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Understanding and approach of Ayurveda management towards a unique case of Hashimoto Thyroiditis - A Case Report

Abdul Khader¹, Bhagyashree Kamate²

¹Professor, Dept. of Kayachikitsa, Sri Kalabyraveswara Swamy Ayurvedic Medical College Hospital and Research Centre, Bangalore, Karnataka, India.

²Post Graduate Scholar, Department of Kayachikitsa, Sri Kalabyraveswara Swamy Ayurvedic Medical College Hospital and Research Centre, Bangalore, Karnataka, India.

ABSTRACT

Hashimoto thyroiditis is also known as chronic autoimmune thyroiditis and chronic lymphocytic thyroiditis, is an autoimmune disease in which thyroid cells are destroyed via cell and antibody-mediated immune processes. It is the most common cause of hypothyroidism in developed countries. The Pathophysiology of Hashimoto Thyroiditis involves the formation of antithyroid antibodies that attack the thyroid tissue, causing progressive fibrosis. The condition is sometimes not diagnosed until late in the disease process. The most common laboratory findings demonstrate elevated Thyroid-Stimulating Hormone (TSH) and low Thyroxine (T4) levels, coupled with increased anti thyroid peroxidase (anti-TPO) antibodies. In Ayurveda, it can be correlated with *Rasavaha Sroto Vikara*, *Dhatwagnimandya*, *Vataja Pandu*, *Pittavruta Vata* based on symptoms.

Case Report: In this present study a female patient aged 37 years, known case of Hashimoto Thyroiditis since 8 years was treated with *Shiro Takradhara*, *Sarvanga Abhynaga*, *Virechana* and specific *Shamanaushadhi's* as per signs and symptoms. **Results:** After 2 months of treatment there was a significant reduction in the signs and symptoms of the disease with 70% improvement in the condition.

Key words: Hashimoto Thyroiditis, Ayurveda, Chronic Autoimmune Thyroiditis, Chronic Lymphocytic Thyroiditis

INTRODUCTION

Hashimoto Thyroiditis, also known as chronic autoimmune Thyroiditis and chronic lymphatic Thyroiditis, is an autoimmune disease in which thyroid

cells are destroyed via cell and antibody mediated immune processes. It is the most common cause of hypothyroidism in developed countries. It is primarily a disease of women, with a sex ratio of 10:1 approximately. In an epidemiological study conducted in India, prevalence of >20% was recorded. Incidence rate of HT is 0.54% in India. Although some sources cite diagnosis happening more so in the fifth decade of life, most women are diagnosed between the ages of 30 to 50 years.^[1] The cause of HT is thought to be a combination of genetic susceptibility and environmental factors.

The patho physiology of Hashimoto Thyroiditis involves the formation of anti-thyroid antibodies that attack the thyroid tissue, causing progressive fibrosis. The diagnosis can be challenging and consequently, the condition is sometimes not diagnosed until late in the

Address for correspondence:

Dr. Bhagyashree Kamate

Post Graduate Scholar, Dept. of PG Studies in Panchakarma, Muniyal Institute of Ayurveda Medical Sciences, Manipal, Karnataka, INDIA.

E-mail: bhagyashreerkamate10@gmail.com

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disease process. The most common laboratory findings demonstrate elevated Thyroid Stimulating Hormone (TSH) and low Thyroxin (T4) levels, coupled with increased anti thyroid peroxidase (anti-TPO) antibodies. This activity reviews the pathophysiology and diagnosis of Hashimoto Thyroiditis.^[2]

Etiology

The aetiology of Hashimoto disease is very poorly understood. Most patients develop antibodies to a variety of thyroid antigens, the most common of which is anti-thyroid peroxidase (anti-TPO). Many also form anti thyroglobulin (anti-Tg) and TSH receptor-blocking antibodies (TBII). These antibodies attack the thyroid tissue, eventually leading to inadequate production of thyroid hormone.^[3,4]

