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**CASE REPORT** March 2024

# Management of Hypothyroidism with Ayurveda -A Case Study

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## ABSTRACT

Thyroid problems are the most common endocrine disorders seen worldwide. Thyroid gland secretes two hormones, Thyroxine (T4) and Triiodothyronine (T3). TSH plays a major role in controlling the thyroid axis and serves as the most useful physiological marker of Thyroid gland function. Sedentary lifestyle and unhealthy food habits may be considered as a primary reason behind increasing Endocrinological disorders including that of Thyroid gland. Increasing levels of stress and anxiety is also contributing to thyroid disorders as the gland is highly sensitive to stimuli. Many of the Kaphaja Nanatmaja Vikaras are seen as the clinical features of Hypothyroidism viz. Gurugatrata (feeling of heaviness), Alashya (lethargy), Tandra (drowsiness), Atisthoulya (obesity/weight gain), Atinidra (excessive sleep) etc. Hypothyroidism is a clinico-pathological condition affecting multiple systems and require multimodal treatment. The treatment protocol was adopted to counteract the pathophysiology by Shodhana and Shamana Chikitsa. Patient was cured completely with no reoccurrence of symptoms even after 6 months. During subsequent treatments and routine follow-ups, laboratory investigations were done. A case of hypothyroidism was successfully treated with multimodal Ayurvedic medicine, resulting in a rapid and significant recovery.

Key words: Hypothyroidism, Ayurveda, Agnimandya, Medo-Dushti, Virechana, Case report.

#### **INTRODUCTION**

Thyroid problems are the most common endocrine disorders seen worldwide. Thyroid gland secretes two hormones, Thyroxine (T4) and Triiodothyronine (T3). These hormones are formed within the follicular cells of the gland, which are released into the systemic circulation in response to Thyroid stimulating hormone (TSH) secreted from the thyrotropic cells of Anterior

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Pituitary gland. TSH plays a major role in controlling the thyroid axis and serves as the most useful physiological marker of Thyroid gland function. Sedentary lifestyle and unhealthy food habits may be considered as a primary reason behind increasing Endocrinological disorders including that of Thyroid gland. Increasing levels of stress and anxiety is also contributing to thyroid disorders as the gland is highly sensitive to stimuli. Hypothyroidism is divided into Primary and Secondary types depending on whether the condition arises from abnormality in the Thyroid gland itself or as a result of Pituitary or Hypothalamic malfunction.

Many of the Kaphaja Nanatmaja Vikaras are seen as the clinical features of Hypothyroidism viz. Gurugatrata (feeling of heaviness), Alashya (lethargy), Tandra (drowsiness), Atisthoulya (obesity/weight gain), Atinidra (excessive sleep) etc. Medodhatu is being nourished and maintained by Medodhatwagni. If there is Medodhatwagnimandya, excess deposition of Medo Dhatu (Saama Meda Dhatu) which will

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contribute to symptoms of Hypothyroidism. As *Charaka Acharya* has mentioned the *Medavaha Srota Dushti Laksanas*<sup>[1]</sup> which are also the *Purvarupa* of *Prameha*: *Shayyasana Sapnasukhe Rati* (fatigue), *Sithilangata* (lethargy), *Ghanangata* (weight gain) etc. These features also simulate the symptoms of Hypothyroidism. Hypothyroidism is a clinicopathological condition affecting multiple systems. There are many hypotheses formulated regarding the understanding of Hypothyroidism in Ayurveda.

#### **CASE PRESENTATION**

A female patient aged 50 years came to Ayushakti Ayurveda Pvt Ltd, Navi Mumbai branch with the following complaints:

Increased tiredness, sudden weight gain, puffiness of face, constipation and lack of concentration.

#### **Clinical findings**

Local examination of the Thyroid gland

#### **On inspection**

No localised swelling

#### **On palpation**

- a) Size normal
- b) Shape normal
- c) Tenderness absent
- d) Temperature not raised

#### Astavidha Pariksha

- a) Nadi Vata-Kapha
- b) Mutra Pita
- c) Mala Malavastambha
- d) Jiva Saama
- e) Shabda Prakrit
- f) Sparsha Prakrit
- g) Drik Prakrit
- h) Aakriti Sthula

#### Laboratory evaluation

Thyroid profile

- T3 154.1 ng/dL
- T4 8.66 μ/dL

### TSH - 10.60 μIU/ml

#### Treatment protocol

As per etiology and clinical presentation patient was diagnosed as *Rasavaha Strotas Dushti* and *Agnimandya*. On basis of this diagnosis, line of treatment was planned. At first patient was advised to take *Shodhana Chikitsa* considering the *Bahudosha* (patient having excessive accumulation of *Dosha*) condition.

