

Effect of *Gandharvahastadi Eranda taila* in *vardhamana krama* in Management of Thyroid Dysfunction

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Abstract: Introduction: Thyroid is an endocrine gland responsible for the formation and secretion of the thyroid hormones as well as iodine homeostasis within the human body. The thyroid produces approximately 90% inactive thyroid hormone, or thyroxine (T4), and 10% active thyroid hormone, or triiodothyronine (T3). Hypothyroidism is a condition where the thyroid gland does not produce adequate quantity of thyroid hormones. This leads to an increase in production of the thyroid stimulating hormone produced by anterior pituitary gland. Symptoms such as tiredness, constipation, dry skin, weight gain, hoarse voice, coarse hair and skin, muscle weakness, aches, tenderness and stiffness, menstrual cycles that are heavier than usual or irregular, thinning hair, bradycardia, depression, and memory problems are seen. Methods & Materials: A 19yr. old female patient with complaints of giddiness and tiredness early in the morning, muscle cramps, pale and dry skin, dry scalp and hair, dry lips, cracked heel and polydipsia, reduced appetite, hair fall, swelling in the neck approached to benefit from ayurveda treatment. She was administered 500ml of Gandharvahastadi Eranda tailain VardhamanaKrama for a period of one month along with shadangapaneeya as an alternative to water. Result: Significant changes in the presenting symptoms were seen. Symptom of excessive thirst was reduced, appetite increased, there was reduction in generalized tiredness and giddiness, the swelling in the neck was absent, scalp and skin dryness were reduced; reduction in frequency and intensity of muscular cramps was observed. Menstruation was regularized with 35 days cycle. Clinical investigation of TSH value showed normal findings. Discussion: Symptoms associated with thyroid dysfunction as a Vyadhi are not restricted to a single srotas. Hence, it becomes critical for a Vaidya to meticulously observe the assess the subject and analyse the Doshavastha, Rogamarga, Srotodushti and Nidana Panchak accordingly. The symptoms seen in the above - mentioned subject revealed the dushti of rasavaha and udakavahasrotas. Shadangapaneeya is indicated in jwarachikitsa in treatment of pipasa and jwara. Gandharvahastaditaila is indicated in Chikitsa of udavarta, it is swabhavavat - vatahara and has the effect of Meda/ Asruk/ Pitta/ Kapha Avrut Anilahara, and it has been mentioned that this Yoga even finds its utility in Mrdu Koshta & Alpa Bala individuals when used along with Bhojana. In the above - mentioned case, it played a vital role in achieving the effect of Vata anulomana, Snehana and agnideepana. So, the desired result of Trishna Hara, Vata Anulomana, SrotoShodhana, Deepana, Pachana along with Snehanawas achieved with these two Yoga.

Keywords: Thyroid dysfunction, Gandharvahastadi Eranda Taila, ShadangaPaneeya, Medo Dhatu

1. Introduction

In Ayurveda, the strength and efficiency of Agni are critical factors in determining overall health and well - being. Poor digestion and a weak Agni can lead to various health issues, digestive problems, low energy levels, and weakened immunity. As Acharya Vagbhata stated *Sarvarogo Mandanala*¹, meaning, all the diseases arise due to derangement of the metabolic fire in the human body, indicating Agni acts the main decider of health and disease.

Body is said to be made by the network of Srotas². The *UdakavahaSrotas* primarily carry the water element in the body, including all bodily fluids such as plasma, lymph, saliva, and sweat. They are responsible for maintaining the proper hydration levels of the body and ensuring the smooth functioning of various bodily processes that involve fluids, such as digestion, absorption, and elimination.

One among the endocrine glands is the thyroid. Its position is in the inferior, anterior neck, and it oversees the body's iodine balance as well as the production and secretion of thyroid hormones. Thyroxine (T4), which is 90% inactive and triiodothyronine (T3), which is 10% active, are both produced by the thyroid³. Any deviation from this gland's typical function might result in the conditions hyperthyroidism and hypothyroidism.

Underactive thyroid, low thyroid are other names for the endocrine condition known as hypothyroidism, which is distinguished by insufficient thyroid hormone synthesis by the thyroid gland. It demonstrates that it can cause a wide range of symptoms, including decreased appetite, slowed metabolism, fatigue, constipation, a slow heartbeat, depression, and weight gain.