It can be part of the Polyglandular Autoimmune Syndrome type 2 with autoimmune adrenal deficiency and type-1 DM. Hashimoto thyroiditis is also related to several other autoimmune diseases such as pernicious anaemia, adrenal insufficiency, and celiac disease.^[5]

Evaluation

Hashimoto Thyroiditis is an autoimmune disorder of inadequate thyroid hormone production. The biochemical picture indicates raised thyroid-stimulating hormone (TSH) in response to low free T4. Low total T4 or free T4 level in the presence of an elevated TSH level confirms the diagnosis of primary hypothyroidism.^[6]

The presence of anti-thyroid peroxidase and anti-thyroglobulin antibodies suggests Hashimoto Thyroiditis, however 10% of patients may be antibody negative. Anemia is present in 30 to 40%. There can be decreased Glomerular filtration rate (GFR), renal plasma flow, and renal free water clearance with resultant Hyponatremia. Creatinine, kinase is frequently elevated. Prolactin levels may be elevated. Elevated total cholesterol, LDL, and triglyceride levels can occur.^[7]

The treatment of choice for HT is replacement of thyroid hormone. But a long term hormonal therapy is not always free from complications as well as side effects. Moreover, currently Hypothyroid patients are

opting for Ayurvedic management due to dissatisfaction in modern regime. A case of HT was managed through treatment protocol based on the clinical features and managed by following Ayurveda guidelines.

After diseased condition changes in the body with manifestation of symptoms

The organ system manifestations of Hashimoto Thyroiditis are varied due to the nature of the disease. Initially patients may have bouts of hyperthyroid symptoms, as the initial destruction of thyroid cells may lead to the increased release of thyroid hormone into the bloodstream. Eventually, when enough destruction has been caused by the antibody response, patients exhibit symptoms of hypothyroidism. These symptoms are insidious, variable and may affect almost any organ system in the body.

The classic skin characteristic associated with hypothyroidism is myxoedema, which refers to the oedema-like skin condition caused by increased glycosaminoglycan deposition. This however, is uncommon and only occurs in severe cases. Skin can be scaly and dry, especially on the extensor surfaces, palms, and soles. Histological examination reveals epidermal thinning. Increased dermal mucopolysaccharides cause water retention and in turn pale-coloured skin seen.

The rate of hair growth slows, and hair can be dry, coarse, dull, and brittle. Diffuse or partial alopecia is not uncommon.

Fatigue, exertional dyspnea, and exercise intolerance are likely associated with a combination of limited pulmonary and cardiac reserve in addition to decreased muscle strength or increased muscle fatigue. Biochemical changes in this population have shown decreased muscle oxidation of pyruvate and palmitate, increased utilization of glycogen stores, and diminished fatty acid mobilization. Muscle weakness and myopathy are important features.

The presentation may also be subclinical. Early symptoms may include constipation, fatigue, dry skin, and weight gain. More advanced symptoms may

include: cold intolerance, decreased sweating, nerve deafness, peripheral neuropathy, decreased energy, depression, dementia, memory loss, muscle cramps, joint pain, hair loss, apnoea, menorrhagia, and pressure symptoms in the neck from goitre enlargement such as voice hoarseness.

Hashimoto Thyroiditis (HT) is one of the most frequent autoimmune diseases and has been reported to be associated with gastric disorders in 10% to 40% of patients. About 40% of patients with autoimmune gastritis also present with Hashimoto Thyroiditis, according to research by Cellini et al. Chronic autoimmune gastritis (CAG) is characterized by the partial or complete disappearance of parietal cells leading to impairment of Hydrochloric acid and intrinsic factor production. The patients go on to develop hypochlorhydria-dependent iron-deficient anemia, leading to pernicious anaemia, and severe gastric atrophy.

