



## Case Report

## Ayurvedic Management of Hypothyroidism - A Case Report

Meghna<sup>1,\*</sup>, Lalit Nagar<sup>1</sup>, Ringzin Lamo<sup>1,2</sup>, Kamal Nayan Dwivedi<sup>1</sup><sup>1</sup>Department of Dravyaguna, Faculty of Ayurveda, Institute of Medical Sciences, Banaras Hindu University, Varanasi, 221005, Uttar Pradesh, India<sup>2</sup>Department of Agad Tantra, Faculty of Ayurveda, Institute of Medical Sciences, Banaras Hindu University, Varanasi, 221005, Uttar Pradesh, India

## ARTICLE INFO

## Article history:

Received 01.06.2023

Accepted 29.08.2023

Published 16.09.2023

## \* Corresponding author.

Meghna

[meghnajawali@gmail.com](mailto:meghnajawali@gmail.com)[https://doi.org/](https://doi.org/10.18579/jopcr/v22.2.23.19)

10.18579/jopcr/v22.2.23.19

## ABSTRACT

Hypothyroidism is the significant endocrine problem found in general public. It is characterized by insufficient production of thyroid hormones, leading to abnormal levels. This condition prompts the decrease in Basal metabolic rate of the body. Ayurveda places a significant part to preclude the basic reason and to treat it. In Ayurveda, it tends to be associated with *Kapha-vata dosha dushti*, *Rasavaha Strotasadushti*, *Medadushti* and *Agnimandya*. In present study, a 22 years old female patient suffering from *Sthaulya* (~Weight gain), *Duarbalya* (~Weakness), *Twak rukshata* (~Dry skin), *Kesh patana* (hair loss), puffiness around eyes, mood swings, impaired memory, emotional depression, drowsiness, headache, *Amalapitta* (~Hyperacidity) and lethargy from last three years. She had been taking allopathic medicine without experiencing any satisfactory relief in her symptoms. In the present study, group of Herbo-mineral preparation was prescribed to the patient for a period of 4 months. After four months patient experienced relief, and her allopathic medicine was completely stopped.

**Keywords:** Hypothyroidism; Agnimandya; Sthaulya

## INTRODUCTION

Hypothyroidism a state of deficient thyroid hormone action in peripheral tissues that depend on thyroid hormone for its normal cellular function<sup>1</sup>. Primary hypothyroidism refers to thyroid failure that results from disease of thyroid gland itself<sup>2</sup>. Central hypothyroidism is a term used for thyroid failure caused by hypothalamic or pituitary disorders that result in deficient central production of thyro-tropin-releasing hormone (TRH) and/or thyroid-stimulating hormone<sup>3,4</sup>. Peripheral hypothyroidism is a diverse group of disorders in which thyroid hormone secretion is normal or increased but thyroid hormone action in peripheral tissues is impaired. Overt hypothyroidism describes moderate to severe thyroid failure resulting in high serum TSH level with low serum concentration of total thyroxine. Sub clinical hypothyroidism refers to mild thyroid failure in which serum TSH levels are moderately increased, but total serum thyroxine T4 remain within the normal limit<sup>5</sup>.

Reported clinical features of hypothyroidism have changed over years. The “classic” features described in

1948 include weakness (99%), dry skin (97%), coarse skin (97%), lethargy (91%), slow speech (91%), puffy eyelids (90%), cold intolerance (89%), decreased sweating (89%), cold skin (83%), thick tongue (82%), facial oedema (79%), coarse hair (76%), pale skin (67%), impaired memory (66%), constipation (61%), weight gain (59%), hair loss (57%), lip-pallor (57%), dyspnoea (55%), oedema (55%), hoarseness (55%), anorexia (45%), nervousness (35%), menorrhagia (32%), palpitation (31%), impaired hearing (30%), precordial pain (25%)<sup>6</sup>.

Clinical features described in later literature (1997) include dry skin (76%), cold intolerance (64%), coarse skin (60%), puffy eyelids (60%), decreased sweating (54%), weight gain (54%), paraesthesia (52%), cold skin (50%), constipation (48%), slow movements (36%), hoarseness (34%), impaired learning (22%)<sup>7</sup>.