#### Table 1: Shodhana Chikitsa in detail

SN	Purva Karma	Pradhan Karma	Assessment
1.	Snehana (therapeutic oleation) Panchatikta ghee - Internally Swedana (Sudation therapy) Sarvanga Bashpa Sweda with dashamool decoction	<i>Virechana</i> (Therapeutic purgation) with <i>Virechana</i> tablet	14 Vegas and 2 Upavegas
2.	Sarvanga Snehana (therapeutic oleation) Swedana (Sudation therapy) Sarvanga Bashpa Sweda with Dashamool decoction	Anuvasana Basti with Sahachar Taila 60 ml Niruha Basti with Dashamool decoction 120ml	

#### Shodhana Chikitsa

#### Purva Karma (Preparatory procedures)

As a prerequisite of Virechana process, Snehana (internal oleation) therapy is essential. In this case Snehana was decided with Panchatikta Ghrita. It contains ingredients like Guduchi (Tinospora cordifolia), Nimba Mool Twak (Azadirachta indica root bark), Vasa (Adhatoda vasica), Patol (Trichosanthes diocia) and Kantakari (Solanum xanthocarpum). All ingredients being Tikta (bitter) in nature show better penetration of ghee in skin tissues. Test dose was performed with 30 ml Panchatikta ghee on day 1. On day 2, 3 and 4 it was increased by 50ml, 80ml, 100ml respectively. On day 5<sup>th</sup> patient developed Snehasiddhi Lakshana like Vata Anulomana (passage of flatus), Mala Snigdhata (unctuous stool), Sneha Dvesha (aversion for oleation), Snigdhaangata (smoothness of

body), *Glani* (fatigue), etc. were observed. After signs of complete oleation *Sarvanga Abhyanga* (external oleation) with *Bala Taila* and *Sarvanga Bashpa Swedana* (External sudation) with *Dashamool* decoction for 2 days were administered. Patient was advised to have diet that would facilitate *Virechana Karma* like *Mamsa Rasa* (soup prepared with meat), *Amla Phala Rasa* (Sour fruit juices), *Chincha Saar* (Soup prepared from tamarind), etc.

#### Pradhana Karma (Main therapeutic procedures)

On day 8, Sarvanga Abhyanaga (Therapeutic massage) and Swedana was done followed by Special Virechana tablet intake and Virechana tablet containing ingredients like Haritaki, Katuka, Bahava, Sonamukhi, Trivrit, Snuhikshir, Shuddha Jaipal. Special Virechana tablet contains ingredients namely Trivrut, Shunthi, Tankana, Pipplai, Marich and Jaipala. These ingredients predominantly have Deepana, Pachana, Rechana and Vata-Kapha Hara action, thus helpful in reducing in condition of hypothyroidism. Patient was instructed to take sip of Ushna Jala (lukewarm water) frequently and wait for Vega (motion). Patient was instructed not to strain during defecation. First motion was observed after 45 minutes of intake of Aushadha. Total 14 Vegas were observed.

#### Paschat Karma (Post therapy procedures)

Patient was instructed to follow *Samsarjan Krama* (post therapy dietetic regimen for revival) after *Virechana* for 5 days. After 5 days patient was advised to start food consumption with light to digest foods like amaranthus, *moong dal* and rice, *Draksha* (dried grapes), etc. No consumption of red meat, alcohol, junk food, stale food was advised.

#### Basti Chikitsa

15 days post *Virechana, Yoga Basti* was administered for 8 days. 5 *Anuvasana Basti* with *Sahachar Taila* and 3 *Niruha Basti* with *Dashamool* decoction were given. The concept of thyroid-gut connection gives an idea of how basti affects thyroid functions. A significant 20% of thyroid function is dependent on a sufficient supply of healthy gut bacteria to convert T4 into T3. When diets are poor and digestion fails, dysbiosis, or an overabundance of bad bacteria, prevents the production of active thyroid hormone.<sup>[2]</sup> *Basti* combats this by its action i.e., due to its *Virya*, *Basti* spreads in the entire body. The enteric nervous system, or second brain, works in conjunction with the central nervous system. Thus, *Basti* may act on ENS receptors to stimulate the CNS, which then stimulates the HPT axis, resulting in normal thyroid hormone secretion.<sup>[3]</sup>

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#### Shamana Chikitsa

After 15 days of *Shodhana Karma* patient was administered *Shaman Chikitsa* (Palliative treatment) for further management.

