

Effectiveness of bio-purification therapy of Ayurveda followed by *Simhasana* in the management of Hypothyroidism

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ABSTRACT:

Hypothyroidism, an endocrine illness affects more commonly women of all age groups these days and alters their metabolism. Hypothyroidism has turned into a lifestyle disorder as a result of sedentary habits, a diet heavy in fast food, and a bad lifestyle. Swelling all over the body, puffiness on face and eyes, muscle ache, breathlessness, leg cramps, hair fall, dry cold and clammy skin, menstrual abnormality, infertility are some the signs and symptoms of hypothyroidism. Although there is no any such description as hypothyroidism in *Ayurveda* texts, It can be put as heading clinically with *Dhatvagni Mandhya or Vaishamya*. In this case female patient of 40 years old was pre diagnosed with Hypothyroidism for 10 years visited our hospital and manage with the Therapeutic purgation along with oral medication *Ajmodadi Churna* 3gm twice before the meal with luke-warm water administered followed by *Simhasana* (type of yoga) to manage Hypothyroidism. The result was assessed on the basis of clinical symptoms and thyroid function test periodically. From this case can be use the Ayurveda along with Yoga to manage the hypothyroidism.

KEY WORDS: *Ajmodadi Churna, Dhatuagni Mandhya, Hypothyroidism, Simhasana, Triphala Churna, Virechan Karma.*

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INTRODUCTION:

Hypothyroidism is a clinical condition caused due to failure of thyroid gland to produce enough thyroid hormones that is T3 and T4. This condition may occur as a result of primary gland failure or insufficient stimulation of thyroid gland by pituitary. There are many reasons of primary gland failure such as congenital abnormalities, auto immune destruction (Hashimoto disease), iodine deficiency, and infiltrative disease. Approximately 95 % of hypothyroidism cases are diagnosed as

primary Hypothyroidism. (AACE 2002) Thyroid gland is largest gland of endocrine system plays a major role in overall metabolic activity of body, growth and development. Early sign and symptoms of hypothyroidism include weak digestion, constipation, disturbed sleep pattern, dry skin and hair, hair fall, cold intolerance, decreased sweating, puffiness of face, non-pitting oedema on body, anaemia, weight gain, decreased libido, menstrual disturbance menorrhagia in common, fatigue, muscle ache etc. [1] If remain

untreated can lead to serious conditions hypertension, dyslipidaemia, infertility, cognitive impairment, and neuromuscular dysfunctions. In there is no direct correlation of hypothyroidism in *Ayurveda*, however after reviewing various texts of *Ayurveda* hypothyroidism can be correlated with *Dhatu Agni Mandya* or *Vaishamya*. Which is result in different *Dhatu Dusti Janya Vikar* (Disease related to seven *Dhatuas* of body) having similar symptoms as found in hypothyroidism, affecting each and every *Dhatu* of body gradually. Symptoms of each individual are different according to their *Dhatu* involvement and extant of *Dhatu* involved.

CASE REPORT:

A female patient 40 year old, come to OPD of Kayachikitsa Ch. Bhram Prakash Charak Ayurveda Sansthan khera Dabar, New Delhi on date with chief complains of weakness, puffiness of face, hair fall and dryness of skin, weight gain, weak digestion, constipation. Patient was already a diagnosed case of hypothyroidism and taking medicine thyroxin 50mg OD full form empty stomach for 10 years. Patient had feeling uncomfortable with the modern medicine i.e palpitations, joint pain, anxiety, therefore patient came to Ayurvedic consultation and further management for the same.

There is no history of Hypertension, Diabetes, Asthma and tuberculosis. There is no family history of any thyroid disorder. Patient is taking thyronorm for 10 year. On physical examination B.P was 110/70 pulse 80/min and patient was obese.

In personal history, patient had complained of Irregular bowel habit mostly constipated with hard stools pass. She had frequency of micturition 5-6 times a day. Patient Appetite was diminished also while examining the tongue was coated. There were no any sigh of pallor. Patient look like obese. Patient have habit of taking irregular diet pattern.