According to recent literature studies (2014), reported clinical symptoms of hypothyroidism include- fatigue (81%), dry skin (63%), shortness of breath (51%), mood liability (46%), constipation (39%), globus expansion (36%),

palpitations (35%), restlessness (33%), hair-loss (30%), dysphagia (29%), wheezing (27%) and vertigo (24%). Thyroid hormone has important action on organs and tissues throughout the body, due to which the sign and symptoms of hypothyroidism are multi systemic<sup>8</sup>.

After evaluating the clinical text in Ayurveda it reveals that Hypothyroidism is due to anomaly of *Jathragni* (~ *agni* that acts on the food in gastro-intestinal tract to digest it), *Bhutagni* (~act on the corresponding substrate based on *panchabhautika* composition to make them homologous to that of bodily constituents) and *Dhatwagni* (~metabolic factor located in dhatu/consist of seven types of *agni* responsible for transformation of one dhatu into another) with vitiation of *Kapha* and *Vata dosha* and *Medo dhatu dushti* (~deformity in adipose tissue and other lipids in body)<sup>9</sup>.

## PATIENT INFORMATION

A 22-years- old female patient, a B.A.M.S student is suffering from *sthaulya* (~weight gain/obesity), *duarbalya* (~weakness/debility), *twak rukshata* (~dryness of skin), *kesh patana* (~falling of hairs), gradual loss of hairs coupled with development of facial hairs, puffiness specially around eyes, mood swings and behavioural changes, impaired memory and difficulty in thinking, emotional depression, drowsiness, headache, *amalapitta* (~hyperacidity), *bhinna swara* (~Hoarseness of voice) and lethargy. These complaints have gradually progressed. She also has a history of constipation on and off. Patient was diagnosed with hypothyroidism 3 years ago and has been taking Allopathic treatment with no relief. She was taking Thyronorm 75 mcg daily. With all these complaints she came to our O.P.D for Ayurvedic treatment and to get rid of her daily pill.

The patient was non diabetic, normotensive with no history of allergy to any allergen, addiction, surgical intervention. There was no linked past history and no history of Pulmonary tuberculosis, Bronchial asthma, Epilepsy or any other serious illness. She had no family history of hypothyroidism.

## CLINICAL FINDINGS

Upon clinical examination of patient, the patient had a pulse rate of 68/min, blood pressure 124/76 mm of Hg, Axillary temperature 97.8°F, SpO<sub>2</sub> 98, Respiratory rate 16/min. Her weight was 68 kg and height were 5 feet. There were no signs of Pallor, icterus, cyanosis, clubbing, lymphadenopathy, discolouration, or pigmentation. Puffiness was present around eyes and on face. Her skin texture was rough and hairs were coarse. Coarse facial hairs were also present over the chin. Cardiovascular examination revealed no abnormality with normal S<sub>1</sub> and S<sub>2</sub> sound and no added murmur. Respiratory examination revealed bilaterally equal air entry with no abnormality. There were no signs and

symptoms of organomegaly in abdomen. Abdomen was soft and non-tender.

*Ashtasthana pariksha* (~eight folds examination of patient)- It reveals that her *Nadi* (~pulse rate) was 68/min and was *kapha-vataja* in nature, *Mala* (~stool/excreta) was normal and was without *Ama dosha* (~anything that exists in a state of incomplete transformation), *Mutra* (~urine) was *Prakrut* (~normal) in quantity and was without burning sensation, her *Jihwa* (~tongue) was *Aam yukta/Sama* (~coated). Her *Shabda* (~voice/speech) was hoarse and was not *Spashta* (~not Clear), her *Sparsha* (~tactile examination) was *Ruksha* (~dryness of skin) leading to *Khara sparsha* (~rough texture of skin/dryness of skin), her *Driga* (~eye and eyes sight) was normal, her *Akriti* (~body stature) was *Uttama* (~excellent).

*Dashvidha pariksha* (~Ten folds examination of patient)- On thorough clinical examination it was found that patient was of *kapha-vattajaprakruti* (~physical constitution), was of *Madhyama* (~moderate) (i) *Sara* (~eight state of excellence of tissue elements) and *Madhyama Samhanana* (~compactness of tissues or organs). Her *Ahara shakti* (~power of intake and digestion of food) was *Madhyama*, *Saatmya* (~homologation/habitation) and *Pramana* (~measurement of the body constituents) were *Uttam* (~excellent). She had *Madhyama Vyayama shakti* (~power of performing exercise). *Vikruti* (~morbidity) was of *Kapha-vata dosha* and *Rasa* (primary product of digested food) and *medovaha strotas dushti* (~deformity in adipose tissue and other lipids in body). She was of *Uttam satva* (~psychic condition). Her *Vaya pariksha* (determination of age) revealed her to be in *Vardhamana dhatu* phase of *Balyavastha* (~here the tissues of body are in state of growth and maturation).