Understanding of Hashimoto Thyroiditis in Ayurveda

In Ayurveda, there is no exact correlation to Hashimoto Thyroiditis but can be understood based on *Nidana*, *Dosha*, *Dushya*, *Srotas*, *Sthana* and *Lakshanas*. HT is *Tridoshaja* mainly *Pitta* predominant disease where in, *Jatharagni Mandya* leading to the formation of *Ama* causing *Srotorodha* at various level and *Dhatwagnimandya* which further causes *Uttarottara Dhatwagnimandya* leading to *Dhatu Dushti* and impaired *Uttarottara Dhatu Poshana* showing cluster of symptoms and can be correlated to *Rasapradoshaja Vikara*, *Dhatwagnimandya*, *Vataja Pandu*, *Pittavruta Vata*.

Patient was provisionally diagnosed as *Rasa Pradoshaja Vikara*,^[8] *Dhatwagnimandya*, *Pittavruta Vata*^[9] and *Vataja Pandu*^[10] based on the presenting complaints like *Varchashosha*, *Anaha*, *Angamarda*, *Ruja*, *Shirashula*, *Shopha*, *Ruksha Anga* and *Bala Kshaya*. Hence *Agnideepana*, *Amapachana*, *Vatanulomana*, *Vataja Pandu*, *Vataja Grahani* and *Vataja Jwara* line of management was adopted based on presenting symptoms.

The treatment was started with internal and external therapy. The treatment protocol assigned for this

patient was *Dhatwagni Ama Pachana*, *Agnideepana* and *Vatanulomana*. *Virechana* (therapeutic purgation) was administered as per *Panduroga* line of management.^[11] Again after *Shodhana Shamanaushadhi's* (pacifying medications) were prescribed based on signs and symptoms. Treatment schedule followed is enlisted at Table-1

MATERIALS AND METHODS

The treatment was planned by assessing the state of *Rogabala* (strength of the disease) and *Rogibala* (strength of the patient). The following medicines are administered to the patient for a period of 2 months. The patient was advised to indulge in light diet.

Description of Case

A 37-year-old unmarried, female patient, belonging to middle economic status, professor by occupation, with history of irritable bowel syndrome (IBS) approached to the OPD on January 30 2023 with complaints of incomplete evacuation of stool, bloating of abdomen, whole body ache, weight loss and burning sensation over scalp region associated with increased tiredness, irritation, dry rough skin and Hair loss since last 8 years.

Patient was apparently well 8 years back, in 2015 she went for higher studies to Cambridge university London, after 2 months because of variation in atmospheric temperature suddenly patient noticed bilateral knee joint pain and swelling and she was not able to walk, for these complaints she consulted doctor on Online, they advised vegetable diet, she continued the same for 20 days and she felt mild improvement in her symptoms. After 2 months she discontinued diet and she was fine 2 months, after that she noticed throat pain and irritation while speaking, for these complaints patients consulted Manipal Hospital in Udupi, their they advised FNAC and thyroid profile and diagnosed as Hashimoto Thyroiditis (anti TPO- >1300, TSH>100) and prescribed Tab. Thyronorm 50 mcg (Levothyroxin). Patient continued same medication for 5 years.

In 2020 patient shifted to Bangalore and consulted Endocrinologist they increased dose of Tab-Thyronorm to 75 mcg, she consulted same endocrinologist for 3

years. Once the TSH level is raised again they again increased the dose of Thyronorm to 125mcg and she continued the same. Again in 2021, she developed irregular bowel habits, hair fall, burning sensation over scalp and bilateral soles for these complaints she consulted Gastroenterologist they advised endoscopy and Vit-B12 inj. But she denied undergoing endoscopy. Again in 2022 she developed whole body pain, irregular bowel habits so she consulted Naturopathy doctors they advised diet for 6 months, she continued same for 6months and after that she noticed marked weight loss from 62 kg to 47kg. Again she consulted Ayurveda physicians and they advised Tab. Anuloma DS, Tab. Abhra Loha, and Cap. Imunocin, she continued same medications for 2 months but she did not noticed much relief in her symptoms, so she consulted OPD in SKAMCH & RC, Bengaluru.

