



Case Report

Mapping Disease Trajectories: An Ayurvedic Diagnostic Approach to Primary Pathology Treatment in Hypothyroidism

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Abstract

Introduction: Hypothyroidism, an endocrine disorder affecting approximately 10.95% of Indian adults, associated with metabolic dysfunction, weight gain, goitre, and reduced quality of life. It carries risks of progression to life-threatening states like myxedema coma or cardiac failure. Main clinical findings: A 45-year-old obese male presented with progressive weight gain, fatigue, cold intolerance, abdominal discomfort, bowel irregularity and visible, painless neck swelling. Laboratory investigations revealed elevated thyroid-stimulating hormone (TSH) levels, confirming hypothyroidism, along with clinical features suggestive of metabolic impairment. **Diagnosis:** The Patient was to diagnosed with *Amashaya Dushti*, the root pathology of *Medovridhhi* (obesity) via *Nidanarthakara Roga* principles. **Intervention:** An 18-week Ayurvedic treatment protocol was administered including oral medications *Shankh vati*, Combination of *Bhaskar lavana*, *trikatu churn*, *hingwashtak churn*, *Panchakolasava*, *Swayambhuvakhya Guggulu*, *Gandharva Haritaki*, *Medopachaka Vati* and *Arogyavardhini vati*, local application of paste of *Kanchanara guggulu* over the goitre, along with structured dietary regulation, and lifestyle modification including exercise and breathing practices. **Outcome:** Marked results emerged, including a 9.4 kg body weight reduction, disappearance of the goitre, full symptom abatement, normalisation of thyroid indices, and sustained remission at follow-up.

Keywords: *Nidanarthakara Roga*, *Amashaya Dushti*, *Swayambhuvakhya Guggulu*, Goitre, T.S.H, Dietary modifications.

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Introduction

Hypothyroidism affects approximately 0.3% to 12% of the global population, (1) with a higher incidence among women and older adults (female-to-male ratio: 6:1). (2) A multicentre cross-sectional survey conducted in India evaluated 5,360 adults aged 18 years and above (mean age: 46 ± 14.68 years; 53.7% female) and reported an overall prevalence of 10.95%. (3) It is an endocrine disorder that reduces metabolic activity, impairing energy utilisation, organ function, and overall health. Untreated

cases may progress to severe complications such as heart failure and myxedema coma, posing significant mortality risks. Rapid lifestyle transitions including poor dietary habits, chronic stress, physical inactivity, smoking, and inadequate sleep have been shown to influence disease onset and severity, contributing to the increasing prevalence of hypothyroidism. (4)

Modern diagnosis depends on clinical assessment and hormonal evaluation, particularly of TSH (Thyroid-Stimulating Hormone), T3 (Triiodothyronine), and T4 (Tetraiodothyronine) levels. Ayurveda, however, focuses on uncovering root causes and tracking disease progression through the concept of *Nidanarthakara Roga* (~Disease trajectories). (5) (6) This principle explains how one illness can give rise to another, emphasising the interconnected nature of disorders. Assessing a patient's history, lifestyle, and disease pattern helps reveal how conditions co-occur or evolve. Chronic diseases often exemplify

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this process, where the primary illness itself becomes the cause of subsequent pathology.

In the present case, *Medovridhhi* is diagnosed as a secondary condition arising from *Amashaya Dushti* a vitiation of the stomach or upper gastrointestinal tract caused by *Ama Dosha*, the toxic byproduct of incomplete digestion. The treatment focuses on addressing *Amashaya Dushti* as the root cause of *Medovridhhi* (~obesity). The aim is to develop a treatment approach that focuses on the underlying cause of the disease by identifying its root, validating the chosen intervention based on the disease prognosis, and preventing recurrence through the restoration of physiological homeostasis.

Materials and Methods

It is a single case report. The place of study is Shree Vishwakhyati Ayurvedic Clinic- Pune, Maharashtra. Informed consent was taken in the patient's language before commencement of treatment.