TIME LINE:

The patient was first time diagnosed with Hypothyroidism ten year back. She was taking 1 tab thyronorm 50 mg empty stomach. Patient visited CBPACS for the first time in 15 March 2022. After taken detail history and clinical examination and blood investigation planned for Bio-cleansing (~Therapeutic Purgation) known as *Virechana Karma* (~Therapeutic Purgation). For this, patient was given 3 gm of *Ajmodadi Churna* with lukewarm water daily twice a day before meal for first five days for *Deepana* (~Appetizer), and *Triphala Churna* 5gm with lukewarm water at bed time for five days for *Anuloman* (Agent removing Dosha in downward direction). The patient reported improvement in bowel habits, diet, and felt lighter in her body. Then, over the following five days, in increased doses of *Mahatriphala Ghrita* were advised for therapeutic internal oleation (of 30, 60, 90, 120, and 150ml). On an empty stomach, ghee was administered in the early morning with warm water. *Samyak Sidhhi Lakshana* [(~Suitable internal oleation signs), such as soft, unctuous skin and passing soft faeces, were discovered after five days of internal oleation. Following the proper internal oleation, a therapeutic massage by *Ksheer Bala Taila* and three days of sudation therapy with *Dashmool Kwath* were administered. Bio cleansing was done with *Triphla Kwath* (Coarse Powder of *Emblica Officinalis*, *Terminalia Bellerica*, *Terminalia Chebula*) 100ml added with *Danti mool* (*Baliospermum montanum*) 10gm and 10gm *Trivrit* (*Operculina Turpethum*).^[2]

Patients had 28 Vegas (urges to Purgate) noted at the day of *Virechana*. Then next day plan of therapeutic dietary regime was advised to patient for seven day, *Peya* (~Watery gruel) prepared from rice on first day in evening same day of *Virechan*, watery gruel of rice on second day, *Vilepi*

((~Thick gruel of rice)on third day, on forth day *Akruta yusha* ((~green gram soup flavored)and *kruta yusha* (~Green gram soup added with salt ,ghee ,species) on fifth day , on sixth and for seventh day same diet is continued of *Kruta Yusha*. While receiving therapy, the patient was advised to live a healthy lifestyle and only eat whole foods. Then oral medicine along with and advised to do the *Simhasana* was advised to patient for 3 months. Patient was felt relief in constipation, fatigue, hair loss, puffiness on face subsided and her thyroid profile test also shows cured. The assessment was done on subjective crietria adopting standard parameters of Zulewski's Clinical score for hypothyroidism. [3]

THERAPEUTIC INTERVENTIONS:

After a thorough examination that considered *Ayurvedic* principles and after evaluating the patient's strength, humors, body constitution, age, psychological stamina, and digestive capacity, the patient was advised to check into an IPD. *Virechan Karma* (~Therapeutic Purgation) of patient was scheduled. Oral medications, including *Ajmodadi Churna* 3gm daily twice a day with lukewarm water after food along with *Simhasana*, were advised for 12 weeks after the completion of *Virechana Krama* and *Samsarjana Krama* (~Therapeutic dietary regime) (Table No-2).

Table-1: Subjective criteria (Zulewski's Clinical score for hypothyroidism)

Symptoms	New Score	
	Present	Absent
1. Diminished sweating (sweating in the warm room or hot summer)	1	0
2. Hoarseness (Speaking voice, singing voice)	1	0
3. Paraesthesia (subjective sensation)	1	0
4. Dry skin (Dryness of skin, noticed spontaneously, need treatment	1	0
5. Constipation (bowel habit, use of laxative)	1	0
6. Impairment of hearing (Progressive impairment of hearing)	1	0
7. Weight increase (recorded weight increase, tightness of cloths	1	0
Physical Sign		
1. Slow movement (Observe patient removing his clothing)	1	0
2. Delayed ankle reflex (observe the relaxation of reflex)	1	0
3. Coarse skin (Examine hands, forearms, elbow for roughness and Thickening of skin)	1	0
4. Periorbital puffiness (This should obscure the curve of malar bone)	1	0
5. Cold skin (Compare temperature of hands with examiner's)	1	0

Sumtotal is 12 (Score > 5 defines hypothyroidism, 0-2 define euthyroidism). On evaluating patient total score was 6.