Patient is a known case of Hashimoto thyroiditis since 8 years on regular medication (Thyronorm 125 mcg) at morning daily before food. There is no history of Diabetes Mellitus, Hypertension, Cardiac problem or any other complicated diseases and there was no relevant family history of Thyroid disorders. The appetite is reduced, sleep is disturbed, bowel is irregular and micturition is 4 to 5 times per day. All the vitals and systemic examination were within normal limits.

Thyroid Gland Examination

On Inspection Localized Temperature - Normal

Swelling - Absent Tenderness - Absent

Pallor - Present on Auscultation

On palpation Bruits - Heard on Thyroid Gland

Size - Normal

Shape - Normal

Clinical Findings

In her initial presentation, the patient had poor built, reduced sleep, moderate appetite, *Visamagni* (~unstable digestive functions), constipated bowel, clean tongue and clear voice. Her intelligence was normal and had a *Vata-Piitaja Prakriti* with *Avara Sara* (~least purity of body tissue), *Avara Samhanana* (~

least body built), *Sama Pramana* (~equal body proportions), *Madhyama Satmya* (~medium suitability or homologation), *Madhyama Satva* (~medium psyche), *Madhyama Vyayama Shakti* (~medium physical endurance), and *Madhyama Aharasakti* and *Jaranashakti* (~medium food intake and digestive power). Cardiovascular, Respiratory, Musculoskeletal, and Genitourinary system examinations were normal. Where as in integumentary system examination, the skin was dry and Hair fall since 8 years.

Therapeutic Intervention

Considering nature of the disease, a two-dimensional approach was planned to arrest the progress of disease and to improve in symptoms. The first course of treatment was given from 4th February 2023 to 8th February 2023 [Table 1]. Internally *Arogyavardhini Rasa*, *Pippalyasava*, *Hamsapadadi Kashaya*, *Ashwagandharishta* was given. *Gandharva Hastadi Taila* (25ml) was given with warm milk on 3rd day for *Koshta Shuddhi*. Along with these, externally *Shiro Takradhara* with *Jatamamsi Musta Amalaki Churna + Takra*, *Sarvanga Abhanga* with *Yashtimadhu Taila* followed by *Sarvanga Bhashpa Sweda* is given for 5 days.

In 2nd course of treatment *Virechana* was planned from 9th February 2023 to 16th February 2023 and advised *Samsarjana karma* for 5 days. [Table 2]. *Snehapana* was done with *Kalyanaka Ghrita + Sukumara Ghrita* for 4 days, *samyak snigdha lakshanas* are attained on 4th day. *Sarvanga Abhaynga* with *Yashtimadhutaila* was done for 3 days during *Vishrama Kala*, 4th day after *Sarvanga Abhyanga* and *Bhashpa Sweda*, 70 grams of *Trivrut Avalehya* was given with 100 ml *Triphla Kashaya*. Patient has attained 16 *Vegas* and advised *Samsarjana Karma* for 5 days.

Third course of treatment was started from 21/2/2023-21/5/2023. During this course internal medications, Tab. *Arogyavardhini Rasa* (2BD, After food), *Hinguvachadi Churna* (1 tsf of *Churna* with butter milk, before food), *Pippalyasava + Hamsapadadi Kashaya + Balarishta* (9tsf BD with equal quantity of water, after food) and *Sukumara Ghrita* (1tsf with hot water, empty stomach early morning) was given for 1 month.