#### Table 2: Shamana Chikitsa in detail

SN	Name of medicine	Dose	Duration	Before/After food	Anupana
1.	Tablet Amrutarasa	2 tablets BD	2 months	After food	Warm water
2.	Tablet Granthihar	2 tablets BD	2 months	After food	Warm water
3.	Tablet Metaboost	2 tablets BD	2 months	After food	Warm water
4.	Tablet Sumedha	2 tablets BD	2 months	After food	Warm water

#### BD: Twice a day

#### **Tablet Sumedha**

It contains ingredients namely Shankhapushpi (Evolvulus alsinoides) Ghan, Brahmi (Herpestismonniera) Ghan, Kushmand (Cucurbita pepo) fruit Ghan, Mundi (Sapheranthus indicus) Ghan, Jhotismati Tail (Celastrus paniculatus) seed oil, Jatamansi (Nardostachys jatamansi) rhizome Ghan, Vacha (Acorus calamus) rhizome, Shatavari (Asparagus racemosus) root Ghana. These ingredients have Medhya (nootropic action), Balya, Smrutikara action. The brain is a major target organ for thyroid hormones, and adult-onset hypothyroidism can have significant

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effects on neuropsychiatric function.<sup>[4]</sup> *Brahmi* possess memory enhancing property along with its anxiolytic activity.<sup>[5]</sup> Studies prove that *Kushmandadi Ghrita* show significant result in the management *Chittodvega* (anxiety disorders). The action has been attributed to the *Medhya Prabhava* as described in Ayurveda. Similar studies done on *Shankhapushpi, Mundi, Jhotismati, Vacha* prove their efficacy in treating anxiety and memory disorders.

#### **Tablet Amrutarasa**

It contains ingredients namely Amalaka (Emblica officinalis), Tankan (Sodi bioboras), Abhrak Bhasma (Mica), Shunthi (Zinziber officinale) rhizome, Marich (Piper nigrum), Pippali (Piper longum), Tamra Bhasma (Cuprum), Dalchini (Cinnamomum zeylenicum), Tejapatra (Cinnamomum tamala), Ela (Elettaria cardamomum), Nagakeshar (Mesua ferrea), Shankh Bhasma (Turbinella rappa), Bilva (Aegle marmelos), Karchur (Curcuma zedoria), Yashtimadhu (Glycerrhiza glabra), Triphala, Bhavana Maka Swarasa. These ingredients show Deepana, Pachana, Vata-Kaphahara action. Thus, show significant action on symptoms like sudden weight gain, constipation, tiredness etc.

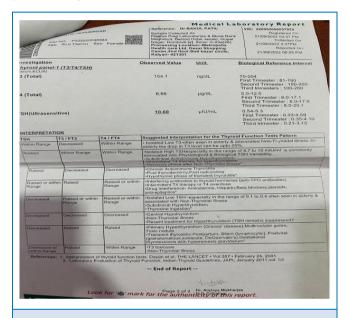
#### **Tablet Metaboost**

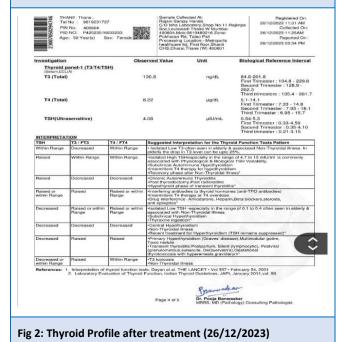
It contains ingredients namely Pushkarmoola (Inula Shuddha Guggulu (Balsamodendron racemosa), mukul), Arjuna (Terminalia arjuna), Chitraka (Plumbago zeylanica), Amlavetasa (Garcinia pendenculata), Yavani (Trachyspermum ammi), Karchura (Curcuma zedoria), Jaharmohra Pishti (Serpentine stone), Haritaki (Terminalia chebula), Chavya chaba), Kutaj (Holarrhena (Piper antidysentrica), Moti Pishti, Abhrak Bhasma (Mica), Pippali (Piper longum), Shunthi (Zingiber officinale), Kankola (Piper cubeba), Vacha (Acorus calamus), Saindhav, Hingu (Ferula narthex), Marich (Piper nigrum), Sanchala, Yavakshara, Bid-Lavana. These ingredients act on overall metabolism of body and help to regulate the digestion and excretion process.