Table -2: Timeline of events:

Duration	Particular and intervention
15 March 2022	Patient had Visited CBPACS OPD for first time Taken the details history along with clinical examinations and advised for Panchkarma therapy to Patient.
22 March 2022- 26 March 2022	<i>Deepan</i> with <i>Trikatu Churna</i> (Coarse powder of <i>Piper Nigrum</i> , <i>Piper Nigrum</i> , <i>Zingiber Officinale</i>)3gm with lukewarm water two times a day after meal <i>Amulomana</i> with <i>Triphla Churna</i> -3 gm with lukewarm at bed time.

27 March2022-31 March022	<i>Snehapan</i> (internal oleation) with <i>Mahatriphala</i> Ghrita staring with dose of 30 ml,60 ml, 90ml, 120ml,150ml in increasing dose
1 April 2022 -3 April 2022	External Oleation with <i>Ksheer bala oil</i> and sudation with <i>Dashmool kwath</i> for 3days
4 April 2022	Bio cleansing was done with <i>Triphla Kwath</i> (powder of <i>Emblica Officinalis</i> , <i>Terminalia Bellerica</i> , <i>Terminalia Chebula</i>) 100ml added with <i>Danti mool</i> (<i>Baliospermum Montanum</i>) 10gm and 10gm <i>Trivrit</i> (<i>Operculina Turpethum</i>)
5 April 2022-11April 2022	<i>Sansarjana Karma</i> (Post-therapy dietetic regimen for revival) was done for 7 days according to <i>Shuddhhi</i> (cleansing)
12 April 2022-12 July 2022	<i>Shamana</i> (palliative procedures) drugs were given in the form of <i>Ajmodadi churna</i> 3gm twice a day along with <i>Simhasana</i>
15 July 2022	Advised thyroid function test
21 July 2022	In thyroid function test TSH is within normal range that is 2 μ iu/ml from 10.2 μ iu/ml
22 July 2022	On follow up with diet and lifestyle modification

Table-3: Thyroid profile:

Date	T3	T4	TSH
23/2/2022	116 ng/dl	95 μ g/dl	10.70 μ iu/ml
6/4/2022	1.2 ng/ml	10 μ g/dl	6 μ iu/ml
21/7/2022	1.03 ng/dl	7.9 μ g/dl	2 iu/ml



Test Description	Observed Value	Biological Reference Interval
IMMUNOASSAY		
T3 T4 TSH		
Triiodothyronine, Total (T3)	116	60-181 ng/dL
Thyroxine, Total (T4)	9.5	4.5-10.9 μ g/dL
3rd Gen. (TSH Ultrasensitive)	10.70	0.35-5.50 μ U/mL

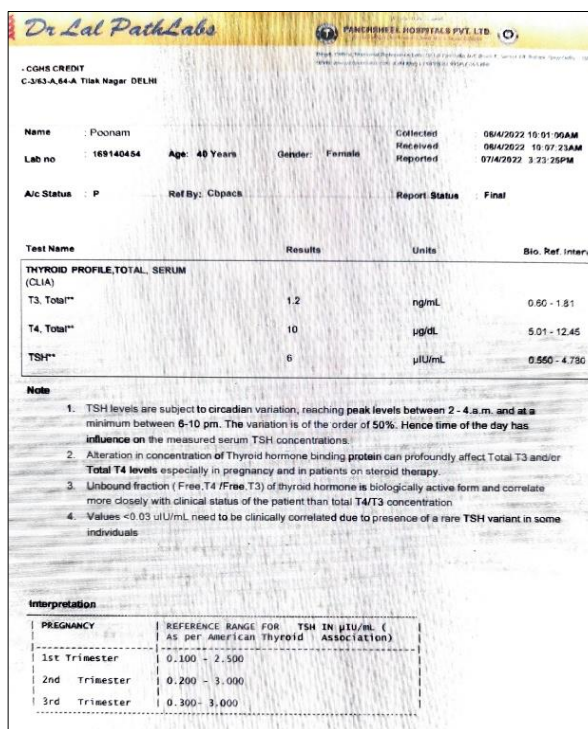
COMMENT:
The levels of thyroid hormone (T3 & T4) are Low in case of Primary, secondary and tertiary hypothyroidism and sometimes in non-thyroidal illness also. Increased levels are found in grave's disease, hyperthyroidism and thyroid hormone resistance. T3 levels are also raised in T3 thyrotoxicosis. TSH levels are raised in primary hypothyroidism and are low in hyperthyroidism and secondary hypothyroidism.