Table 1: First course of treatment

Date	Internal Medicine	Dose	Procedure	Outcome
31/1/2023 - 8/2/2023	1.Tab. <i>Arogyavardhini Rasa</i> 2. <i>Pippalyasava</i> + <i>Hamsapadadi Kashaya</i> + <i>Balarishta</i>	2 tab BD 30ml with equal quantity of water, after food	1. <i>Shiro Takradhara</i> with <i>Musta</i> , <i>Amalaki</i> & <i>Jatamansi</i> 2. <i>Sarvangana</i> <i>Abhyanga</i> 3. <i>Sarvangana</i> <i>Bashpa Sweda</i>	1.Whole Body pain reduced completely. 2. Body stiffness reduced 3.Sleep improved 4. Hair texture improved 5.Felt calmness
5/2/2023	<i>Gandharva Hastadi Taila</i>	25ml with warm milk	-	1. 4 episodes of loose stools 2.Bloating reduced

Shiro Takradhara with *Musta*, *Amalaki* and *Jatamansi* was done for 20min and whole body *Abhyanga* with *Yashtimadhu Taila* was done for 40min followed by *Sarvangana Bashpa Sweda* until *Samyak Sweda Lakshanas* attains. Internal medications were advised along with above procedures.

Table 2: Second course of treatment

Date	Internal Medicine	Dose	Procedure	Outcome
9/2/2023 - 21/2/2023	-	-	1. <i>Snehapana</i> with <i>Kalyanka Ghrita</i> + <i>Sukumara Ghrita</i> in <i>Arohana Krama</i> for 4 days 2. <i>Vishramakala - Sarvangana</i>	1.Appetite improved. 2.Sleep improved. 3.Lightness in body. 4.Dryness of skin reduced.

			<i>Abhyanga</i> with <i>Yashimadhu Taila</i> followed by <i>Bhashpa Sweda</i> for 3 days. 3. <i>Virechana</i> with <i>Trivrut Avalehya</i> 70 gram + 100 ml <i>Triphala kashaya</i> . 4. <i>Samsarjana Karma</i> for 5days	5.Constipation persists. Hb - 11.2gm/dl TSH - 6.250mIU/L
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Table 3: Third course of treatment

Date	Internal Medicine	Dose	Procedure	Outcome
21/2/2023 - 21/5/2023	1.Tab. <i>Arogyavardhini Rasa</i> 2. <i>Pippalyasava</i> + <i>Hamsapadadi Kashaya</i> + <i>Balarishta</i> 3. <i>Hinguvachadi Churna</i> 4. <i>Sukumara Ghrita</i>	2 tab. BD 30ml with equal quantity of water, after food 6 grams of <i>Churna</i> with <i>Takra</i> , BD, Before food 10ml with hot water, morning empty	-	1.Complete evacuation of stool 2.Bloating of abdomen reduced 3.Burning sensation in scalp and all over body reduced. 4.Appetite improved. 5. Hairfall reduced

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OBSERVATIONS

Clinical features, Serum Thyroid Function Test (TFT) values, Anti TPO and TSH levels were assessed before and after the treatment. Patient reported lightness in body, changes in hair texture and relief in irritation after *Shirodhara* and *Sarvanga Abhyanga*. Constipation and dryness of skin was reduced during *Snehapana*. Patient noticed improvement in appetite, sleep, dryness of skin, enhanced complexion, body pain and TSH Levels after *Virechana*. After administration of *Shamana* drug symptomatic relief was maintained.

After two months follow up, **Anti TPO** level comes down to **185.2 IU/ml** and **TSH** level to **68.30mIU/L**. No recurrences of previous symptoms were observed till date. The treatment made a pleasing improvement in patient’s quality of life.

Table 4: Effect on TFT and Thyroid Parameters

Parameters	Normal values	Before treatment (9/11/2021)	After treatment (17/6/23)
TSH (mIU/mL)	0.4 - 4.2	>100	68.30
T3 (ng/dl)	80 – 200	0.85	0.57
T4 (µg/dl)	4.6 - 10.5	4.92	4.98
Anti TPO (IU/ML)	<34 U/ml	>1300.0 IU/ml	185.2
Anti Tg (U/ML)	<60	147.80 U/ml	-
Hb%	12-16gm/dl	9.8gm/dl	11.2gm/dl

DISCUSSION

Hashimoto Thyroiditis is the most common cause of Hypothyroidism in the United States and in those areas of the world where iodine intake is adequate. The incidence is estimated to be 0.8 per 1000 per year in men and 3.5 per 1000 per year in women. Women are more often affected. The female-to-male ratio is

10:1.^[12] Women are diagnosed between the ages of 30 to 50 years. Autoimmunity is the main culprit in Hashimoto Thyroiditis, impairing cellular metabolism. As HT is unique and rare case of Autoimmune disease, use of immuno-modulatory, anti-inflammatory drugs and other molecules that clears the nutrition pathway through correction of digestion and metabolism will help in breaking the pathology.

