

## AYURVEDIC MANAGEMENT OF HYPOTHYROIDISM - A CASE STUDY

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### ABSTRACT

Hypothyroidism is a condition caused by a lack of thyroid hormone and resistance of the body's tissues to thyroid hormone in response to metabolic demand. According to mainstream research, using synthetic thyroid hormone to treat hypothyroidism causes the patient to become drug addicted while also failing to resolve the underlying disease. The clinical manifestations of hypothyroidism range from life-threatening to no signs or symptoms. The most prevalent symptoms in adults include fatigue, lethargy, cold sensitivity, weight gain, constipation, voice changes, and dry skin, but clinical presentation varies by age and gender, among other factors. The standard treatment is thyroid hormone replacement with levothyroxine. There is no direct correlation in *Ayurveda*, hence it can only be correlated with a *Srotorodh Pradhan* systemic illness because its symptoms are similar. A 57-year-old female patient was studied for three month using an integrated approach that included *Yoga (Setubandhasana, Halasana)*

and *Pranayama (Ujjai) + Pathya Palan + Ayurvedic* medicines such as *Vidangadileha* and the symptoms and TSH levels were significantly reduced.

**KEYWORDS:** *Setubandhasana, Halasana, Pathya Palan, Bharamri pranayama, Vidangadileha, Ayurveda, Hypothyroidism.*

### INTRODUCTION

In the changing lifestyle of 21<sup>st</sup> century hypothyroidism is considered as one of the commonest diseases. The prevalence of hypothyroidism in India is around 11%.<sup>[1]</sup>

Hypothyroidism is the most common endocrinal disorder that occurs when the thyroid gland does not make enough thyroid hormone to meet the body's needs. Thyroid gland produces two hormones Thyroxine (T4) & Triiodothyronine (T3). These hormones play a critical role in cell differentiation during development and help maintain thermogenic and metabolic mechanism.

Thyroid hormone regulates the metabolism and affects nearly every organ in the body. Without enough thyroid hormone, many of the body's functions slow down.<sup>[2]</sup>

In *Ayurvedic* classics hypothyroidic problems are not described under a particular disease. It is a symptom found in various disorders specially *Kaphaja Galganda*, *Kaphaja Shoth*, *Rasapradoshaja Vikar* etc. Hypothyroidism is *Tridoshaja Vyadhi* with *Kapha* predominance. As per clinical features sign and symptoms of Hypothyroidism resembles with the *Kaphaja Shothas* mentioned by *Acharya Charak*.

On the basis of *Ayurvedic* principles, we can understand the pathology of Hypothyroidism as that "***Roga Sarveapi Mandagno***". In modern terminology "*Agnimandya*" can be understood as decreased caloric expenditure which is present at systemic and cellular level. It is basically caused due to dysfunctioning of the *Agni*. It is a metabolic disorder in which *Agni* (*Jatharagani*, *Bhutagni*, *Dhatwagni*) are at very low level.

*Vridhhi* of *Vata Dosha* and *Kapha Dosha* and *Kshaya* of *Pitta* is most important in genesis of disease Hypothyroidism. *Vatta Dosha* causes *Avaran* to *Kaph Dosha* that will aggravate *Kaph Dosha* and cause the symptoms. The *Vridhhi* of *Kapha Dosha* will cause unnecessary weight gain, cold intolerance, goiter, hoarseness of voice, mental depression which are the classical features of Hypothyroidism.

Many of *Rasa Pradoshaja Vikaras* which have been mentioned in *Charak Samhita* are similar to the clinical features of Hypothyroidism i.e. *Ashraddha*, *Aruchi*, *Gaurava*, *Tandra*, *Angamarda*, *Panduroga*, *Klaibya*, *Srotorodha*, *Agnimandya* etc.

## CASE REPORT

A 57 years old female suffering with Hypothyroidism attended Kayachikitsa OPD, Motichohta Ayurvedic hospital, Udaipur with the complaints of puffiness of face and eyelids, weakness, lethargy, fatigue, dry and coarse skin since one year with elevated levels of Serum

TSH (Thyroid Stimulating Hormone). She was under Hormone replacement therapy (Tab Thyroxine 75mcg OD) since one year. No positive family history was noticed.

The *Prakriti* was identified as *Vata pitta*. Despite taking Thyroxine for a year, she was unable to achieve acceptable alleviation from her problems and sought *Ayurvedic* treatment.

Because Agni dysfunction is involved in the pathophysiology, *Vidangadileha* (3gm twice a day) with jaggery and ghrit, *Punrnva mandur*, *panchkol churn* were chosen in this case and administered for 90 days. The compositions of these three formulations is shown in Table 1-2-3.