In Pregnancy:

LEVEL	TOTAL T3	TOTAL T4	TSH
1st Trimester	81-190	6.6-12.4	0.1-2.5
2nd Trimester	106-260	6.6-15.5	0.2-3.0
3rd Trimester	106-260	6.6-15.5	0.3-3.0

*** End Of Report ***

Fig-1: Thyroid profile before treatment



Test Name	Results	Units	Bio. Ref. Interval
THYROID PROFILE, TOTAL, SERUM (CLIA)			
T3, Total**	1.2	ng/mL	0.60 - 1.81
T4, Total**	10	μ g/dL	5.01 - 12.45
TSH**	6	μ U/mL	0.550 - 4.780

Note



- TSH levels are subject to circadian variation, reaching peak levels between 2 - 4 a.m. and a minimum between 6-10 pm. The variation is of the order of 50%. Hence time of the day has influence on the measured serum TSH concentrations.
- Alteration in concentration of Thyroid hormone binding protein can profoundly affect Total T3 and/or Total T4 levels especially in pregnancy and in patients on steroid therapy.
- Unbound fraction (Free T4 /Free T3) of thyroid hormone is biologically active form and correlate more closely with clinical status of the patient than total T4/T3 concentration.
- Values <0.05 μ U/mL need to be clinically correlated due to presence of a rare TSH variant in some individuals.

Interpretation

PREGNANCY	REFERENCE RANGE FOR TSH IN μ U/mL (As per American Thyroid Association)
1st Trimester	0.100 - 2.500
2nd Trimester	0.200 - 3.000
3rd Trimester	0.300 - 3.000


Fig-2 Thyroid profile during treatment

DIAGNOSTIC REPORT

SRWORLD

DIAGNOSTICS



SRI

World

Di

gnostics

PATIENT NAME – Poonam

REF. DOCTOR: CIPACS

Date- 21/07/2022

SPECIALISED CHEMISTRY - HORMONE

T3, T4, TSH

T3	1.03	Non-Pregnant Women 80.0 - 200.0 Pregnant Women 1st Trimester:105.0 - 230.0 2nd Trimester:129.0 - 262.0 3rd Trimester:135.0 - 262.0	ng/dL
T4	7.9	Non-Pregnant Women 5.10 - 14.10 Pregnant Women 1st Trimester: 7.33 - 14.80 2nd Trimester: 7.93 - 16.10 3rd Trimester: 6.95 - 15.70	µg/dL
TSH	2	Non Pregnant Women 0.27 - 4.20 Pregnant Women 1st Trimester: 0.33 - 4.59 2nd Trimester: 0.35 - 4.10 3rd Trimester: 0.21 - 3.15	µIU/mL

End of Report

Please visit www.sriworld.com for related Test Information for this accession

Fig-3: Thyroid profile after treatment

Outcome Measure and Follow up:

The result were assessed on the basis of TFT changes, that is TSH normalized with value of 2 µiu/ml from 10.7 µiu/ml (Table-3) and an improvement in the general condition of the patient that is swelling in extremities, puffiness of face, poor digestion, hair fall, muscle ache, dry skin.

DISCUSSION:

Probable Mode of Action of *Virechan* (Therapeutic Purgation)- *Agni* (~Digestive fire), *Dosa*, *Dushya*, *Sthana* (~Place), and *Srotas* (~Body Channles) are the bases on which hypothyroidism can be understood and evaluated. *Virechana Karma* is regarded in *Ayurveda* as the best lines of purifying techniques for eliminating toxic substances from the human body. The vitiated *Doshas* are forced to flow through the anal pathway and are evacuated from the body as a result of the *Virechana* medicines' predominance of *Prithvi*(~Earth) and *Jala* (~watera) *Mahabhootas*. [4] and their powerful *Adhobhagahara Prabhava*(~Tendency to flow downwards). A *Virechana* medicine

enters the *Hridaya*(~Heart) through its *Virya* (~Potency), and after passing through the *Dhamni* (~Blood vessels), it permeates the entire body through both large and small *Srotasa* (~Channels of body). They are promptly absorbed as a result of *Virechandravya's* *Vyavayiguna*(~Fast pervading or diffusing). *Vikasiguna* (~Getting dispersed all through the body and cause distruction of oja) employs *Dhatu Shaithilya karma* (~to loosen) to soften and loosen the link. *Doshas's* *vishyandana* (~flowing) is caused by *Ushnagun* (~Hot Potency). ~*Virechana* medications have *Teekshana* (~Sharpness) characteristics that *Chedana* (~to scrape) the *Dosas*, which have previously been softened by oleation therapy. [5]

