, and also supports the *jatharagni*, it helps to reduce or break down the deep-seated *kaphadosha* and *Medodhatu* and clears the *srotorodha*, by this way it restores the functions of this gland and prevents weight gain and puffiness of the face, corrects the hoarseness of the voice, menstrual abnormalities caused due to hypothyroidism. It also helps to reduce joint pain, muscle weakness, stiffness, and pain associated with this disease. *Chitraka* possesses *katurasa*, *laghurukshateekshnaguna*, *ushnaveerya* and *katuvipaka*, *deepana*, *lekhana*, *vatanulomana*, and *vatakaphashamaka* properties. Hence it breaks *Kapha-medas* disorders and corrects *ama* clears *srotorodha* and subsides *avarana* of *vatadosha* in hypothyroidism, *Aswagandha* having *katutikta* and *madhurarasa* and *ushnaveerya* acts as *kaphavatahara*, and *shothahara* (reduces the swelling of the gland) and *andyoni shoolahara*. *Guduchi* having *tiktakashaya rasa*, *guru* and *Snigdaguna*, *ushnaveerya* acts as *tridoshashamaka*, acts as *rasayana*. *Katuki* having *tikta rasa*, *sheetaveerya* and *katuvipaka* act as *shotha hara* clear the *ama* stimulates the thyroid gland to produce thyroxine hormone. Thus, it treats hypothyroidism. *Anu taila-*

*tridoshanashaka, indryabalavardhaka. Charaka* indicated *anu tailain UrdhwajatrugataVyadhis,*

## DISCUSSION

*Kaklarakshak yoga* supports the proper function of the lymphatic system, balances *vata* and *kaphadosha*, and promotes the elimination of inflammatory toxins, *Kanchanara* is very useful in extra growth or tumors and helps in reducing the growth and balancing activity of the thyroxin production, increasing any deficient production and decreasing any excess, it also clears swellings in the neck and goiter, an active constituent of *bauhinia variegata* promotes the conversion of tyrosine to thyroxine potentiating the enzyme tyrosinase, *Shodhita guggulu*<sup>9</sup> provided 23.73% relief in T3, 26.72% relief in T4 and 45.86% relief in TSH and 10.47% relief in blood cholesterol which were statistically showing the highly significant result. Active ingredients of *chitraka, ashwagandha, guduchi, and katuki* acting as anti-inflammatory and stimulants to thyroid-pituitary axis, and promote thyroid tissue regeneration and bioregulation of thyroid activity. From the above study, it is seen that *ayurvedic* medications can help to normalize the TSH value, all these medicines have the evidence to cure hypothyroidism.

## CONCLUSION

From the above study, it can be concluded that the combined effect of *Kaklarakshak yoga* and *anu tailapratimarshanasya* is effective in the management of primary hypothyroidism without any evidence of side effects or complications. The combination medicines showed encouraging results in this case. The results need to be studied in large

samples in the early stage of the disease for a better assessment.

## REFERENCES

1. AACE Thyroid task force. American Association of clinical Endocrinologists' medical guidelines for clinical practice for the evaluation and treatment of hyperthyroidism and hypothyroidism. *Endocr Pract.*2002; 8:458-469.
2. Marwaha RK, Tandon N, Ganie MA, Kanwar R, Satry A, Garg MK, et al, Status of thyroid function in Indian adults; Two decades after universal salt iodization. *J Assoc Physicians India* 2012; 60:32-6.
3. Agnivesha, Charaka Samhita, Chaukambha publications, Delhi, edited by Vaidya Jadavji Trikamji acharya.2015, sutrasthana 18<sup>th</sup> chapter, shloka 21, Pg no.107
4. Acharya Priyavat Sharma, dravyagunavigyana, part-2 published by chaukambhabharti academy, reprint 2006/pg no.235, 359,441,761,763.
5. Sastry J.L.N. illustrated Dravyaguna Vijnana vol.2, second edition, Varanasi, Chaukhamba Sanskrit series, 2005:34,115,118-119,189,190,314,391.
6. Brahma Shankar mishra, editor 11<sup>th</sup> ed. Varanasi Chaukambha Sanskrit sansthana, 2004. Bhavamishra, Bhavaprakasha, Guduchyadivarga 103-105.
7. <https://ijapr.in/index.php/ijapr/article/view/1815/1320>
8. Pandit Hari Sadashiva shastri Paradakara Bhisagacharya Vagbhata, Ashtanga Hridaya with the commentaries Sarvanga Sundara of Arunadatta and Ayurveda Rasayana of Hemadri. Chaukhambha orientalia, Varanasi, 2011, Sutra Sthaana 1/34, Pg no.188.
9. Panda S Kar A guggulu (Commiphoramukul) induces triiodothyronine production: possible involvement of lipid peroxidation. *Life Sci.*65(12), PL137-PL141(1999).
10. Agnivesha, Charaka Samhita, Chaukambha publications, Delhi, edited by Vaidya Jadavji Trikamji acharya.2015, sutrasthana 5<sup>th</sup> chapter, shloka 63-70, Pg no.41-42.

**Source of Support: Nil**

**Conflict of Interest: None Declared**

How to cite this URL: NivedithaSomalapur& Pooja Bhavi: An Ayurvedic Approach in the Management of Hypothyroidism-A Case Study. *International Ayurvedic Medical Journal* {online} 2022 {cited September 2022} Available from: [http://www.iamj.in/posts/images/upload/2618\\_2623.pdf](http://www.iamj.in/posts/images/upload/2618_2623.pdf)