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CASE STUDY

Management of Hypothyroidism through Ayurveda: Single Case Study

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ABSTRACT

One in ten persons in India suffer from hypothyroidism, one of the most widespread thyroid conditions. Despite the fact that hypothyroidism's diagnosis and treatment are frequently regarded as being straight forward, many persons with this ailment receive inadequate care. The current problem was chosen for research and Ayurveda principles were used to treat it due to the disease's extensive range and high incidence in society. Based on the patient's symptoms and signs, a treatment plan was designed and assigned. *Shaman* and *Shodhan* are two main treatment protocol of Ayurveda which can alleviate the disease. Present scenario is the single case study in which *Shaman* therapy was adopted due to patient's busy schedule. *Paachan* and *Deepan* were given to the patient according to her *Prakriti* following the *Shaman* drugs. The patient's biochemical and clinical profiles indicate that the treatment regimen was effective. Patients with hypothyroidism ought to be given the option to forego lifetime hormone therapy. This can be accomplished by thoroughly assessing patient's response to the medicines used here and then reproducing those results in a much larger cohort.

Key Words Hypothyroidism, *Ayurveda, Mandagni, Varunadi Kashay*

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INTRODUCTION

India has a high prevalence of thyroid diseases, and the nation actually lacks suitable treatment options for hypothyroidism. Hypothyroidism is a condition caused by a lack of thyroid hormone or body tissue resistance to thyroid hormone in relation to metabolic demand. Each and every tissue in the body needs thyroid hormone to function normally. Therefore, its lack shows up as multi - system involvement. In India, there are thought to be 42 million persons with thyroid diseases, the majority of whom have hypothyroidism, which has a prevalence of 5.4%[1]. The current medical system is still looking into ways to treat hypothyroidism better and more successfully. TSH and T_4 levels may be returned to normal with synthetic thyroid hormone derivatives, but the patient will remain drug dependent for the rest of their lives due to the increased dosage and ongoing medication. It

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is linked to the failure to alleviate clinical symptoms even years after treatment. Additionally, excessive thyroid hormone replacement raises the risk of life-threatening long-term metabolic health consequences e.g., accelerated osteoporosis [2] . The thyroid gland's principal job is to act as a spark plug for the preservation of oxidative metabolism in the majority of tissues. According to Ayurveda, this is considered to be *Agni's* function (system related to metabolism). Hormone replacement with medication is not an option for the *Ayurvedic* care of hypothyroidism. However, one might understand the pathophysiology of hypothyroidism in the framework of Ayurveda, where Agni plays a crucial role and can be managed to restore healthy normal thyroid gland function. By controlling the immune system and reducing inflammation, treatment should aim to deal with the problem at its root. The four fundamental tenets of treatment are *Pachana* (digestion), *Agnideepana* (stimulating of the metabolism and digestion), *Srotoshodhana* (cleaning of the macro and micro-channels), and *Vatanulomana* (correct management of the excretory system).

Case Report:

A 43 year old female patient, Housewife by profession, who appeared to be in good health eleven years ago, initially developed progressive fatigue and drowsiness. Then after two years (2013), she gradually developed mild neck swelling, dyspnea on exertion, Puffiness on face at morning time, Cold intolerance, hoarseness of voice, Pedal edema and unable to do her routine house work. Blood investigations at this stage revealed Hypothyroidism. She was advised to administer Tab. Levothyroxine. She was kept on varying doses of drug (100 mcg - 200 mcg) based on her hormone level. But she didn't get much relief from any of the above symptoms. As, Thyroid Stimulating Hormone (TSH) levels were not coming into physiological range, She stopped the medication against medical advice four months before his first visit to OPD of Makwana Clinic at Jamnagar in January 2022. Symptoms like dyspnea on exertion and Puffiness on face were the chief complaints during his visit to the OPD. On examination there was mild swelling of thyroid gland, dryness of skin and palpitation. Patient was provisionally diagnosed as *Kapha avrita vata* (*vata* obstructed by *Kapha*) with *Pittaanubandha* (associated with Pitta) based on the presenting complaints like *Sheeta asahishnuta* (cold intolerance), *Swara graha* (hoarseness of voice), *Daurbalya* (tiredness) [3] . The treatment was started with *Pachan* (correction of digestion) and *Depana* (Correction of metabolism) therapy. Patient was denied for *Shodhan* (Body purification) therapy so, we gone ahead with *Shaman Chikitsa* along with *Shman Sneha* and *Mridu Virechan*. Treatment schedule followed is enlisted at Table 1.