Virechana is intended to alter the biochemistry of the body while modulating the fluid compartments. Following *Virechana* and follow-up, fewer changes in the *E. coli* colonization, demonstrating the impact of gut flora dysbiosis and further encouraging the stability of gut flora. Numerous processes, including phospholipid production, choline

metabolism, and lipoprotein metabolism, have shown changes in metabolites, as indicated by research. The observed changes in plasma metabolomics may be due to a modulation of metabolotypes brought on by *Panchakarma*. Phosphatidylcholines, sphingomyelins, and other substances are all altered in plasma in statistically meaningful ways by *Panchakarma*. It controls immunological responses by regulating immunoglobulin's, pro-inflammatory cytokines, and T-cell activity. [6]

Probable Mode of Action of Simhasana:

The name is derived from the Sanskrit words *Simha*, which means "lion," and *Asana*, which means "posture" or "seat." The posture is also known by the Sanskrit name *Narasimha*, which refers to a loin-man avatar of Lord Vishnu. [7] This term first appeared in the 19th-century *Joga Pradipika*. In *Simhasana Jalandhar Bandha* is applied which exerts the pressure on various nerve fibers pass through the neck but the nervous impulses flow to brain is restricted and when pressure due to *Jalandhar Bandha* is released the pressure impulses collected in cervical plexuses floods into brain as a result higher centers in brain get activated and activation of pituitary gland results in further activation of other endocrine glands such as thyroid gland. [8] When we perform Simhasana, we apply Jalandhar Bandha, which causes breath retention and slows down the carotid artery's blood flow. arteries for a little period of time and then abruptly released which stimulate and deliver signals to the brain parasympathetic nerve system, which consequently results in mental serenity and alleviate emotional or mental signs and symptoms of thyroid dysfunction, alleviating stress, worry, and rage and so raising the metabolism and thyroid gland function.

Probable Mode of Action of Ajmodadi

churna : Hypothyroidism can be correlated with *Dhatuagni mandya* or *Vaishamya* (Fire located inside the tissue is either low or Uneven in nature) and the main culprit for this *Dhatuagni Mandya* or *Vaishamya* is *Kapha* and *Vata Dosha*, [9] so disease can only be cured by normalizing the Agni at all the levels of body and for that *Ajmodadi Churna* is suitable medication. [10] The combination's *Virya* (approximately 81% of all medications have an *Ushna Virya*) demonstrates that it has a primary effect against the *Kapha* and *Vata Doshas*. The combination suggests that a *Katu* rasa is present in around 61% of medicine. The combination will work since *Katu Rasa* enhances digestion and creates the initial *Dhatu* in the perfect proportion. [11] The majority of the medications, including *Shunthi*, *Pippali*, *Pippalimoola*, *Chitraka*, etc., exhibit *Dipana* and *Pachana* properties that enhance *Agni* function. The *churna* will limit further development of *Ama* and assist in reversing the primary pathology. *Ama* is a term for unripe and undigested *Annarasa*. It requires the proper *Paka* (digestion). *Ama Pachana* will occur as a result of *Ushna Virya* (81% of all medications) and *Dipana-Pachana* property. *Amapachakas* like *Sunthi*, *Pipali*, *Pipalimoola*, *Chitraka*, and others are proven to be the greatest. The preparation will thereby remove *Ama*, and correct *Vata*, and *Kapha Dosha*. [12]

CONCLUSION:

It can be concluded from this core study that hypo functioning thyroid is a lifestyle disorder and slows down the metabolism of body that result in various symptoms which hamper functioning of whole body and can only be corrected by improvising on life style using Ayurveda and eliminating the causative doses completely.

Limitation of study:

Further study on same intervention or protocol is needed in more number of patients for its scientific validation.

Consent of Patients:

The written informed consent has been taken from patient for publication of her details and reports without disclosing patient's identity.

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