The patient's thyroid profile was not normal, with a TSH level of 6.81 uIU/ml even after taking Thyroxine hormone replacement of 75 mcg daily empty stomach. Diagnosis was made by her thyroid profile and symptoms suggesting of hypothyroidism.

## MATERIAL AND METHODS

After complete assessment of *Dosha-dhatu* involved in the pathology of disease, treatment with *Kanchanar guggulu*<sup>10,11</sup> with *Varunadi kashaya*<sup>12</sup>, *Mrituanjya rasa* with *Hamsapadiadi kashaya* and *Madhusnuhi rasayana*<sup>13</sup> was advised for first one month (Table 1). Subsequently, the patient was carefully observed for one month. With the decrease in her TSH level and improvement in her symptoms, her allopathic medicine was reduced to 50 mcg on first follow up. The treatment plan was then revised and *Arogyavardhini vati*<sup>14</sup>, *Chandraprabha vati*<sup>15</sup>, *Shudha Gandhaka*, *Kanchanar guggulu* and *Madhusnuhi rasayana* was advised for next two months (Table 1).

After three months, her allopathic medicine Thyronorm was reduced to 25 mcg, and the revised treatment plant consisting of *Arogyavardhini vati* and *Kanchanar guggulu*

**Table 1: Therapeutic interventions including dose administered and duration of treatment**

S/No.	Time	Dravya (Drug)	Dose	Duration	Anupana (~Vehicle to take medicine)
1	(23/03/2022-23/04/2022)	<i>Madhusnuhi Rasayana</i>	12gm	Bd	Luke warm water
2	(23/03/2022-23/04/2022)	<i>Kanchanar guggulu</i>	500mg	Bd	<i>Varunadi kashaya</i> -20ml with equal quantity of water
3	(23/03/2022-23/04/2022)	<i>Mrituanjaya rasa</i>	250mg	Bd	<i>Hamsapadiadi kashaya</i> -20ml with equal quantity of water
4	(23/04/2022-23/06/2022)	<i>Arogyavardhini vati</i>	500mg	Bd	Luke warm water
5	(23/04/2022-23/06/2022)	<i>Chandraprabha vati</i>	500mg	Bd	Luke warm water
6	(23/04/2022-23/06/2022)	<i>Shudha Gandhaka</i>	500mg	Bd	<i>Hamsapadiadi kashaya</i> -20ml with equal quantity of water
7	(23/04/2022-23/06/2022)	<i>Kanchanar guggulu</i>	500mg	Bd	<i>Varunadi kashaya</i> -20ml with equal quantity of water
8	(23/04/2022-23/06/2022)	<i>Madhusnuhi Rasayana</i>	12gm	Od	Luke warm water
9	(23/06/2022-23/07/2022)	<i>Arogyavardhini vati</i>	500mg	Bd	Luke warm water
10	(23/06/2022-23/07/2022)	<i>Kanchanar guggulu</i>	500mg	Bd	<i>Varunadi kashaya</i> - 20ml with equal quantity of water

was given for one more month (Table 1). On her fourth follow up, her TSH level was within normal limit, and her symptoms had completely disappeared. As a result, both her allopathic medicine as well as ayurvedic medicine was fully stopped. And patient was advised to follow *pathya ahara vihara* (~diet and lifestyle having beneficial effect over the body and mind) along with *yogasana* (~body posture that is performed to benefit body and mind) for her overall well-being and maintenance of general health.

## RESULTS

There was significant reduction in severity of all symptoms in subsequent follow up (Table 2).

The patient was advised to undergo investigations of T3, T4 and TSH after each month of treatment. Before starting the treatment her T3, T4 and TSH values were 90.0 ng/dl, 4.10 ug/dl and 6.81 uIU/ml, respectively. At first follow up her T3, T4 and TSH values were 76.00 ng/dl, 7.93 ug/dl and 0.968 uIU/ml, respectively, while at second follow up her T3, T4 and TSH values were 90.0 ng/dl, 11.96 ug/dl and 0.555 uIU/ml, respectively. At end of treatment her T3, T4 and TSH values were 94.0 ng/dl, 6.64 ug/dl and 0.073 uIU/ml, respectively.