Case Presentation

Patient information and clinical findings:

A 45-year-old married man IT professional, presented on June 20, 2024, height -163cm, weight- 94 kg, with a one-year history of diagnosed hypothyroidism and acidity. He reported recent abrupt weight gain, postprandial bloating and abdominal distension, constipation, cold intolerance, fatigue, anorexia and swelling over neck region. He also had chronic sinusitis of six years' duration. Vital signs revealed pulse: 70/min, and blood pressure was 140/90 mmHg. Temperature was 98.9^o F, and SpO₂ was 97% on room air. The general appearance was class II obese, sweaty, with reduced tolerance for brisk walking, and a good psychological state.

Past History

The patient had a history of recurrent fever, chronic sinusitis, and nasal polyps, with prior polypectomy in 2017. He had been on allopathic drugs for eight months with no improvement, including thyroxine 75 mcg once a day, pantoprazole 40 mg once a day before a meal, and xylometazoline spray as required. Seeking Ayurvedic consultation and management for hypothyroidism.

Table 1: Personal history

<i>Prakruti</i>	<i>Kaphapradhan pitta</i>
<i>Ahaar prakar</i> (Diet)	Non-vegetarian, sweet and spicy preference
<i>Ahaar shakti</i> (Appetite)	Irregular
<i>Kshudha</i> (Hunger)	Medium
<i>Nidra</i> (sleep)	<i>Atinidra</i> (Increased sleep) more than 8 hours a day of which <i>Divaswapa</i> (sleeping in daytime) is for 2 hours.
Addiction	Alcohol approximately 60–90 mL, (twice a week) for the past 8 years.

Table 2: Ashtavidha Pariksha (eight-fold examination)

<i>Nadi</i> / Pulse- <i>Kaphapradhan Vata</i>	<i>Shabda</i> (Speech)- clear
<i>Mala</i> (Stool)- Constipation	<i>Sparsh</i> (Touch)- Ushna (Hot)
<i>Mutra</i> (Urine)- Normal	<i>Druk</i> (Vision)- Normal
<i>Jivha</i> (Tongue)- white coated at the centre	<i>Akruti</i> (Body appearance)- <i>Sthula</i> (Obese)

On Examination (Abdominal and Local)

On percussion and deep palpation of the abdomen, no evidence of shifting dullness or fluid accumulation. and Mild tenderness, Grade I, suggestive of accumulation of *Ama* or stomach/upper GI tract pathology. (7) On local examination, the thyroid gland was enlarged, easily visible, painless, non-tender, feels nodular on palpation.

Nidanpanchak (Etiopathology & signs, symptoms)

Hetu (Causes):

- **Aaharaj Hetu (Dietary causes):** *Abhishyandi aahar* (daily consumption of cheese, processed butter), *Adhyashana* (overeating), *Viruddha aahar* (Incompatible food items like milk shakes, milk with salty food items), *Guru* (heavy like milk products, oily-fried refined wheat flour items), *Atisnigdha* (over unctuous food), *Vidahi aahar* (foods that cause burning sensation like fried pickles, spicy dishes) since 2 years.
- **Viharaj Hetu (Lifestyle causes):** *Divaswapa* (sleeping in daytime) for 2 hours, *Atinidra* (oversleeping, more than 8 hours/day), *Avyayama* (lack of exercise), sedentary lifestyle, *Ratri jagrana* (delayed bedtime after 1-2am).

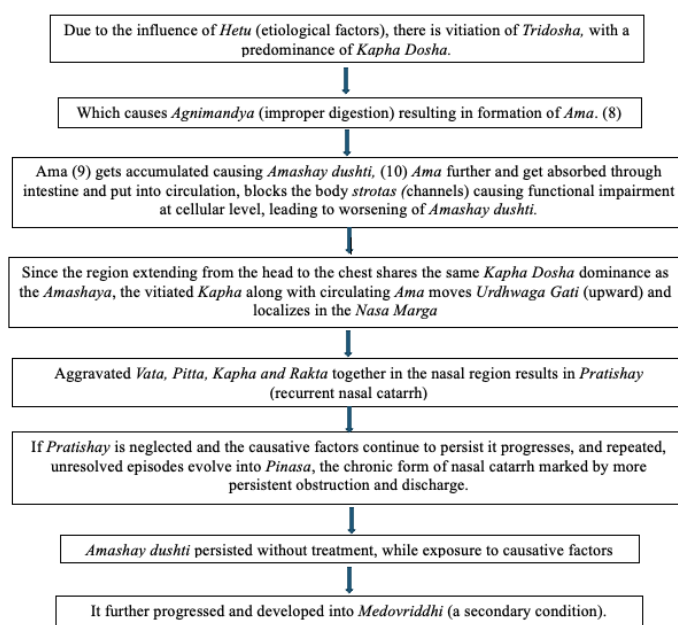
Purvaroop (prodromal symptoms): *Ajirna* (indigestion), *udargaurava* (feeling of heaviness just after taking a meal)

