Case Study

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EFFECT OF POLY-HERBAL MEDHYA RASAYANA DRUGS AND KANCHANAR GUGGULU IN THE MANAGEMENT OF HYPOTHYROIDISM: A CASE STUDY

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ABSTRACT

Hypothyroidism is a common disorder of the endocrine system in which the thyroid gland does not produce enough thyroid hormone. Females have to be more affected than males. The leading cause is physical and mental stress. Physical stress relates to lifestyles such as fast food, disturbed sleep patterns and environmental risk factors. Mental stress arises from work pressure, emotional weakness, and grief from disputes. The symptoms are quite variable depending on the severity of the hormone deficiency. Chronic fatigue, loss of appetite, weight gain, puffiness on the face, weakness and hoarseness of voice symptoms were found in this case study. In Investigation T3, T4 was found normal, and TSH was higher than the normal level. Ayurveda is vital in ruling out the underlying cause and treating it. In Ayurveda, it can be correlated with agnimandhya, kapha - vata vriddhi, pitta kshaya and rasavaha, medovaha and manovaha srotasa dushti. In this case study, the leading cause was stress in patients. Primary aim was to manage hypothyroidism with Ayurvedic medicines. The patient was treated with medhya rasayana drugs and kanchanar guggulu. The present study has focused effectiveness of polyherbal Ayurvedic therapy in hypothyroidism.

Keywords: Hypothyroidism, Stress, Agnidushti, Medodhatavagni mandhya, Medhya Rasayana, Kanchanar Guggulu.

INTRODUCTION

Hypothyroidism refers to the common pathological condition of thyroid hormone deficiency. Clinical primary hypothyroidism is defined as thyroid-stimulating hormone (TSH) concentrations above the reference range and free thyroxin concentrations below the reference range. Mild or subclinical hypothyroidism, commonly regarded as a sign of early thyroid failure, is defined by TSH concentrations above the reference range and free thyroxin concentrations within the normal range[1]. Thyroid hormone replacement with levothyroxine is the standard treatment for patients with hypothyroidism.

Hypothyroidism is the most common form of thyroid disorder and is a very commonly encountered problem in clinical practice. It is arguably, among the commonest endocrine disorders worldwide. India, too, is no exception. According to a projection from various studies on thyroid disease, in India, 42 million people suffer from thyroid disorders, out of which hypothyroidism is most familiar, with a prevalence of 5.4% [2].

It is more prevalent among females, with the male-female ratio being 1:6. [3] Eight types of nindita purushas [4] and avranas [5] can be described based on hormonal disorders. If we try to have keen insight into the pathogenesis of hypothyroidism according to the principles of Ayurveda, we find that it is caused due to misfunctioning of the agni. Hypo functioning of jatharagni, which in turn affects dhatvagni, eventually brings out pathological sequence and ultimately, the diseased condition develops. According to Acharya Vagbhata, looking into its doshika dominance, kapha associated pitta dushti with vitiation of vata due to margavarana, and predominantly rasa-vaha, medo-vaha and mamsa-vaha srotodushti can be considered as a cause of the disease.[6] Despite many advances, the modern management of hypothyroidism remains unsatisfactory. Excessive thyroid hormone replacement carries the potential for long-term severe metabolic complications (accelerated osteoporosis[7] drug intolerance and hypersensitivity[7] the danger of acute and chronic complications). The most important thing is searching for safe, effective, cheaper remedies. Such remedies could be explored from the massive wealth of Ayurveda. Looking at the pathogenesis and complications of hypothyroidism requires a systemic and radical therapy for which Ayurveda may provide a ray of hope through its holistic approach. In this case, study, stress was the leading cause of hypothyroidism. So patient was treated by polyherbal medhya rasayana yoga and kanchanar guggulu.

CASE REPORT

A female patient, 38 years old, who had to work as a nurse at PHC Jamnagar, came 14/03/2020 in OPD No. 1 Kayachikitsa Depaartment Shree Gulabkunverba Ayurveda Chikitsalaya Jamnagar, India.