The HPT axis (Hypothalamic - Pituitary - Thyroid axis) is a complex feedback loop that regulates the production and release of thyroid hormones. The HPT axis works through a negative feedback loop, where in adequate levels of thyroid

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hormones in the blood, decrease the production of TRH and TSH in the hypothalamus and pituitary gland⁴, respectively, to prevent overproduction of thyroid hormones and low levels of thyroid hormones in the blood, the HPT axis is activated to increase the production and release of thyroid hormones.

2. Material and methods

A 19yr. old female patient hailing from Hassan, Karnataka, India with complaints of giddiness and tiredness early in the morning, muscle cramps, pale and dry skin, dry scalp and hair, dry lips, cracked heel and polydipsia, reduced appetite, hair fall, swelling in the neck approached to be benefited from ayurveda treatment.

She was advised ayurvedic treatment and regimen, details of which have been mentioned below.

3. Case Report

Chief complaints

Patient complaints of muscle cramps in calf muscles, early morning tiredness and giddiness and on examination the patient had pale and dry skin, dry scalp and hair, dry lips, cracked heel. On questioning patient complained excessive thirst, reduced appetite, and hair fall

History of Presenting Complaints

Patient was apparently healthy two years ago, she developed amenorrhoea for 3 months and consulted a local clinic, where blood investigations were advised; Investigations revealed hypothyroidism with TSH: 6 mIU/l and was put on medication Thyronorm 12.5mcg 1 OD, the subject continued the medicine for 1 year, in the meantime she also suffered from Covid 19 infection for which she took antipyretics and recovered within a week. Post one year, investigations were repeated and TSH was 8.253mIU/l, hence the medications such as thyronorm was continued, bethoxicine (25mcg), calcium supplements were advised. Due to the above medications, time duration between two menstrual cycles increased from 28 days to 60 days, other presenting complaints persisted. For these complaints, she approached to benefit from *Ayurveda* treatment.

Family history

Mother's diet drastically changed after marriage as she shifted from Bangalore to Sagar post marriage. During the mother's pregnancy, the mother developed two kidney stones in her 7th month/ 3rd trimester. Mother currently suffers from Thyroid dysfunction and is on medication.

Pareeksha

During pareeksha the following was observed:

Ashta Sthana Pareeksha

- *Nadi: vata - kaphaja*
- *Jihwa: lipta* (posteriorly)
- *Mootra: Increased*

- *Mala: Constipated, once per day*
- *Shabda: prakruta*
- *Sparsha: Ruksha*
- *Drik: Pale*
- *Aakriti: Avara*

Dashavidha Pareeksha

- *Prakruti: Vata - Kapha*
- *Vikriti: medo dhatu andartava*
- *Saara: madhyama*
- *Samhanana: avara*
- *Satmya: jainfood*
- *Satva: madhyama*
- *Pramana: avara*
- *Ahara shakti: avara*
- *Vyayama shakti: avara*
- *Vaya: bala*

Nidana

The patient was apparently healthy until she graduated from her pre - university. She opted for 'long term' and stayed at home to prepare for competitive exams. She disrupted her sleep cycle and would often sleep around midnight (*Ratrijagarna*) and woke up post 9 am in the morning (*diwaswapna*⁵). She often used to sleep during the day (*Diwaswapna*). Patient used to usually skip her lunch (*Vishamashana, akala bhojana*⁶, *anashana*) and have food when not hungry (*Adhyashana*). She regularly consumed curds (*Dadhi*). She was under stress (*Chinta*⁷). Due to these reasons, she developed amenorrhoea for three months.

Roopa

*Klama*⁸

*Agni mandya*⁸

*Mukha shosha*⁸

*Aruchi*⁸

Atitrushna (Thirst was measured using nine - point (1 - 9) Likert scale that provided verbal anchors of 1. Not Thirsty at all 3. A little thirsty 5. Moderately Thirsty 7. Very Thirsty 9. Excessively thirsty)⁹

Kesha patana

Pindikodweshana

Anga marda

Sampraptighataka

- *Dosha - Vata Kaphaja*
- *Dushya - Rasa, Medo*
- *Updhatu - Aartava*
- *Agni - Dhatwagni Mandata of Rasa, Medas*
- *Srotas - Rasavaha, Medovaha*
- *Srotodushti - Rasavaha, Udakavaha, Medovaha*
- *Udbhava Sthana - Aamashya*
- *Adhishthana - Rasa, Medas*
- *Sanchara Sthana - Sarvasharira*
- *Vyakta Sthana - Sarva Shaareera*
- *Swabhava - Ashukari*
- *Sadhyaasadhya - Sukhasadhya*

4. Treatment

Patient was administered *Gandharvahastadi Eranda Taila* in *Vardhamana krama* starting from 5ml in shamana kala i. e, evening when hungry and this dose was increased everyday by 5ml upto 35ml and then reduced by 5ml everyday back to initial dosage of 5ml. Initially subject had loose stools and

considerable amount of bowel gas was passed but as the dose was increased loose stools and bowel gas reduced. There was gradually increase in hunger and early morning tiredness reduced. Motions were regularized eventually during treatment. *Shadanganpaneeya* was advised instead of regular water and gradually excessive thirst reduced. *Sarvanga abhyanga* was advised before bath.