Roop (Symptoms): *Atopa* (bloating), *aruchi* (anorexia), *Jwara* (fever), *Malavashtambha* (constipation), *Bhara Vriddhi* (weight gain).

Upashay (things to be done to get relief): regular exercise, avoiding heavy meals, waking up early, avoiding sleeping during the day. Treatment that cures *Ama Dosha* (Toxins due to indigested food) and *Medovridhi*.

Samprapti (Pathophysiology)

Figure 1: Pathophysiology of the disease



Diagnosis: The Ayurvedic diagnosis was established as *Medovridhhi* as a secondary condition arising from *Amashay Dushti* due to *Ama*, while the Modern diagnosis, as per investigation, suggests Hypothyroidism.

Interventions done

Table 3: Ayurvedic Oral Medications

Day 1 to Day 15				
Formulation	Dose	Time of administration	Vehicle	Duration
1. Tab. <i>Shankh vati</i> (500mg)	2-2 tablets BD	After meal	Lukewarm water	12 days
2. Combination of <i>Bhaskar lavana</i> (500mg) + <i>trikatu churn</i> (500mg) + <i>hingwashtak churn</i> (250mg)	1.25 gm BD	15 minutes before meal	Lukewarm water	12 days
3. <i>Panchakolasava</i>	15ml+15ml water BD	After meal	Lukewarm water	12 days
4.Tab. <i>Swayambhuvakhya Guggulu</i> 500mg	1 tablets BD	before meal	Lukewarm water	6 weeks
5. Tab. <i>Gandharva Haritaki</i> (500mg)	1 tablet HS	After meal	Lukewarm water	6 weeks
Day 15 to day 45				
1. <i>Phalatrikadi</i> decoction	15 ml + 15ml water BD	After meal	Lukewarm water	6 weeks
2. Tab. <i>Swayambhuvakhya Guggulu</i> 500mg	1 tablets BD	before meal	Lukewarm water	6 weeks
3. Combination of powder of <i>Medopachak vati</i> (1gm) + <i>Arogyavardhini vati</i> (500mg)	1-1 tablet BD	Before meal	Lukewarm water	6weeks
4. Tab. <i>Gandharva Haritaki</i> (500mg)	1 tablet HS	After meal	Lukewarm water	6 weeks
This treatment was further continued for the next 12 weeks.				

Table 4: Local Application, Diet, and Lifestyle Modifications

Day 1 to Week 18	
Local Application	A paste of <i>Kanchanara guggulu</i> and water is applied over neck swelling twice a day.
Dietary and lifestyle changes advised	
Diet changes	Avoid: Overeating, hard-to-digest food items (oily, sweet dishes, dairy products), irregular eating habits and incompatible food combinations (fruits and milk, salty dishes and milk products). Advised: Meal timings- two meals per day—first between 10:00 and 11:00 a.m., and dinner at 7:00 p.m.; if hungry in the afternoon, eat fruits.
Behavioural changes	Avoid: Daytime sleeping, late-night wakefulness, prolonged sitting the whole day. Advised: Regular exercise early in the morning - a brisk walk for 30 minutes, breathing exercises (<i>Anuloma-viloma</i>), skipping 50 reps x 2 sets, and practice 12 <i>Suryanamaskar</i> rounds (starting from 3 and increasing by 2 every week).