### *Ashtavidha parikshana*

*Nadi*-80/min

*Mala*(stool)-Constipation

*Mutra*(urine)-Normal

*Agni*-Agnimandhaya

*Shabd*(speech)-Normal

*Sparsha*(skin)-Normal

*Druka*(eye)-Normal

*Bala*-Madhyama

*Rakatadaab*-110/70

**Table 1: Composition of *Vidangadileha*.**

S. No.	Sanskrit Name	Botanical Name	Use
1.	<i>Vidanga</i>	<i>Embelia ribes</i>	<i>Krimighna</i>
2.	<i>Bhallatka</i>	<i>Semecarpus Anacardium</i>	<i>Kushtagna (Deepniya)</i>
3.	<i>Chitrak</i>	<i>Plumbago zeylanica</i>	<i>Deepniya</i>
4.	<i>Guduchi</i>	<i>Tinospora cordifolia</i>	<i>Tridosh shamak (Rasayana)</i>
5	<i>Shunthi</i>	<i>Zingiber officinale</i>	<i>Vata-Kapha Shamak</i>

**Table 2: Composition of *Punarnavadi Mandoor*.**

S. No.	Sanskrit Name	Botanical Name	Use
1.	<i>Punarnava</i>	<i>Boerhaavia diffusa</i>	<i>Deepana, Sothahara, Pandughna</i>
2.	<i>Trivruti</i>	<i>Operculina terpenanthum</i>	<i>Sothahara, Rechaka</i>
3.	<i>Sunti</i>	<i>Zingiber officinalis</i>	<i>Deepana, Sothahara, Pandugna Vedhanasthapana, Balya, Vatanulomana</i>
4.	<i>Pippali</i>	<i>Piper longum</i>	<i>Deepana, Pachana Rasayana, , Rechaka</i>
5	<i>Maricha</i>	<i>Piper nigrum</i>	<i>Deepana, Lekhana, Ruchya</i>
6	<i>Vidanga</i>	<i>Embelia ribes</i>	<i>Sothahara, Raktavikaranut, Grahi</i>
7	<i>Devadaru</i>	<i>Cedrus deodara</i>	<i>Deepana, Pachana ,Sothahara, Vedhanasthapana,</i>

			Rasayana
8	Chitraka	Plumbago Zeylanica	Deepana, Pachana, Sothahara, Rasayana
9	Kushta	Saussurea lappa	Deepana, Pachana, Raktashodhaka
10	Haritaki	Terminalia chebula	Deepana, Pachana, Shoolaghna, Balya
11	Vibhitaki	Terminalia bellirica	Deepana, Pachana, Sothahara, Anulomana, Vedhanasthapana
12	Amalaki	Emblica officinalis	Deepana, Anulomana, Rasayana
13	Haridra	Curcuma longa	Deepana, Sothahara, Pandugna, Raktha doshahara
14	Danti	Baliospermum montanum	Deepana, Sothahara, Rakthavikarahara Shoolaghna, Rechaka
15	Chavya	Piper chaba	Deepana, Pachana
16	Kutaja	Hollarrhena antidrsentrica	Deepana, Pachana, Sothahara
17	Katuki	Picrorhiza kurroa	Deepana, Sothahara, Rakthashodhaka, Pittavirechana
18	Mustaka	Cyperus rotundus	Deepana, Pachana, Grahi, Balya
19	Mandhura Bhasma	Iron oxide calx	Deepana, Soshahara, Sothahara, Vrishya

Table No. 3: Composition of Panchkol churna.

S. NO	Sanskrit Name	Botanical name	Use
1.	Pippali	Piper longum	Deepana Pachana, Rechaka, Rasayana,
2.	Pippalimula	Piper longum	Deepana, Rasayana, Pachana, Rechaka
3.	Chitraka	Plumbago Zeylanica	Deepana, Pachana, Sothahara, Rasayana
4.	Chavya	Piper chaba	Deepana, Pachana
5.	Shunthi	Zingiber officinale	Deepana, Sothahara, Pandugna Vedhanasthapana, Balya, Vatanulomana

In addition to the oral medication, the patient was advised on Pathya, Apathya, and Vihara (wholesome and unwholesome diet and lifestyle). Throughout the therapy period, she was instructed to drink lukewarm water rather than regular or cold water. Furthermore, it was advised to avoid consuming difficult-to-digest diets, consuming diets before complete digestion of previous diets, consuming curd on a regular and excessive basis, and sleeping during the day. The patient's thyroxine (75 mcg) dose was discontinued one week after beginning treatment than after 45 days medicine (thyroxine) was stop. Thyroid profile tests were performed, and the patient's subjective characteristics were evaluated before and after 90 days of medication.