Many clinic patients complain of poor quality of life and fatigue, which are often associated with mood alterations and poor memory are common complaints, often prompting subjects to obtain standard or alternative thyroid hormone preparations. An unmanaged autoimmune condition causes chronic inflammation, the brain neurons are not able to function properly. Hence severely hypothyroid patients present with agitation and frank psychosis (“myxedema madness”).^[13]

The development of Hashimoto Thyroiditis is thought to be of autoimmune origin, with lymphocyte infiltration and fibrosis as typical features.^[14] The current diagnosis is based on clinical symptoms correlating with laboratory results of elevated TSH with normal to low thyroxin levels. In Autoimmune disorders, *Agni* plays a major role in its pathogenesis and the manifestation of symptoms. Hence one can interpret the pathogenesis of HT in the context of Ayurveda, in which the role of *Agni* is foremost and through its management, normal functioning of the thyroid gland is achieved.

Ayurveda and modern medicine are derived from different theories of knowledge, especially in regards to their method of scope. Therefore, the approach to a particular disease and diagnosis differs extensively making it quite impossible to make it one to one correlation or pick up one equivalent term. At the same time without an Ayurvedic diagnosis it is difficult to visualize the complete treatment for the patient. Hence it is necessary to understand the disease in terms of *Nidana*, *Dosha*, *Dushya* as well as stages of progress of the disease for succeeding treatment.

On analysis of signs and symptoms, the patient was found to have *Lakshanas* of *Dhatwagnimandya*, *Rasa*

Pradohaja Vikara, Pittavruta Vata and Vataja Pandu. Hence an apt treatment in this condition is *Dhatwagni Pachana, Agnideepana* and *Vatanulomana*. Patient was responding positively to *Deepana* and *Pachana* (corrects digestion and metabolism through augmenting the digestive fire) and *Virechana* (Purgative) treatment procedures. Thus, the patient was treated on the line of mitigation of and pacifying *Vata (Vata Anulomana)*. As the patient was having vitiation of *Pitta* and *Vata - Deepana, Pachana and Vatanulomana* line of management was included in the protocol. *Agni Deepana* (kindle digestive fire) was done initially to correct the digestion and metabolism.

Masthishky - Shirodhara

Shirodhara is a classical, a well-established and widely practicing Ayurvedic procedure of slowly and steadily dripping medicated oil or other liquids on the forehead. By means of *Abhyanga* as a *Purvakarma* of *Shirodhara* would derive better results. It has anti-stress effect and it is effective in reducing serum TSH levels.

Sarvanga Abhyanga with *Yashtimadhu Taila* helps in mobilization of accumulated muco-polysaccharides and fat metabolism. Further it provides nourishment to the skin which reduces the dryness caused due to Hypothyroidism.

In this case patient's stress was one of the major symptom. Stress affects the HPA axis and the level of various hormones changes in response to stress. Reactions to stress are associated with enhanced secretion of a number of hormones including Glucocorticoids, Catecholamine's, Growth Hormone, Prolactin and Cortisol. Cortisol is the main hormone produced in response to stress, can suppress pituitary function and keep the thyroid-stimulating hormone (TSH) from being released, thereby inducing hypothyroidism.^[15] Hence *Shirodhara* has therapeutic role in the management of HT caused due to stress.