Day & Date	Intervention	Dosage	Observations
Day 1 (30/7/2022)	<i>Gandharvahastadi Eranda Taila</i> [at]8: 30 pm <i>Shadanga Paneeya</i>	5ml 2 litres/day	The subject developed headache, nausea belching, bowel gas and had an episode of loose stools[at]11: 13 pm., for which she was advised <i>Shunthi Kashaya</i> and <i>peya</i>
Day 2 (31/7/2022)	<i>Gandharvahastadi Eranda Taila</i> [at]8: 30 pm <i>Shadanga Paneeya</i>	10 ml 2 litres/day	Headache persisted, <i>Vacha lepa</i> , <i>Karpoora</i> steam inhalation, <i>Shunthi Kashaya</i> , <i>peya</i> were advised.
Day 3 (1/8/2022)	<i>Gandharvahastadi Eranda Taila</i> [at]8: 30 pm <i>Shadanga Paneeya</i>	15 ml 2 litres/day	Headache appeared after intake of <i>taila</i> . <i>Shunthi Kashaya</i> , <i>peya</i> were advised.
Day 4 (2/8/2022)	<i>Gandharvahastadi Eranda Taila</i> [at]8: 30 pm <i>Shadanga Paneeya</i>	20 ml 2 litres/day	Negligible headache and nausea, bowel gas formation and 1 episode of loose stools[at]10: 00 pm, advised <i>langhana</i>
Day 5 (3/8/2022)	<i>Gandharvahastadi Eranda Taila</i> [at]8: 30 pm <i>Shadanga Paneeya</i>	25ml 2 litres/day	No headache and nausea observed, tiredness observed.
Day 6 (4/8/2022)	<i>Gandharvahastadi Eranda Taila</i> [at]8: 30 pm <i>Shadanga Paneeya</i>	30 ml 2 litres/day	1 episode of loose stools observed at 10: 30 pm, advised <i>Laghu ashana rupi Langhana</i>
Day 7 (5/8/2022)	<i>Gandharvahastadi Eranda Taila</i> [at]8: 30 pm <i>Shadanga Paneeya</i>	30 ml 2 litres/day	Pain abdomen radiating sideways after passing stools hard + loose stools, bowel gas
Day 8 (6/8/2022)	<i>Gandharvahastadi Eranda Taila</i> [at]8: 30 pm <i>Shadanga Paneeya</i>	35 ml 2 litres/day	Nothing significant observed
Day 9 (7/8/2022)	<i>Gandharvahastadi Eranda Taila</i> [at]8: 30 pm <i>Shadanga Paneeya</i>	30 ml 2 litres/day	3 episodes of loose stools and bowel gas No pain abdomen
Day 10 (8/8/2022)	<i>Gandharvahastadi Eranda Taila</i> [at]8: 30 pm <i>Shadanga Paneeya</i>	20ml 2 litres/day	Nothing significant
Day 11 (9/8/2022)	<i>Gandharvahastadi Eranda Taila</i> [at]8: 30 pm <i>Shadanga Paneeya</i>	20ml 2 litres/day	Nothing significant
Day 12 (10/8/2022)	<i>Gandharvahastadi Eranda Taila</i> [at]8: 30 pm <i>Shadanga Paneeya</i>	15 ml 2 litres/day	Bowel gas present Stools well formed Stools passed once in the morning
Day 13 (11/08/2022)	<i>Gandharvahastadi Eranda Taila</i> [at]8: 30 pm <i>Shadanga Paneeya</i>	10 ml 2 litres/day	Bowel gas reduced Stools well - formed and passed once in the morning
Day 14 (12/08/2022)	<i>Gandharvahastadi Eranda Taila</i> [at]8: 30 pm <i>Shadanga Paneeya</i>	5 ml 2 litres/day	Well - formed stools Bowel gas reduced Muscle cramps significantly reduced

