

**MANAGEMENT OF GRAVE'S DISEASE WITH SPECIAL REFERENCE TO
BHASKAMA ROGA- A CASE REPORT**Rao Veena G.¹, P. Seethadevi² and H. S. Vatsala^{3*}¹Professor and HOD, ²Reader and ³PG Scholar
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ABSTRACT

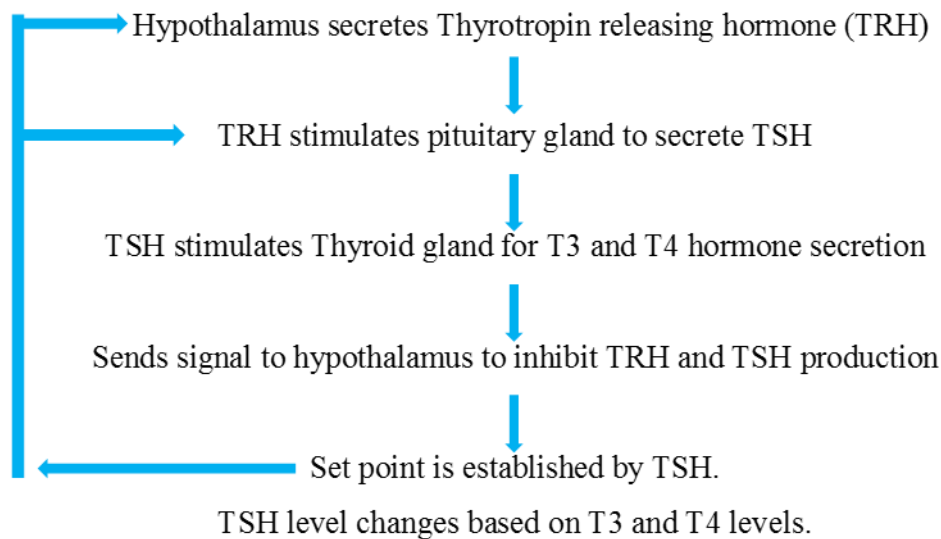
Bhaskama roga is excessively increased status of *Jataragni* inturn *Dhatwagni* due to excessively aggravated *Pitta* which is associated with increased *Vata* and decreased *Kapha*. Hyperthyroidism is a metabolic disorder characterised by excessively circulating free thyroid hormone in the blood. i.e. Increased or normal T3, T4 levels with decreased TSH levels. *Bhaskama roga* can be correlated to Grave's disease. Hyperthyroidism is not so common with an incidence of 0.4 per 1000 women and 0.1 per 1000 men with ratio 10:1 respectively. The Main function of thyroid gland is to maintain proper metabolism, growth, basal temperature and sinus rhythm which can be attributed to the functions of *Prakruta Vata* and *Pitta*. Vagbhata's explanation on this correlates with increased BMR causing weight loss which is prime factor in both *Bhaskama roga* and Hyperthyroidism. In this condition, the treatment should be aimed towards *Kapha Vruddhi Kara*, *Vata* and *Pitta Shamana*, which helps in bringing back the increased *Jataragni* and *Dhatvagni* to normalcy. This was a single case report on a patient of primary hyperthyroidism (Grave's disease), who was administered with *Vidaryadi Ghrita* and *Drakshadi Kashaya* as *Shamana Oushadi* for a period of 2 year. The objective and subjective parameters were assessed before and after treatment. The results were encouraging with significant improvement. Hence this treatment can be effectively adopted in patients of hyperthyroidism i.e. *Bhaskama roga*.

KEYWORDS: Hyperthyroidism, Grave's disease, Bhaskama roga, Atyagni, Agni, Thyroid, Methimazole.**INTRODUCTION**

Thyroid is derived from the Greek word 'thyreos' means shield and 'eidos' means form. It is a butterfly shaped gland having 2 lobes connected by Isthmus. It is situated anterior to trachea between cricoid cartilage and the suprasternal notch. Weighs about 12-20 gms.^[1] It is highly vascular and soft in nature. It secretes majorly 2 basic hormones called T3 (Tri iodothyronine) and T4 (Thyroxine), which acts through alpha and beta receptors.^[1] They help in cell differentiation during development and help to maintain thermogenic and metabolic homeostasis in the adult.