Case History

Patient Name - ABC
Age – 38 years
Sex – Female
Occupation – Nurse - Service
Weight – 68 kg
Height - 5-foot 1-inch

Chief Complain

Aruchi (Anorexia) – for two months
Shotha (Puffiness on face)
Anidra (Insomnia - disturb sleep)
Daurbalya (weakness)
Bhrama (Vertigo)

Constipation
Weight Gain
Sore throat
Hoarseness of Voice
History of Allergy: No
Prakriti: Pitta-Kapha
Medical History: - HBP/DM/Others - No
Current Medicine: No

Personal History
Appetite: Poor
Mala Pravrutti:3-4 times unsatisfactory passes stool.
Mutra Pravrutti: 6-8 times/day, one time/Night
Sleep: 6-8 hours disturbed and Delayed
Menstrual History: 4-5 days/1 month
Agni: Manda Jatharagni mandhya
Mental status: Excessive thinking, irritation and stress due to excessive work and family problems.

Vital Sign
Pulse: 82/minute
BP: 130/80mmHg
RS: 18/minute
Temperature: 98.6 ^{0}F.

RS- Normal
CNS –Conscious
CVS – S1S2 sound normal.

All routine investigation of the patient was within normal limits.

History of Present illness
The patient came on 14/03/2020 with the complaint of weakness, vertigo, aruchi and katishoola for one month. The patient was treated with an appetizer, pittashamak and painkillers.

At 2nd time patient came on 13/06/2020 with complaints of sore throat, puffiness on the face, loss of appetite and disturbed sleep due to stress. The patient has Investigated T3, T4, TSH and complete blood count.

History
No HBP/DM/TB/Epilepsy/stress or another severe disease.
No Surgical illness

Family History: No

Diagnosis
Thyroid Function test (Before treatment): 15/06/2020
T3: 1.8 ng/ml
T4: 7.60 ug/dl
TSH: 6.744 u/U/ml
The diagnosis was confirmed as the modern view of Hypothyroidism. According to Ayurveda, we have correlated Medodhatvagni mandhya (Agnimandhya, vata- kapha vriddhi, pitta kshaya).

MATERIAL AND METHODS

The patient had complained of anorexia, sore throat, hoarseness of voice, weakness, puffiness on the face, insomnia, cough, bhram and constipation for 1- 2 months.

Ayurveda Management
Medhya Rasayana: Shankhapushpi churna - 2 gm, Bhrami churna - 2 gm, Pippalimula - 500 mg, Two times a day with lukewarm water
Sitopaladi churna - 3 gm, Trikatu churna - 500 mg, Yastimadhu - 500 mg, two times a day with Lukewarm water
Kanchanar Guggulu - 2 tablets (1 tablet – 250 mg)/
3 times/Lukewarm water.

RESULT

Symptoms wise Result

Symptoms Before Treatment	7 days	14 days	21 days	28 days	37 days After Treatment
Daurbalya (Weakness)	+++	++	+	+	+
Shotha (Puffiness on Face)	+++	++	+	-	-
Aruchi (Anorexia)	++	+	-	-	-
Swarbhed (Hoarseness of voice)	++	+	-	-	-
Anidra (Insomnia)	++	++	++	+	+
Kasa (Cough)	++	+	+	-	-
Bhrama (Vertigo)	++	+	+	-	-
Vibandha (constipation)	++	+	-	-	-
Weight	68 kg	68 kg	68 kg	67 kg	65 kg

Investigation wise Result

Investigation	Before Treatment	After Treatment	Normal Value
	Dated 15/06/2020	Dated 24/07/2020	
T3	1.8 ng/ml	2.8 ng/ml	0.6 -1.81 ng/ml
T4	7.60 ug/dl	8 ug/dl	4.5-12.6 ug/ml
TSH	6.744 u/IU/ml	3.287 u/IU/ml	0.55- 4.78 u/IU/ml

DISCUSSION

There is no direct reference to hypothyroid get in Ayurveda, but According to signs and symptoms, we can correlate with medodhatvagni mandhya (agnimandhya, vata-kapha vriddhi, pitta kahaya). Hence the drugs used were brain tonic, vata-kaphahar, and agnideepana, and symptoms-wise treatment was given to the patient.

Pathya and Apathya management are essential

Pathya- Light diet, food rich in vitamin A and D, iodine rich diet. Increased physical activities and aerobic exercises in yoga-sarvangasan, matsyasan, halasan, and suryanamaskar- were helpful.
Apathya – Cabbage, cauliflower, soybeans, pears, heavy fried and fast food, oversleeping.