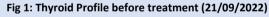
#### RESULT

Follow up was taken after every 2 months to check any recurrence of symptoms. First follow up was taken on

21/01/2023 where patient showed relief in symptoms like tiredness, lack of concentration and constipation. Second follow-up was taken on 25/03/2023 where patient was relieved from all the symptoms and experienced reduction in weight by 5 kg. Third follow-up was taken on 28/05/2023. Patient experienced no symptoms and had a healthy daily routine. Medicines were continued for next three months. After 3 months Thyroid profile was repeated. The report showed significant reduction in TSH levels (10.60 to 4.08  $\mu$ IU/mI). Fig.1 and 2.







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Hypothyroidism is a pathological condition of thyroid gland with deficiency of thyroid gland hormones. On the basis of Ayurvedic fundamentals it becomes evident that *Kapha* associated with *Pitta Dushti* and vitiation of *Vata* result in vitiation of *Agni*.<sup>[6]</sup> All these factors lead to *Annavaha* and *Rasavaha Srotodushti* predominantly. As there is no direct correlation of hypothyroidism in Ayurvedic classics, based on the *Lakshanas* it can be considered under the *Bahudoshavastha*.

Samshodhana is indicated in Bahudoshavastha (i.e., when Doshas are aggravated). Some diseases like Sthoulya, Tandra excess Kapha and Pitta Dosha, Santarpana Janya Vyadhi are included in Bahudoshavastha Lakshanas.<sup>[7]</sup> As patient is suffering from digestive disturbances, constipation, Mandagni etc. which indicates the involvement of Pittasthana. Virechana is the best treatment for Pitta associated with Kapha or Vata, and eliminates Pitta from Pittasthana and Kaphasthana.<sup>[8]</sup> Production of Ama is the result of Avarana of Pittasthana by Kledakakapha. thus hampering the digestive activity of the Pachaka Pitta. Snehapana is done by Panchatikta Gritha as it is used in the preparatory procedure of Panchakarma and Jatrurdhavagata Vyadhis. And also, it acts on Tridosha and bring the Dosha from Shakha to Kostha.<sup>[9]</sup>

#### Mode of action of Virechana Karma

*Virechana* drug possessing properties like *Ushna, Teekshna, Sukshma, Vyavayi*, and *Vikasi* reaches the *Hridaya* by virtue of its *Veerya* and then following the *Dhamani*, it pervades the whole body through large and small *Srotas* and removes the *Doshas* out of the body. *Virechana* drugs carry out the therapeutic purgation due to their *Prabhava* (potency). As these drugs are having *Jala* and *Prithvi Mahabhuta* dominancy, they have natural tendency to go downward and thus they can help in induction of purgation.<sup>[10]</sup>

Constipation, a common symptom encountered in cases of hypothyroidism, is believed to impair hormonal clearance and causes elevation in estrogen,

which in turn increases the thyroid-binding globulin levels and decreases the amount of free thyroid hormone available to the body.<sup>[11]</sup> Hence administration of *Virechana* and *Basti* help in alleviating this symptom seen in most hypothyroidism cases.

#### Basti

*Basti* was administered in patient for seven days. *Anuvasana* and *Niruha Basti* were given alternately with *Sahachar Taila* and *Dashmoola* decoction respectively.

*Basti* acts at enteric nervous system and influences cellular level. Stimulates HPT axis by virtue of thyroid gut connection. As per Research, *Lekhana Basti* is effective in the management of hypothyroidism. It does *Shaman* of *Vata* which is *Avrita* by *Kapha Dosha*.<sup>[12]</sup>

#### **CONCLUSION**

The study concluded that combining Ayurvedic medicine with proper *Panchakarma* procedure has a beneficial effect on hypothyroidism. Thus, helpful in reduction of sign and symptoms of hypothyroidism. At the end of therapy, there was improvement in clinical symptoms and no adverse effects were observed.

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