Drug review

Gandharva Hastadi Eranda Taila ¹⁰

Sl. No.	Name of the drug	Botanical name	Quantity
<i>Kwatha Dravya</i>			
1.	<i>Gandharva hastha moola</i>	<i>Ricinus communis</i>	1 Tula (4.8kg)
2.	<i>Yava</i>	<i>Hordeum vulgare</i>	1 Adhaka (3.07kg)
3.	<i>Nagara</i>	<i>Zingiber officinale</i>	1/2 Kudava (96 gm)
4.	Water for decoction		1 Drona (24.58 lt)
5.	<i>Ksheera</i>		2 Prastha (1.54 lt)
<i>Kalka Dravya</i>			
1.	<i>Gandharva hasta moola</i>	<i>Ricinus communis</i>	1 Kudava (192 gm)
2.	<i>Nagara</i>	<i>Zingiber officinale</i>	1 Pala (48gm)
<i>Sneha Dravya</i>			
1.	<i>Eranda taila</i>	<i>Ricinus communis</i>	1 Prastha (768ml)

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ShadangaPaneeya¹¹

Herb	Rasa	Guna	Veerya	Vipaka	Prabhava	Doshaghnta
Musta	Tikta, katukashaya	RukshaLaghu	Sheeta	Katu	Grahi, Dipana, Pachana, Lekhan	Kapha - PittaHara
Parpatak	Tikta	Laghu	Sheet	Katu	Guru, RukshaTikshana	Kapha - PittaHara
Usheera	Tikta, Madhur	RukshaLaghu	Sheet	Katu	Pachana, Stambhana	Kapha - PittaHara
Chandan	Tikta, Madhur	RukshaLaghu	Sheet	Katu	Varnya, Dahaprashaman	Kapha - PittaHara
Udichya	Tikta	RukshaLaghu	Sheet	Katu	Deepan, pachan, hrallas	Kapha - PittaHara
Nagar	Katu	Guru, RukshaTikshana	Ushna	Madhur	Deepana, Bhedan	Vata - KaphaHara

Laboratory test results



10/01/2022



15/08/2022



03/04/2023

5. Result

Thirst reduced from 7 to 3 after the course of treatment, there was reduction in formation of bowel gas. The complaints of constipation and incomplete bowel evacuation were relieved, the dryness of skin and scalp reduced. The muscle cramps only appeared on long exposure to water.

6. Discussion

The signs and symptoms observed in the above - mentioned case represent the *Laxanaof Rasa vahasrotodushti (Aruchi, Tandra, Angamarda, Agninisha)* and *Udakavahasrotodushti (Pipasa, jihva, talu, oshtha, shosha)*. Correction of Agni and proper assessment of *Koshtais* the key to success of any treatment and this was done by administering

Gandharvahastadi ErandaTaila in *Vardhaman Krama*. This helped in gradually doing *Snehanaof Koshta* and hence *Vatanuloma* which also corrected the *KoshtaAgni*. *Gandharvahastaditaila* is indicated in *Chikitsa of Udavarta*, it is *Swabhavavat - vatahara* and has the effect of *Meda/ Asruk/ Pitta/ KaphaAvrutAnilahara*, and it has been mentioned that this *Yoga* even finds its utility in *Mrdu Koshta&Alpa Bala* individuals when used along with *Bhojana*

The *moola* of *UdakavahaSrotas* is *talv* and *kloma*, the symptom of excessive thirst indicated *AmajaTrishna*. *Talu* includes the function of pituitary gland which is responsible for release of TSH. TSH regulates the release of thyroid hormones. Correction of *moola* of *UdakavahaSrotas* thus normalised the functioning of pituitary gland and helped in *Agni Deepana and Vata Anuloma*. Correction of *UdakavahaSrotoDushti* was done by advising intake of *ShadangaPaneeya* instead of water. *ShadangaPaneeyais* indicated in *TrushayuktaJwara* which helped in correction of both *Rasa* and *UdakavahaSrotas*, which in turn helped in reduction of signs & symptoms, there was evident change in the level of TSH hormone in thyroid profiling which indicated *Dosha paka* and success of *Chikitsa*.

7. Conclusion

Hypothyroidism is a lifestyle disorder which requires *Chikitsa* in multifactorial manner viz. *Aahara, Vihara, Aushadha*; The *dosha vikruticausing* the symptoms in lifestyle disorders such as hypothyroidism can be corrected by analysing the *Dosha* involved, *Srotas* affected and chronicity of the disease and thus improve the quality of life of the health seeker.

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