



Hyperthyroidism and its management with *ayurveda* - A case report

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Received: 10.08.2022

Revised: 20.03.2023

Accepted: 25.10.2023

ABSTRACT: Cases of thyroid dysfunctions are alarmingly increasing today. In India too, there is a significant burden of thyroid diseases. According to a projection from various studies on thyroid disease, it has been estimated that about 42 million people in India suffer from thyroid diseases. Hyperthyroidism is prevalent in people of developing countries. The present case report delineates history of a 32 years old female, who presented the complaints of palpitation, excessive hunger, weight loss, fine tremor of hands and legs and exophthalmos. Patient has been clinically diagnosed with hyperthyroidism [ICD-10 code E05.0] and further confirmed by laboratory tests. Patient has elevated thyroid hormone levels (raised thyroxin and/or triiodothyronine) and low or undetectable levels of thyroid-stimulating hormone (TSH). The patient underwent *snehapana*, *swedana* and *virecana*, followed by regular use of medicated milk prepared with *sataavari*, *saaribaa*, *candana* and *useera* for a period of one year. Reduction of symptoms and normalization of blood parameters started to appear after 2 months of the use of ayurvedic medicines. Patient was advised to taper modern medicine and stop gradually. The present findings show the effect management of *ayurveda*-formulations in the management of hyperthyroidism.

Key words: Hyperthyroidism and *ayurveda*- management, Thyrotoxicosis, Medicated milk.

Introduction

Hyperthyroidism, also called thyrotoxicosis, a condition where the thyroid makes and releases high levels of thyroid hormone. This condition speeds up the metabolism due to excessive production of hormone. Symptoms of hyperthyroidism^{[1],[2]} include tachycardia, weight loss, excessive sweating, heat intolerance, anxiety, irritability, palpitations, fatigue, bulging eyes, frequent bowel movements and fine tremor of hands and legs. Hyperthyroidism is characterized by low serum thyroid-stimulating hormone (TSH) concentrations and raised serum concentrations of thyroid hormones: thyroxin (T4), tri-iodo thyronine (T3), or both. Subclinical hyperthyroidism is characterized by low serum TSH, but with normal serum T4 and T3 concentrations. Hyperthyroidism is relatively rare than hypothyroidism. If not treated, hyperthyroidism can cause serious problems in

heart, bone, muscles, menstrual cycles and fertility. Globally about 1-5 % population are affected with hyperthyroidism. The prevalence of thyroid disorders in India has been studied. In an epidemiological study from Cochin, subclinical and overt hyperthyroidism were present in 1.6% and 1.3% of subjects participating in a community survey^{[3],[4]}.

Hyperthyroidism simply means hyper function of the thyroid gland. It is associated with thyrotoxicosis, i.e., hyper metabolic state caused by elevated levels of T3 and T4. Hyperthyroidism might not be only cause for thyrotoxicosis. In hyperthyroidism, there is depressed level of TSH due to negative feedback mechanism.

Causes of hyperthyroidism include Graves' disease, thyroid nodule, thyroiditis, too much iodine and too much thyroid medicine.

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Ayurvedic classics have no direct reference on hyperthyroidism. Considering various factors it can be compared with *atyagni*^{[5],[6],[7],[8]}, *teeknaagni* or *bhasmaka roga* (related to increase in *agni*). *Pitta prakopa* plays an important role in the pathogenesis and production of symptoms. Increase in *agni* causes rapid digestion and *pitta prakopa* symptoms like excessive hunger and sleeplessness.

Case report

A 32 years old female patient presented with the following complaints

1. Palpitation
2. Excessive hunger
3. Weight loss
4. Anxiety and irritability
5. Sleep disturbance
6. Fine tremor of hands and legs
7. Exophthalmos
8. Fatigue
9. Frequent bowel movements

Blood test showed elevated T3, T4 level and low level of TSH. Thyroid scintigraphy was performed feature are suggestive of a hyperactive diffuse toxic goiter. After that she took Neomercazole 20 mg /day, as advised by the doctor.

Patient had these complaints for last one year with no other co morbidities. On examination in the OPD patient looked tired and had a blood pressure 100/70 mm Hg, pulse rate of 100/minute, temperature 97.2 degree Fahrenheit and respiratory rate of 20/minute. She had exophthalmos and enlarged thyroid gland. Lab investigation showed TSH <0.01 along with normal T3 and T4 levels. Thyroid scintigraphy was performed and the features were suggestive of hyperactive diffuse toxic goiter. She was put on Neomercazole 20mg /day and which has been continued for ten months. Even after doing so the symptoms and abnormality in TFT continued. So she decided to take *ayurveda* treatments and was undergone consultation (Table 1)

Date	T3	T4	TSH
3/3/2017	412	21.7	0.01
19/4/2017	164	9.9	0.01
18/5/2017	134	11.5	0.01
24/8/2017	129	11.5	0.01
6/11/2017	120	11	0.01

Apart from the signs and symptoms following were the observations.

Ashtasthaana pareeksha^{[9],[10]}

1. *Naadi*(pulse): 100/ minute
2. *Mala*(stool): Frequent bowel movements (4-5 times per day)
3. *Mootra*(urine): Normal
4. *Jihwa*(Tongue): Normal
5. *Sabda*: Normal
6. *Sparsa*: Hot in touch
7. *Drk*: Exophthalmos
8. *Aakrti*: *Krsaa*

Materials and methods of ayurvedic treatments

1. *Snehapaana* with Tiktaka ghritham for 7 days – Starting dose:- 50 ml, Ending dose :- 200 ml (Table 2).
2. *Swedana* :- *Sarvanga swedana* on 9th day, 10th day and 11th day after applying Pindathailam.