**Assessment criteria:** Improvement was evaluated based on the percentage of relief observed in the presenting complaints. The institute's grading criterion was used to assess the therapy's effectiveness.<sup>[3]</sup>

## 1. FATIGUE

No Fatigue	0
Patient like to stand instead with walk	1
Patient like to sit instead with stand	2

Patient like to lie down instead with sitting	3
Patient like to sleep instead with lying down	4

**2. BREATHLESSNESS**

Absent	0
Occasionally, only after strenuous workout	1
Even on climbing upstairs, but relieved by rest	2
Felt in routine work-bathing, changing cloths	3

**3. WEAKNESS**

Able to exercise without difficulty	0
able to do mild exercise	1
able to do mild work with difficulty	2
not able to do even mild work	3
unable to do even day to day routine work	4

**4. OEDEMA ON PERIPHERAL EXTREMITIES**

No Oedema	0
Oedema over lower/upper extremities	1
Oedema over both extremities	2
Oedema all over body	3

**5. PUFFINESS ON FACE**

No Puffiness	0
Occasionally	1
Daily, periorbital oedema	2
Persistent Puffiness	3

**6. DRYNESS**

No Dryness	0
Dryness after bath only	1
Dryness over all body but relieved by oil application	2
Dryness not even relieved by oil application	3

**7. WEIGHT GAIN**

No gain in weight	0
Patient experienced slight tightening of clothes	1
Noticeable change in tightening of clothes	2
Unable to wear already stitched clothes	3
Rapid weight gain with excessive deposition of weight	4

**8. COLD INTOLERANCE**

Absent	0
Cold intolerance especially with environmental changes	1
Cold intolerance present inspite of clothing, avoids cold climate	2

Disability present even on normal room temperature	3
Susceptible to even minute temperature fluctuations	4

## 9. CONSTIPATION

Normal bowel habit	0
Passes stool daily but slight difficult	1
Passes hard stool on alternate day	2
Patient need some laxative to pass stool	3
Unable to pass stool even after use of laxative	4

## 10. HOARSENESS OF VOICE

Normal voice	0
Patient feels that his/ her voice is changing	1
Gruff voice present with hoarseness of voice	2
Changes in voice pronounced	3
Slurred voice	4

## 11. ARTHRALGIA

Absent	0
Mild joint pain that does not affect activities of daily living	1
Moderate joint pain that limit some activities of daily living	2
Severe joint pain that significantly limit activities of daily living	3
Severe joint pain not relieve even after taking analgesic	4

## 12. IMPAIRED MEMORY

Both remote and recent memory normal with easy retention and recall	0
Both remote and recent memory normal with difficult retention and recall	1
Remote memory is impaired but recent memory is intact difficulty in retention and recall	2
Both remote and recent memory are impaired with difficult retention and recall	3

## 13. PARESTHESIA

Absent	0
Mild paresthesia, loss of deep tendon reflexes	1
Mild or moderate objective sensory loss, moderate paresthesia	2
Severe objective sensory loss or paresthesias that interfere with function	3

## 14. MENSTRUAL IRREGULATION

Normal menstrual cycle ( 4-5days )	0
Mild menstrual irregularity ( 3 days )	1
Moderate menstrual irregularities ( 2 days )	2
Severe menstrual irregularities ( 1 day )	3

## OBSERVATIONS AND RESULTS

Considerable improvement was noticed in complaints.

## DISCUSSION

In hypothyroidism involvement of *Tridosha* should be considered in which *Kapha Dosha* is main culprit associated with *Pitta Kshaya* and *Margavrodhjanya Vata* *Vatavridhi* can be considered. So *Kapha Vata Shamak* drugs should be chosen in the management of hypothyroidism. In the *Vidangadileha* having *Vata Kapha Shamak* Property.

*Vidangadileha* is described in *Agnimandya Chikitsa* in *Chakradatta Samhita*. In this *Yoga* all the drugs are antidepressants, anti-inflammatory, detoxicant, immuno-modulatory & anti-neoplastic property. All drugs are *Katu, Tikta, Kashaya Rasapradhan*.