Thyroid hormone production is regulated by Hypothalamus and pituitary gland. Hypothalamic thyrotropin releasing hormone (TRH) stimulates pituitary thyrotropin (TSH) synthesis and secretion. In turn, TSH stimulates production and release of T4 and T3 from thyroid gland. Once released T4 and T3 exert a negative feedback mechanism on the production of TRH and TSH. In the blood T3 and T4 are transported by binding to plasma proteins. The minor quantity of non- protein bound thyroid hormone (free T3 and free T4) enter peripheral cells and interacts. This leads to induction of many enzymes to finally express the effect of the thyroid

hormones. Decreased or subnormal circulating level of TSH with increased level of free T3 and free T4 clinches the diagnosis of Primary hyperthyroidism. This excludes the possibility of involvement hypothalamus and pituitary in the pathology of the diseases.



Schematic Representation 1: Showing Thyroid axis.^[2]

In the hyperthyroidism of Grave's disease along with the above said classical picture of hormone levels, there will be diffusely increased RAIU (Radioactive iodine uptake) by the thyroid. This investigation differentiates the other causes of hyperthyroidism from grave's disease. Furthermore in grave's disease thyroid peroxidase antibodies (TPO Ab) and TSH receptor antibodies are positive which explains the autoimmunity into development of Grave's disease. Genetic, Environmental factors contribute to its susceptibility. Stress, smoking, sudden increase in iodine intake, postpartum period may precipitate grave's disease.^[3]

Hyperthyroidism is not so common with an incidence of 0.4 per 1000 women and 0.1 per 1000 men with ratio 10:1 respectively.^[4] Grave's disease occurs in upto 2% of women but one-tenth as frequent in men. The disorder rarely begins before adolescence and typically occurs between 20 and 50 years of age.^[3]

The main signs and symptom of Grave's disease is increased weight loss with enhanced appetite due to increased metabolic rate.^[3] The other symptoms include hyperactivity, nervousness, irritability, fatigue, insomnia, impaired concentration, fine tremor, dysphoria, heat intolerance and sweating, palpitations, weakness, diarrhoea, polyuria, oligo menorrhoea, loss of libido, tachycardia, atrial fibrillation, warm moist skin, muscle weakness, proximal myopathy lid retraction or lagging, gynecomastia, osteopenia, mild hypercalcemia (20%), Hypercalciuria.^[3]

The size of the Thyroid gland increases 2-3 times more in grave's disease and thrills or bruit will be present due to hyper vascularity.^[3]

Lid retraction will be observed as staring appearance. This is due to the infiltration of extra ocular muscles

release cytokines, resulting in fibroblast activation and increased synthesis of glycosaminoglycan's that trap water, there by muscle swelling. It occurs within a year of diagnosis in 75% of people. There may be periorbital oedema, diplopia, and compression of optic nerve as a complication. The proptosis is examined by Exophthalmometer, which allows the visualization of sclera between iris and lower eye lid.^[5] Thyroid dermopathy can occur as orange skin appearance, peritibial myxedema clubbing as thyroid aeropathy.

Concept of *Agni* in Ayurveda is vast, and *Agni* is considered to be *Prana* and keeps the person enthusiastic and healthy.^[6] *Atyagni* also known as *Bhasmaka roga* (Dalhana Acharya) is a state of excessively aggravated *Pitta* with increased *Vata* and decreased state of *Kapha*⁷ leading to excessive increase in *Jataragni* inturn increases *Dhatvagni* leading to *Dhatu Paka* and *Dhatu Kshaya*. Here the *Agni* will be so strong so as to digest any amount of *Guru Ahara* very quickly. In the absence of *Ahara* it starts digesting the *Dhatu*s leading to *Krishata* due to *Dhatu Paka* which explains the presentation of increased BMR.