Day	Dose	Remarks
1 st day	50 ml	Patient took porridge at 11.30 am, bowels- once/daily
2 nd day	75 ml	Patient took food at 12.30 noon, bowels- once /daily
3 ^{ed} day	100 ml	Patient took food at 1.15 pm, bowels- twice /daily
4 th day	125ml	Patient took food at 1.45 pm, bowels- twice /daily, loose bowels
5 th day	150 ml	Patient took food at 2 pm, bowels- twice /daily, loose
6 th day	175 ml	Patient took food at 2.30pm, bowels- once /daily
7 th day	200ml	Patient took food at 3 pm, bowels- three /daily, loose bowels with oil

3. *Virecana*:- Avipathi choornam 20 g - on 12th day.

Virecana was done with Avipathi Choornam 20 gm. The powder mixed with warm water and taken at 6 am. Patient got 8 times loose bowel movement after that took porridge at 10.30 am. Then had *samsarjana karma* for three days.

4. Started medicated milk prepared as per *ksheerapaaka*, at bed time after 12 days of *virecana*. (Table 3).

Drugs	Botanical name	Quantity
<i>Sataavari</i>	<i>Asparagus racemosus</i>	5g
<i>Useera</i>	<i>Vetiveria zizanioides</i>	5g
<i>Candana</i>	<i>Santalum album</i>	5g
<i>Saaribaa</i>	<i>Hemidesmus indicus</i>	5g
Milk		100ml
Water		400ml

Method of preparation

The medicines washed and crushed well and made into a potali, dipped in 100 milk added with 400 ml water, heated *in mandaagni* and reduced to 100 ml, filtered and use for drinking at bed time.

Assessment criteria

Patient was regularly assessed on the basis of T3, T4 and TSH values and symptoms relief before and after treatments. Patient tapered and stopped Neomarcazole within 2 months of ayurvedic medicines.

Result

Regular assessments were carried out in terms of symptoms and blood parameters. Improvement in symptoms was noted during the course of treatment. Palpitation rate reduced to normal level, burning sensation inside the abdomen disappeared within two months of using the milk decoction. Weight loss was found reduced viz., gained 68 kg weight from the level of 61 kg. The disturbance in the sleep disappeared and started to get sound

sleep within two months. Exophthalmus and fatigue disappeared gradually. Frequent bowel movements relieved. Fine tremor on the limbs were not manifested after the procedures (Table 4). The patient started improvements in TFT levels within 3 months and came to normal after 12 months of treatments (Table 5). *Samana* medicines were continued for a period of 10 months and discontinued. Patient did not have any complaints for the past 8 years, till the preparation of this article.

Symptoms	1 ST month	3 months	6 months	9 months	12 months
Palpitation	+++	++	++	+	0
Excessive hunger	+++	++	++	+	0
Weight loss	+++	++	+	0	0
Anxiety an irritability	++	++	+	0	0
Sleep disturbance	+	+	0	0	0
Fine tremor of hands and legs	++	+	+	0	0
Bulging of eyes	+++	++	+	+	0
Fatigue	+++	++	+	0	0
Frequent bowel movements	++	+	+	0	0

Date	T3	T4	TSH
5/2/2018	150	10.5	0.35
11/5/2018	159	8.2	0.75
4/8/2018	109.24	8.3	0.76
30/10/2018	106.3	9.2	1.35

Discussion

Ayurveda classics have no direct reference of hyperthyroidism. Hyperthyroidism may be considered as *atyagni /bhasmaka* in *ayurveda*^[11]. The symptoms of *vaataja pandu roga* (like *alpamedas*, *balakshaya*, *kampa* etc.) are also seen in hyperthyroidism. According to ayurvedic point of view, *nidaana* of subclinical hyperthyroidism is classified as *aahara*, *vihaara* and *maanasika nidaana*. The *nidaana* of the condition attributed to improper and irregular diet, stressful life, lack of exercise, reduced sleep,

excessive thoughts, suppression of urges etc. The vitiated *doshas* include *vaata* and *pitta* and *dooshya* are *saptadhaatus* mainly *rasadhaatu*. Due to *vaatapitta prakopa* patient got good result with *snehapaana* and *virecana*.

According to *ayurveda* impaired digestion of food leads to the blockage of micro channels causing an imbalance in the functions of the thyroid gland. Higher levels of *vaata* and *pitta doshas* raise the metabolic rate and create the symptoms like excessive hunger, weight loss, anxiety and fatigue.

Ayurveda believes eradicating the root cause of problems to attain a permanent solution. It firstly address clearing possible blocks within the body, re-insisting the equilibrium and eventually resulting in the optimal performance of thyroid gland

Snehapaana with *Thiktakaghrita* performed to correct *doshavaishmya*. All the ingredients in the formulations are *vaatapittasamana*. *Svedana* widens the channels, enabling the movement of *aama* from the tissues back to *koshtha*. *Virecana* with *Avipathi choorna* helped to remove the *aama* from the body through *mala* and remnants of *vata pitta dosha* in our body. Medicated milk helped to maintain *vaata-pitta dosha* and nourished the *saptadhaatus*. The case reports consist of the unique presentation of a single case only. More clinical trials are recommended to arrive at a definite conclusion.

Conclusion

On the basis of biochemical parameters and features in the present case of hyperthyroidism the above mentioned managements were very effective. But this is merely a single case report so the effectiveness of this treatment protocol cannot be claimed without further studies.

Acknowledgement

I express my gratitude to Dr. Narayanan Nambi, Principal, Ashtangam Ayurveda College,

Vavannur, Palakkad for guiding the treatment and Dr. Praveen, Senior Physician, Arya Vaidya Sala, Kottakkal for good guideline in the preparation of the manuscript.

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