Samprapti Ghataka

Agni: Jatharagnimandhya
Dosha: Vata- Kapha vriddhi, pitta kshaya
Dushya: Rasa, mamsa, meda
Srotasa: Rasavaha, mamsavaha, medovaha, manovaha
Roga Marga: Aabhyantar
Vyakti sthana: Sharira

Samprapti

Hypothyroidism mainly occurs due to stress and vitiation of vata and kapha doshas. This vitiated doshas derange the jatharagni (digestive enzymes etc.), ultimately leading to the production of ama and lastly vitiates medadhatu. This ama blocks the channels (srotorodha) in the body. Lethargy, fatigue, weight gain, weakness, glandular enlargement etc., symptoms are mainly occurred due to accumulation of kapha and medadhatu due to srotorodha. Constipation and muscle pain are seen due to vitiated vata dosha by avarana.

Mode of Action of Drugs

Medhya Rasayana drugs: Shankhapushpi has snigdha guna, which decreased vata dosha and enhanced dharana karma. Deepana properties improve the function of agni. tikta rasa helps in ama pachana, so it clears obstruction in channels and improves dhatuvriddhi. Brahmi, shankhapushpi and pippalimoola have snigdha and medhya properties, which pacify vata dosha and balya; medhya and rasayana properties enhance sattva guna. It elevates the manasika dosha like bhaya, shoka etc. and relieves stress.[8]

A pharmacological study proved that it improves the motor learning process in rats and is a tranquillizer (Ganguli *et al*.). Depletes brain monoamines, especially noradrenaline and serotonin.

So, Brahmi helps to improve sleep patterns and relieve stress. Effect of shankhapushpi on various glands through neurohumors and reduce stress. Significant result in anxiety level was found, which established its psychotropic property. Pippalimula is kapha-vata shamaka due to its katu Rasa and ushna virya. It is helpful in Insomnia. These all medhya-rasayana drugs improved mental performance and high central nervous system function and relieved stress, anxiety, and depression, as well as controlled the secretion of hormones of the thyroid gland.

Kanchanar Guggulu: It regulates hormonal imbalance and affects the thyroid gland's normal functioning. It is effective in balancing vata-kapha. Its bitter, astringent, and pungent taste of guggulu helps in kapha-vatahara, enhances metabolism, decreases swelling and helps in losing weight. It helps in maintaining the secretion of thyroid hormones and reduces swelling caused due to goiter.

The primary ingredients of kanchanar guggulu are guggulu (50%) and kanchanar (25%). Kanchanar is a valuable plant, used since ancient times to reduce body growth and strengthen the glandular system. It has ruksha (dry), laghu (light), gunas, kasaya rasa (astringent taste), katuvipaka (pungent in post digestive taste), but its prabhava (special effect) is gandamalanashan (effective in cervical lymphadenitis, thyroid and glandular enlargements etc.). Kanchanara has a remarkable ability to dry up the vitiated kapha and meda because of its potent astringent property. Its grahi (enhancing absorption) property helps to remove excess fluid from swollen tissues. It helps correct the thyroid imbalance by removing kapha from the body. It is a drug for all granthi vikara (glandular diseases) and galaganda in Ayurveda.

Guggulu is the best vata and medohara (hypolipidaemic) drug in Ayurveda. It has rukṣha, laghu and sukṣhma (minute), guṇas, uṣṇavirya (hot potency), kaṭuvipaka and lekhana (scraping properties having thermogenic activity) property.

Overall, kanchnar guggulu subsides the kapha and medadushti and helps to reduce the swelling in the thyroid gland and supports the jatharagni. It helps to reduce or break down the deep-seated kapha dosha and medadhatu and clears the obstruction of channels (srotorodha). In this way, it restores the functions of this gland, prevents weight gain and puffiness of the face, and corrects hoarseness of voice, menstrual abnormalities and constipation caused due to hypothyroidism.[9]

Sitopaladi churna, trikatu churna and yastimadhu churn are kapha vata hara, increase appetite, helpful in digestion, helpful improve the function of the throat and relieve swarbhed. Trikatu is beneficial to clear the obstruction from channels.

CONCLUSION

Stress is the main cause of hypothyroidism found in this case study. Due to stress, increased vata dosha, agnimandhya, and ama formation obstructed rasavahasrotas, mansa vahasrotasa, medovahasrotasa and manovahasrotas. The effect of medhya rasayana drugs was relieving stress and improving the function of agni, digestion, clearing the obstruction in channels and thyroid gland.

Effect of kanchnar guggulu was found kapha-vatahar, decreased swelling and reduced weight.

So, in this case study, it is concluded that herbal drugs can treat Hypothyroidism.

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