At the end of four months, most off her symptoms disappeared. She lost 5 kg in during whole treatment schedule. Her facial hairs remained same, but her skin texture had improved. Puffiness of her face had healed after treatment, and she began to feel more energetic after first month of treatment.

No side effects or toxic effects were noted throughout the treatment schedule. Her TSH level was maintained within the normal range with ayurvedic medicines and her allopathic medicine was gradually decreased. After 4 months, the symptoms were no longer observed, and the patient appeared clinically normal. She was fully satisfied with Ayurvedic treatment.

## DISCUSSION

Hypothyroidism occurs due to disbalance of *Kapha* and *Vata dosha* coupled with *Agnimandhya* (~depressed/weak state of Agni) which leads to production of *Ama* (anything that exist in a state of incomplete transformation leading to production of toxins at any stage of metabolism). *Ama* is produced due to *Jathragnimandhya* (~Decreased digestive power) which further causes vitiation of *Bhutagni* (~decrease digestive power at the level of micro and microcirculation) leading to derangement of *Dhatwagni* causing *Rasa* and *Meda dhatu dushti*. Approach is made not only to remove *Ama* at the level of thyroid gland but also to overcome the blockage caused by *Ama* at *Strotas* level in peripheral tissues. *Mrituanjaya rasa* possess the property of *Deepana-pachana* (~digestion and metabolism enhancing) hence it helps in *Sanshaman* (~pacifying therapy) of *Ama* and improvement of *Jatharagni*. *Arogyavardhini vati* and *Shuddha Gandhaka* helps in digestion of *Ama* and improves *Dhatwagni* to prevent *Rasa* and *Medo dhatu dushti*. *Kanchanar guggulu* was given to strengthen the endocrine gland and to reduce excessive growth of the body. It is well-known for

Table 2: Month wise symptomatic assessment

S/no	Clinical presentation	Baseline	After 1 month	After 2 months	After 3 months	After 4 months
1	<i>Sthaulya</i> (~Weight gain)	+++	+++	++	-	-
2	<i>Duarbalya</i> (~Weakness)	++	-	-	-	-
3	<i>Twak rukshata</i> (~Dry skin)	+++	+	-	-	-
4	<i>Kesh patana</i> (~hair loss)	++	++	+	-	-
5	Facial hairs	+	+	+	+	+
6	Puffiness around eyes	++	+	+	-	-
7	Mood swings, behavioural changes and emotional depression	++	++	+	-	-
8	Drowsiness	+	-	-	-	-
9	Headache	++	-	-	-	-
10	<i>Amalapitta</i> (~Hyperacidity)	+	+	-	-	-

its *Galganda* (~Goitre) and *Gandmalanashana* (~Glandular enlargement, Lymphadenitis) property. *Hamsapadiadi Kashaya* helps to regulate thyroid gland and prevent thyroid enlargement. *Varunadi kashaya* is *Kapha-medhaghana* and helps in improving *Agni* (all the factor responsible for digestion and metabolism). It prevents weight gain and puffiness of face and hand. *Madhusnuhi* and *Chandraprabha vati* were administered as *Rasayana* (~medicine use to improve health and longevity) drugs to strengthen normal functioning of the body. *Rasayana* drugs helps in increasing *Vyadhikshamatvam* (~resisting power of the body/Immunity to fight diseases) of the body.

## CONCLUSION

This case report contributes to enhancing the effectiveness of oral Ayurvedic treatment for Hypothyroidism without any unfavourable effects. No signs of toxic effects and reversal of symptoms were observed during the follow up. Hence, there is need to conduct this study on larger sample size to find its effectiveness in larger population. Patient-reported complete disappearance of symptoms. Before starting the treatment, she was taking allopathic medicines daily. However, after receiving ayurvedic treatment, she no longer required allopathic medicines as all her vital parameters were within the normal range. Furthermore, after the discontinuing Ayurvedic treatment, the patient did not require any medicine and no unfavourable outcomes or toxic effects were noted.

## Declaration of patient consent

Authors certify that they have obtained patient consent form, where the patient has given her consent for reporting the case.

## Financial support and sponsorship

Nil.

## Conflict of interest

Nil.