In *Punrnva, mandoor dravyas* such as *Trivrut, Sunti, Vidanga, Devadaru, Chitraka, Vibhitaki, Haridra, Daruharidra, Danti, Kutaja, Katuki*, and *Mandura bhasma* aid to alleviate oedema caused by hypothyroidism. In terms of rasa analysis, the majority of the medications are *Katu* and *Tikta rasa pradhana*, which act as *Deepana* and *Pachana*, respectively, and aid in absorption. *Katu rasa* promotes *Margan vivruti*, clears and dilates the channel, and relieves *Kapha*. *Tikta rasa* acts as *Lekhana*, drying the *Medas*. *Kashaya rasa* initiates *Kledha medha soshana* and *Lekhana* activity. Even though these *Rasas* are abundant in herbal medicines, the *Mandura bhasma*, which is twice as potent, contains *Madhura rasa*. After *Deepana pachana*, it aids *Tarpana, Prinana, Balya*, and *Brahmana*. This will lead to an improvement in overall health.

**Table 4: Effect of therapy on chief complaints.**

Complaints	Before Treatment	After Treatment
Weight(kg)	74kg	71.20kg
Puffiness of face and eyelids	1	0
Weakness	2	0
Odema on peripheral extremities	3	1
Fatigue	2	0
Constipation	2	0
Arthralgia	3	1
Dry and coarse skin	0	0

**Table 5: Effect of therapy on Thyroid Profile.**

Investigations	Before Treatment	After Treatment
Thyroid profile	TSH	11.00 uIU/ml
	T <sub>3</sub>	4.6 mIU/ml
	T <sub>4</sub>	1.26ng/ml
		79.0 nmol/L



## Before Treatment




MAHARANA BHUPAL GOVT. HOSPITAL, UDAIPUR  
MUKHYAMANTRI NISHULK NIROGI RAJASTHAN YOJANA



Patient Name : Mr. [REDACTED]	Lab No : 13766
Age/Gender : 57 Y O M O D / F	CR No :
Ref Doctor : Dr.SELF	Reported : 08/May/2024 18:24
IPD/OPD/Emergency : RNT-HOSPITAL	Barcode No : 10597397
State : Rajasthan	Address : Sec-6


DEPARTMENT OF HORMONE ASSAYS				
Test Name	Result	Unit	Bio. Ref. Range	Method
TSH	11.000	uIU/ml	0.27-4.20	Electro Chemi Luminescence

\*\*\* End Of Report \*\*\*

  
Dr. Arnab Sikdar  
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WBMC-87262



## After Treatment



**BUDHISAGAR'S**  
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21-C-A, Madhuban, Residency School Choraha, Udaipur (Raj.) Tel.: 0294 2522888, 2528944, M.: 99283 44088

NAME : [REDACTED] SEX : Female AGE : 50 Years  
 REF. BY : Dr. Ravi Sharma Sir DATE : 09-Aug-2024 11:42 AM

TESTS		BIOCHEMISTRY	
	RESULTS	UNITS	REF. RANGE
<b>LIPID PROFILE</b>			
SERUM CHOLESTEROL	: 220.0	mg/dl	130 - 250
SERUM TRIGLYCERIDES	: 122.0	mg/dl	60 - 190
HDL CHOLESTEROL	: 44.0	mg/dl	30 - 55
LDL CHOLESTEROL	: 151.6	mg/dl	60 - 185
VLDL CHOLESTEROL	: 24.4	mg/dl	7 - 35
LDLC/HDLRATIO	: 3.4		more than 4 risk increases
TG/HDLRATIO	: 2.8		more than 4 risk increases
S.CHOLESTEROL/ HDLC RATIO	: 5.0		more than 4 risk increases
<b>ENDOCRINOLOGY TEST</b>			
<b>THYROID FUNCTION TEST</b>			
TRIODOOTHYONINE ( T3 )	: 1.26	ng/ml	0.8 - 2.1
THYROXINE ( T4 )	: 79.0	nmol/L	52 - 167
THYROID STIMULATING HORMONE ( TSH )	: 4.6	microIU/ml	0.3 - 4.0

  
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 Allergy Test | USG | Color Doppler | Anomaly | 3D | 4D Scan | Digital X-Ray | ECHO  
 ECG | F.N.A.C. | Hormones | Mammography | CBC | BUN | Creatinine

imitations & General Conditions on the Back Page

## CONCLUSION

This was a single case research that confirmed the efficacy of *Vidangadileha* and *Punarna mandoor* for hypothyroidism control. Though Thyroxine was removed, the symptoms were controlled with the current trial medications. Although the findings are encouraging, there is a need to assess the real impact of the trial medications on a greater number of patients and draw more concrete conclusions. Ayurveda awareness should be raised among the general public so that as many patients as possible can benefit from its services and have a higher quality of life.

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**Conflicts of interest:** None declared.

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