This was very well explained by Vagbhata Acharya^[8] i.e. *Kaya Agni* or *Jataragni* is important factor in causing *Kshaya* or *Vruddhi Avasta* of *Dhatu*s. The increased *Jataragni* leads to increase *Dhatvagni* and digests the food in excess causing *Dhatu Kshaya* due to *Dhatupaka* and decreased *Jataragni* leads decreased *Dhatuvagni* causing *Dhatu Vruddhi* due to *Apachita Dhatu Avastha*.

The Main function of thyroid gland is to maintain proper metabolism, growth, basal temperature and sinus rhythm which can be attributed to the functions of *Prakruta Vata* and *Pitta*. In *Bhasmaka roga*, the treatment should be of *Kapha Vruddhi Kara*, *Vata* and *Pitta Shamana*^[7], which

helps in bringing back the increased *Jataragni* and *Dhatvagni* to normalcy.

CASE REPORT

A 26yrs young male patient, who was lean built, belonged to upper middle class society and civil engineer by profession from Mysore, walked into OPD of JSS Ayurveda Medical College and Hospital on May 2015 with complaints of

- ✓ Gradual Protrusion of Eye Ball on Right Side Since 1 Year
- ✓ Severe Weight Loss – 10 Kg from Past 6-7 Months
- ✓ Associated With Increased Appetite, Nervousness, Irritability And Excessive Sweating.

He was Hindu by religion and having *Shaka Ahara* food habits, *Mala*, *Mootra*, *Nidra* were normal. BMI was 21 kg/m². No other relevant medical history. He was on Tablet Methimazole 10 mg Once a Day. Since 1 month.

Investigations

Table 1: Showing the values of T3, T4 and TSH Before Treatment.

Date	T3	T4	TSH
12/03/15	1.4	10.7	<0.05

Radionuclide thyroid scan and uptake study (9/01/14)

The scan findings are consistent with *Diffuse Toxic Goiter (Grave's disease)*.

He was diagnosed as a case of **Primary Hyperthyroidism (Grave's disease)**. He was advised Radioactive Iodine therapy by contemporary medicine. No other personal or medical history contributed to this study. The signs and symptoms presented in this case was compared with *Bhasmaka roga* and planned treatment accordingly.

Diagnosis

TSH value is decreased. The decreased values of T3 and T4 are secondary to decreased conversion of T4 and T3.

Intervention

Table 2: Formulations (Medicines) administered during the Treatment period.

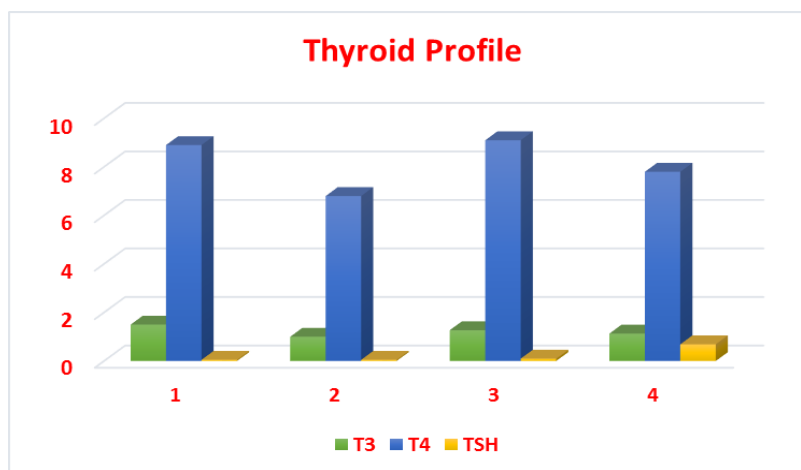
Formulations	Method of Administration	Properties of Medicine
Vidaryadi Ghrita ^[8]	20 MI Daily at Anna Prakankshita Kala in the Morning (8 AM) at Empty Stomach.	Bruhmana Pitta and Vata Shamana
Drakshadi Kashaya ^[9]	15 ml Kashaya Twice daily with 15 ml of Water After food	Pitta Rechaka, Rasayana, Pitta Vata Shamana.