Table 1 Treatment Schedule

Sl	Treatment	Drug of choice	Duration

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1.	*Pachana* (correction of digestion)	*Panchakola Paniyam* (*Panchakola choorna* [4] Put five grams of powder in 3 liters of water and boil it on low heat. When half a litre of water gets burnt, take it out and filter it. Drink small amounts of this water frequently whole day when patient got thirsty.)	15 days
2.	*Deepana* (correction of metabolism)	*Sanjivani Vati* [5] 1 tab TDS after Meal with *Adraka* Svarasa	15 days
3.	*Shaman Chikitsa*	1. *Varunaadi Kashay* [6] 40ml TDS after meal 2. *Dadimadi Ghritam* [7] 5ml BD before meal 3. *Haritaki Choorna* [8] 3 gm at HS with lukewarm water	5 months

Table 2 Effect on Thyroid Function Test

Parameters	Normal Values	Before Treatment	After Trial		
			1st month	2nd month	6th month
T3 (ng/mL)	**0.6 - 1.81**	**0.89**	**0.82**	**0.88**	**0.92**
T4 (µg/dl)	**4.5 - 12.6**	**4.4**	**4.9**	**4.8**	**4.9**
TSH (mIU/ mL)	**0.55 - 4.78**	**139.4**	**121.3**	**78.6**	**32.2**

OBSERVATIONS

Clinical features, Serum Thyroid function test (TFT) values were assessed before and after the treatment [Table 2]. Neck swelling, dyspnea on exertion, Puffiness on face at morning time, Cold intolerance, hoarseness of voice and Pedal edema all symptoms are alleviated significantly. Serum TSH level significantly decreased. The treatment made a pleasing improvement in her quality of life.

DISCUSSION

The majority of hypothyroidism cases lack a clear cause. Hypothyroidism is thought to be the result of an autoimmune reaction. Immunological system cells in autoimmune illnesses do not recognize the cell as "self" and mount an immune reaction against it. This immune system self-attack raises inflammation, and inflammation has a significant impact on all areas of thyroid metabolism and physiology. Pro-inflammatory cytokines can block the enzyme activity of type 2 5'-deiodinase, which is essential for the conversion of T4 to T3. Inflammation raises cortisol levels, resulting in a drop in TSH and decreased thyroid hormone synthesis. Pro-inflammatory cytokines can inhibit type 2 5'-deiodinase enzyme activity which is required for the conversion of T_4 to T_3. Inflammation causes elevated cortisol levels, leading to a decrease in TSH and lowered thyroid hormone production. Cortisol also inhibits the conversion of T_4 to active T_3 and increases the conversion of T_4 to reverse T_3. Thyroid hormones activate various metabolic activities in most tissues, resulting in an increase in basal metabolic rate. Thyroid hormone activity is analogous to *Agni*. *Agnimandya* can be used to compare the source of disease, that is, decreased metabolism.

The primary etiological causes that vitiate *Tridosha* in hypothyroidism are (*Kapha* predominance associated *Vata-Pitta* vitiation and *Margavaranajanya* [hindrance of function] leading to provoking of *Vata*). This *Tridosha* vitiation triggers *Jatharagni* (digestive system) disturbance, which eventually leads to *Dhatvagni* (metabolic system) dysfunction and the

manifestation of *Ama*. This *Ama* blocks the channels in the body (*Srotorodha*), thereby afflicting the Contents of channels causing vitiation of *Srotasa* as well as *Dhatu* to which these *Srotas* deliver. *Panchkola* is predominantly having *ushna*, *tikshna*, *laghu*, *ruksha guna*, *katu rasa*, *katu vipaka* & *ushna virya*. Hence it exhibits *kapha-vata shamaka*, *dipana*, *pachana*, *rochana*, *lekhana*, *sroto vishodhana* & *shothahara* properties [9]. *Panchkola* is considered as one of the best drugs to treat the condition of *mandagni*, *gulma*, *ama*, *aruchi* and *kapha-vata* disorders [10]. *Sanjivani vati* mentioned in *Sharagadhara Samhita* is useful to alleviate *Dhatugat ama* condition [11]. *Varunadi kashaya* is used in *Vata kaphaja* disorder and it is also very well indicated in *Mandagni* [12]. *Dadimadi ghritam* mentioned in *Ashtangahriday Pandu Chikitsa* contains *Dadima*, *Dhanyaka*, *Chitrak*, *Pippali* and *Shunthi*. The *Chitrak*, *Pippali* and *Sunthi* are claimed to *Pachana* and *Agnideepan* along with diuretic properties and thus might have been functional in alleviating swelling, the most common presenting complaint [13]. *Haritaki* have an *anuloman* and *srotoshoshan* along with *rasayan* properties. Which can correct the pathogenesis at the beginning itself

CONCLUSION

Although no clinical condition analogous to hypothyroidism is recorded in Ayurveda, it has been found to have a close link with *Agnimandya* and *Ama*. Above mentioned drugs showed highly significant results on parameters. *Dhatvagni* vitiation is difficult to reverse; hence, *Shamana* therapy should be used for an extended period of time to treat *Ama* at the *Dhatu* level.

Conflict of Interest: No

Source of Support: Nil

Consent of Patient: Taken

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