## REFERENCES

- and MTM. Medical Management of thyroid Disease. In: S CD, Sipos JA, editors. Hypothyroidism. Boca Raton, FL, USA. CRC Press, Taylor and Francis group. 2019;p. 129–158.
- Chaker L, Bianco AC, Jonklass J, Peeters RP. Hypothyroidism. *The Lancet*. 2017;390(10101):1550–1562. Available from: [https://doi.org/10.1016/S0140-6736\(17\)30703-1](https://doi.org/10.1016/S0140-6736(17)30703-1).
- Samuels MH, Ridgway EC. Central Hypothyroidism. *Endocrinology and Metabolism Clinics of North America*. 1992;21(4):903–919. Available from: [https://doi.org/10.1016/S0889-8529\(18\)30194-4](https://doi.org/10.1016/S0889-8529(18)30194-4).
- Grunenwald S, Caron P. Central hypothyroidism in adults: better understanding for better care. *Pituitary*. 2015;18:169–175. Available from: <https://doi.org/10.1007/s11102-014-0559-8>.
- Peeters RP. Subclinical Hypothyroidism. *New England Journal of Medicine*. 2017;376:2556–2565. Available from: <https://doi.org/10.1056/NEJMc1611144>.
- Means JH. Relative frequency of the several symptoms and signs of myxedema. In: The Thyroid and its diseases. Philadelphia, PA, USA. JB Lippincott and Company. 1948;p. 232–234.
- Zulewski H, Müller B, Exer P, Miserez AR, Staub JJ. Estimation of Tissue Hypothyroidism by a New Clinical Score: Evaluation of Patients with Various Grades of Hypothyroidism and Controls. *Journal of Clinical Endocrinology & Metabolism*. 1997;82(3):771–776. Available from: <https://doi.org/10.1210/jcem.82.3.3810>.
- Carle A, Pedersen IB, Knudsen N, Perrild H, Ovesen L, Laurberg P. Hypothyroid symptoms and the likelihood of the overt thyroid failure: a population-based case-control study. *European Journal of Endocrinology*. 2014;171(5):593–602. Available from: <https://doi.org/10.1530/EJE-14-0481>.
- Ranajan M, Rajkala R, Anup BT. Review on Ayurvedic Management of Hypothyroidism with Critical Analysis. *International Journal of Ayurveda and Pharma Research*. 2015;3(9):83–88. Available from: [https://www.researchgate.net/publication/282660214\\_REVIEW\\_ON\\_AYURVEDIC\\_MANAGEMENT\\_OF\\_HYPOTHYROIDISM\\_WITH\\_CRITICAL\\_ANALYSIS](https://www.researchgate.net/publication/282660214_REVIEW_ON_AYURVEDIC_MANAGEMENT_OF_HYPOTHYROIDISM_WITH_CRITICAL_ANALYSIS).
- Das D, Sahu D, Mandal TK, Debnath SK, Barik L, Ekka R, et al. Ayurvedic approach to management of hypothyroidism-A case study”.

- International Journal of Development Research*. 2021;11(1):43645–43648. Available from: <https://www.journalijdr.com/sites/default/files/issue-pdf/20837.pdf>.
11. Sastry JLN. Illustrated Dravyaguna Vijnana;vol. II. 2nd ed. Varanasi, India. Chaukhamba Sanskrit series. 2005.
  12. Jagmeet K, Milan C. kanchnar guggulu and varunadi kashaya in hypothyroidism-a case study. *International Journal of Ayurveda and Pharma Research*. 2014;2(2):58–60. Available from: <https://ijapr.in/index.php/ijapr/article/view/274/259>.
  13. Vidyath R. Sahasrayogam: Text with English Translation, Leha prakarana. 2nd ed. Varanasi, India. Chowkhamba Sanskrit Series Office. 2006.
  14. Pal S, Ramamurthy A, Mahajon B. Arogyavardhini Vati: A theoretical analysis. *Journal of Scientific and Innovative Research*. 2016;5(6):225–227. Available from: [http://www.jsirjournal.com/Vol5\\_Issue6\\_05.pdf](http://www.jsirjournal.com/Vol5_Issue6_05.pdf).
  15. Sinha MH, Mehtab T, Asha UH, Sikder MM, Akter K, Mahub MR, et al. Effect of Chandraprabha Batika on Thyroid Hormone Profile in Male Sprague-Dawley Rats. *Biology and Medicine*. 2019;11(3):1–5. Available from: <https://www.walshmedicalmedia.com/open-access/effect-of-chandraprabha-batika-on-thyroid-hormone-profile-in-male-spraguedawley-rats.pdf>.