Observation Period: 2 years

RESULTS

Table 3: Showing the values of T3, T4 and TSH at Different intervals and After Treatment.

Date	T3	T4	TSH
25/06/15	1.5	8.9	<0.05
29/07/15	1	6.8	<0.05
22/07/16	1.27	9.1	0.10
13/02/17	1.13	7.8	0.69



Graph 1: Showing the values of T3, T4 and TSH at before treatment, During treatment and After Treatment.

Table 4: Showing the comparison of signs and symptoms Before and After treatment.

Subjective Criteria	Before Treatment	After Treatment
Appetite	+++ (Excessively increased)	Normal
Weight Loss	+++ (lost about 10 kgs from 6-7 months)	Gained 5.6 Kgs of Weight
Nervousness	+	Reduced Completely
Irritability	++	Reduced Completely
Excessive Sweating	+	Reduced Completely
Protrusion of Eye Balls	++ (Right eye)	Reduced to Normal Size

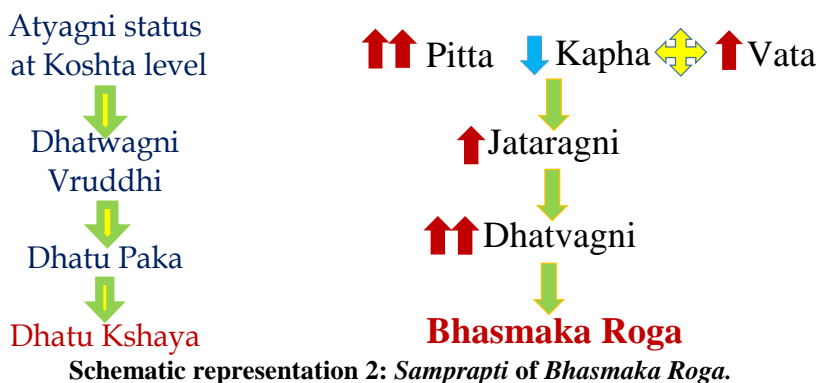
Table 5: Showing the comparison of objective criteria Before and After treatment.

Objective Criteria	Before Treatment	After Treatment
T3	1.5	1.48
T4	8.9	7.8
TSH	<0.05	0.69
Body weight	57.4 kg	63 kg
Drug Methimazole	10 mg OD	1.125mg Per day

DISCUSSION

Agni is apart from *Pitta*, presence of *Drava Guna* in *Pachaka Pitta* differentiates it from *Jataragni* which is called *Anala*. Acharya Sushruta has quoted 3 types of Agni. I.e. *Vishama Agni* due to *Vata*, *Teekshna Agni* due to *Pitta* and *Manda Agni* due to *Shleshma* and he has also quoted 4th type of Agni i.e. *Sama Agni* which is due to balanced state of all the *Tridoshas*.^[10] The one more status of Agni (physiological) which is stronger than *Teeksha agni* is *Uttamagni* as explained in *Madhva Nidna*.^[11] In this condition the Agni is capable of digesting the *Guru Madhura Snigdha Ahara* in large quantity even if the person sleeps during the day time. But in the *Atyagni* or *Bhasmaka roga* condition, *Jataragni* is highly *Teekshna* and pathological and makes the patient to ingest the food repeatedly which relieves the condition temporarily. Thus ingested food gets digested very quickly. At the end of digestion it leads to *Gala Talu Oshta Shoshana*, *Daha* and *Santapa* in the *Shareera*.^[10] This is known as *Bhasmaka roga*.