Snehapanokta Virechana

In this case, most of the symptoms are similar to that of *Vataja Pandu* and in *Pandu Chikitsa, Virechana* is the best line of management. Hence *Virechana* was

advised in this condition. For *Kapha Dosha* and *Kapha Samsrishta Dosha* in *Pitta Sthana, Virechana Karma* is considered as best line of purificatory measure and best *Srotoshodhaka*.

Virechana is a form of *Shodhana* which is done for the elimination of *Vikruta Pitta* and *Kapha* and *Anulomana* of *Vayu*. Drugs capable of inducing *Virechana* possess *Ushna, Teekshna, Sukshma, Vyavayi* and *Vikasi* properties. The *Virechana* drug possessing the above properties reaches, *Hrudaya* by virtue of its *Virya* and spreads all over body. Here *Hrudaya* can be understood in 2 ways. Here *Hrudaya* can be taken as centre of nerve plexus in the brain upon which the drug may act which helps in balancing the Hypothalamo-Pituitary-Thyroid Axis causing normal secretion of Thyroid Hormone. In Hypothyroidism there will be derangement in basal metabolism which in turn leads to the accumulation of non-metabolized products such as muco-polysaccharide (hyaluronic acid) this Hyaluronic acid is hygroscopic in nature. In Hypothyroidism this mechanism is hampered making excess accumulation of muco polysaccharides in the body.^[16]

As *Kalyanaka Ghrita*^[17] is indicated in *Pandu* and *Sukumara Ghrita*^[18] is indicated in *Galaganda, Arbuda, Gulma* here in this study these *Yamaka Sneha* was advised. *Trivrat Avalehya*, which is used as the *Virechana Dravya* in the study has action such as Anti-inflammatory, Anti-pyretic, Anti-histamine, anti-helminthic, blood purificatory, mast cell stabilizing which reduces the secretion of mucous from GIT tract. The diaphoretic activity increases the secretion of sweat by increasing temperature and perspiration. Due to this the peripheral metabolism is increased at this the toxic and metabolic by products are drained into circulation with the help of peripheral Vaso-dilatation. In Hypothyroidism as muco-polysaccharides are accumulated this is brought into circulation and reaches liver for metabolism. The purgative activity of *Trivrat Avalehya* because of presence of glycoside, it eliminates all the contents from GI tract. Once the Gastrum is emptied all the digestive enzymes will be properly synthesized and metabolism is corrected gradually thus regulates the TSH production. After

Virechana Karma, Samsarjana Krama advised for 5 days later, *Shamanoushadhi's* advised for 2 months.

Arogyavardhini Rasa

Arogyavardhini Rasa mainly contains mineral drugs like *Parada, Gandhaka, Loha, Abraka* all mainly ability to reach minute capillaries and tissue pores. *Parada* is such drug can transfer the blood brain barrier and there it acts on target site. Hence it has direct action over endocrine system. At the level of Thyroid gland and controls its secretions. *Loha Bhasma* and *Abraka Bhasma* and *Tamra Bhasma* all these are *Balya, Ayushya, Vrishya* and *Medhya, Dhatwagnivardhana, Malashodhaka* and *Pakwashyadushtinashka* helps in building immunity in the individual.^[19] *Gandharva Hastadi Taila* does *Vatanulomana*, thus helpful in *Koshtashuddi*.^[20]

Combined effect of *Pippalyasava, Hamsapadadya Kashya* and *Balarishta* shows better results on *Ama* and *Agni*.

Hingwashtaka Churna

Hingwashtaka Churna, which is mentioned in *Ashtanga Hrudaya, Gulma Chikitsa* which was given for 15 days. As it is indicated in *Jatharagni Mandhya* and *Vataja Gulma*, this case patient had indigestion, bloating of abdomen and incomplete evacuation of stool hence *Hingwashtaka Churna* was advised.^[21]

Sukumara Ghrita

As in this study, *Vataja Pandu, Vataja Grahani* and *Jeerna Jwara* line of treatment was adopted, hence in all these conditions *Ghritapana* is a choice of drug. *Ghritapana* is considered as best *Dravya* in treating chronic conditions. *Sukumara Ghrita* can be administered in conditions like, *Shopha, Vid Vibandha* and *Gulma*. Subjects shows improvement in bowel habits, appetite after *Ghritapana*.