Acharya Charaka explains this condition as *Kapha Ksheena* and *Pitta Kupita Avasta* in association with increased *Vata Dosha*. This combination due to the *Ushmata* of *Pitta* in its *Swa Sthana*, Agni becomes strong and makes the body dry. It digests the food so quickly and repeatedly. In the absence of food for the digestion, it digests the *Dhatu*s. He develops *Dourbalya*, *Atanka*, *Shwasa*, *Daha* and *Murcha* and there is a threat of even death.^[7] Person gets relief of this after intake of food. The above *Samprapthi* and symptomatology of *Atyagni* can be co related to that of Hyperthyroidism. I.e. In spite of increased quantity of food intake (*Atyagni*) there is weight loss (*Dhatu Pachana* or *Ksheena*) and other symptoms like *Atanka* as nervousness, irritability, *Dourbalya* as fatigue, *Shwasa* might be atrial fibrillation, tachycardia, *Daha* as heat intolerance and sweating etc. Thus the disease Hyperthyroidism can be understood and treated in lines of *Bhasmaka roga*.



Bhasmaka roga Chikitsa Sutra is *Kapha Vruddhi Kara Oushadi* and *Ahara* with *Pitta Vata Shamaka Oushadi* and *Ahara*. Thus Acharyas mentioned *Madhura*,

Snigdha, *Sheeta Oushadi* and *Virechana*. Intake of *Mahisha*^[10] *Ksheera*, *Dadhi*, *Sarpi*, *Payasa*, *Snigdha Krushara*, *Guda Vikruta*, *Ouduka* and *Anupa Mamsa*,

fish, *Mamsa* of sheep, *Yavagu* prepared by adding *Madhuchista* and *Ghrita*, *Manta* prepared from *Godhuma Choorna*, milk mixed with sugar and ghee, *Jeevaniya Gana Oushadi*, fruits which have oil content it should be mixed with *Sharkara*, *Snigdha Mamsa Rasa*, *Sheeta Ambu* mixed with *Madhuchista* and *Sarpi*, *Godhuma Choorna Payasa* with ghee, *Anupa Mamsa* with *Sneha*, *Payasa* with *Trisneha (Taila Varjita)*, *Udumbara Twak Ksheera* with *Nari Sathnya*. *Virechana* with *Shyama Trivrut*. *Pitta Shanti Ahara* like *Payasa*, *Dadhi* which is *Madhura*, *Ahara* which are *Medo Janaka*, *Kapha Kara* and *Guru Bhojana*. And person should be asked to sleep during day time. By the above treatment person will acquire *Sama Dhuatu Avasata* and *Pushti*, increase in *Ayu* and *Bala*.^[7]

Though the choice of treatment here is *Virechana* prior to *Shamana* still patient was treated with *Shamana Oushadi* as patient refused to undergo *Virechana*. Here in this study *Vidaryadi Ghrita* is having *Hrudya*, *Bruhmana*, *Vata Pitta Hara* property, indicated in *Shosha*, *kshaya* etc. *Drakshadi Kashaya* is *Pitta Rechaka*, *Rasayana* and *Pitta Vata Shamana property*, indicated in *Jwara*, *Bhrama* etc. The above treatment helped in *Pitta Rechana*, *Vata Pitta Shamana* and *Kapha Vardhana* which is prime treatment in *Bhasmaka roga* and acts in *Samprapthi Vighatana*. The thyroid profile were monitored regularly. There was significant improvement in both subjective and objective criteria. Increased BMR (*Dhatwagni*) is brought down to normalcy which is evidenced by body weight gain of patient. Protrusion of eyes reduced, Appetite brought to normal, TSH levels got increased. Drug Methimazole dosage was reduced from 10 mg to 1.125 mg per day. The suggested Radioactive iodine therapy was avoided.

CONCLUSION

This was a case of Grave's disease (Primary Hyperthyroidism With Toxic Goiter) where Increased T3, T4 levels and Decreased TSH levels are noted. The increased BMR with body weight loss can be paralleled with *Atyagni* or *Bhasmaka roga*.

Drakshadi Kashaya and *Vidharyadi Ghrita* as *Shamana Oushadi* has relieved the patient from disease in terms of both subjective and objective criteria. So this treatment can be efficiently adopted in patients of Primary Hyperthyroidism of Grave's disease with special reference to *Bhasmaka roga* and can be studied in large number of subjects.

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