Pippalyasava

Agnimandya and *Amadosha* are the important cause for much disease. Most of the drugs in *Pippalyasava* possesses *Ushna Virya, Tikta Rasa, Katu Vipaka, Laghu Guna* due to these properties it does *Amapachana* and improves status *Agni*. *Pippalyasava* is very good

remedy which cures *Kshaya, Gulma, Udara, Karshya* and *Panduta*.^[22]

Pippali acts as a *Rasayana* in case of Hypothyroidism. *Agnimandya* at *Koshta* level can be addressed by *Agnideepana Kalpanas* like *Rasayanas*. *Rasayana* work at *Dhatwagni* level correcting *Dhatwagnimandya* which are seen in Hypothyroidism like endocrine disorders. *Rasayana* drugs can be given in suitable formulations considering *Dosha* status and *Vyadhi Awastha* of patient.

Hamsapadadya Kashaya

Hamsapadyadi Kashaya^[23] is a formulation described in *Vaidya Manorama* - an ancient text of Kerala for *Galaganda* and *Gandamala* is widely practiced by many *Ayurvedic* physicians in *Kerala* and other parts of the state across the country. It contains *Hamsapadi, Guduchi, Nimba, Pippali, Vasa* most of the drugs possess *Katu, Tikta, Kashaya Rasa, Laghu, Ruksha, Tikshna Guna, Ushna-Sheeta Virya* and *Katu Vipaka*.

Katu Rasa is *Agni Deepaka, Tikta Rasa* is *Deepaka* as well as *Pachaka* and hence it does *Agni Deepana* and *Amapachana*. Hence in the pathogenesis of the HT, where the *Kapha* and *Vata* are important *Dosha, Rasa* and *Meda* are the most important *Dushyas* and the pathology is due to *Dhatvagnimandhya*, the drugs present in *Hamsapadyadi Kashaya* seems to useful in combating the pathogenesis involved in the disease as well as relieving the symptoms exhibited in this condition.

CONCLUSION

HT is an Autoimmune disease in which thyroid gland is gradually destroyed. The two antibodies most commonly implicated in autoimmune thyroiditis are antibodies against thyroid peroxidase (TPO Ab) and thyroglobulin (Tg Ab). They are hypothesized to develop as a result of thyroid damage, where T-lymphocytes are sensitized to residual thyroid peroxidase and thyroglobulin, rather than as the cause of thyroid damage. Some patients who are healthy or asymptomatic may be positive for more than one of these antibodies. Doctors who attend to such patients will most likely monitor these patients as there is a

chance that they will develop some type of dysfunction with time. The Range of physical and psychiatric presentations and their potential subtle manifestations make HT a diagnosis easy to miss.

Although no disease condition similar to Hashimoto Thyroiditis is described in *Ayurveda*, using *Yukti* (skill) it can be considered as a condition which results due to *Dhatvagni Mandhya*, *Rasa Pradoshaja Vikara*, *Pittavruta Vata* and *Vataja Pandu* based on symptoms condition can be managed using *Yukti*. In this case study *Deepana*, *Pachana*, *Vatanulomana*, *Vataja Pandu*, *Vataja Grahani* and *Jwara* line of management was adopted based on symptoms. Purification (*Shodhana*) followed by palliative therapy was found as a suitable treatment plan to manage HT. *Virechana* procedure is the common adopted purificatory process with maximum efficacy. There was a significant improvement in majority of symptoms and TSH Levels after treatment. The sustained effect is maintained during follow up periods. *Sarvanga Abhyanga*, *Shirodhara* followed by *Virechana* and *Shamanoushadi's* provided better results on both physical and mental ailments.

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