Observations and Results

Table 5: Subjective assessment of Patient-Specific Symptoms

Assessment Parameter	Day 1	Day 15	Week6	Week 12	Week 18
Acidity	3/3	1/3	0/3	0/3	0/3
Abdominal heaviness postprandial	3/3	1/3	1/3	0/3	0/3
Abdominal distension	3/3	1/3	1/3	0/3	0/3
Fatigue	3/3	2/3	1/3	0/3	0/3
Anorexia	3/3	2/3	1/3	0/3	0/3
Excessive sleep	3/3	2/3	1/3	0/3	0/3
Laboured breathing	3/3	2/3	1/3	0/3	0/3
Ayurvedic Assessment	Severe Kapha-Pitta vitiation	Improving dosha balance	Balanced state	Balanced state	Balanced state

(Severity scale: 3- Severe, 2- Moderate, 1- Mild, 0- No symptom)

Table 6: Zulewski Clinical Score for Assessment of Hypothyroid Features(11)

Zulewski Clinical Parameter	Day 1	Day 15	Week 6	Week 12	Week 18
Dry skin	1	1	0	0	0
Cold intolerance	1	1	1	0	0
Paresthesia	0	0	0	0	0
Constipation	1	0	0	0	0
Impaired hearing	0	0	0	0	0
Weight gain	1	1	1	0	0

Slow movements	0	0	0	0	0
Delayed ankle reflex relaxation	0	0	0	0	0
Hoarse voice	0	0	0	0	0
Periorbital puffiness	0	0	0	0	0
Bradycardia	0	0	0	0	0
Thyroid enlargement	0	0	0	0	0
Total Zulewski Score	5	3	3	0	0

Scoring: 1 = feature present; 0 = feature absent

Local Examination

Table 7: examination and observation of Thyroid gland

Parameter	Day 1	Day 15	Week 6	Week 12	Week 18
Inspection (Visibility)	Visible bilateral enlargement, moderate	Slightly less prominent, smoother contour	Reduced to half, subtle bulge	Barely visible, near normal	Not visible; normal neck
Palpation	Firm/rubbery, symmetric; non-tender	Smaller lobes, softer, symmetric	Half size, less firm	Small, soft, barely palpable	Normal size, non-palpable, soft
Tape Measurement (Neck Circumference)	38-45cm	37-44cm	36-42cm	35.5-41cm	Normal (35-40cm)
Mobility	Moves freely with swallowing, no fixation	Good mobility	Freely mobile	Excellent glide	Fully mobile, unremarkable
Carotid Pulsation	Normal, trachea central	Normal	Normal	Normal	Normal
Kocher's Sign	Absent	Absent	Absent	Absent	Absent
Naffziger Method	Negative (no engorgement)	Negative	Negative	Negative	Negative
Lymph Nodes	No palpable nodes	No palpable nodes	No palpable nodes	No palpable nodes	No palpable nodes

Table 8: Serial Thyroid Function Test (TFT) Profile Over 18 Weeks

Date of investigation	TSH (μIU/mL)	T3 (ng/mL)	T4 (μg/dL)
Day 1	8.66	1.132	10.105
Week 6	4.72	1.122	9.005
Week 12	2.71	1.022	8.205
Week 18	2.33	1.012	8.005

Figure 2: Serial Thyroid Function Test (TFT) reports showing progressive normalization of thyroid parameters from Day 1 to Week 18 during Ayurvedic intervention

Day 1	Week 6	Week 12	Week 18

Discussion

The present case demonstrated progressive clinical and biochemical improvement following an individualized Ayurvedic intervention directed towards *Amashaya Dushti*, *Ama*, and *Medovridhhi*. The patient's presenting symptoms, including acidity, postprandial abdominal heaviness, abdominal distension, fatigue, anorexia, excessive sleep, and laboured breathing, progressively improved and resolved by week 12. The Zulewski clinical score decreased from 5 at baseline to 0 by week 12 and remained unchanged at week 18.

The thyroid enlargement also progressively reduced clinically, with complete resolution of visible and palpable enlargement by week 18. Serial thyroid function tests showed a gradual reduction in TSH from 8.66 μ IU/mL at baseline to 4.72, 2.71, and 2.33 μ IU/mL at weeks 6, 12, and 18, respectively. These findings suggest a favourable temporal association between the intervention and clinical improvement. However, the absence of objective thyroid imaging limits confirmation of structural reduction in thyroid volume.

From an Ayurvedic perspective, the treatment was based on the proposed sequence of *Amashaya Dushti* leading to *Medovridhhi*, in accordance with the concept of *Nidanarthakara Roga*. The therapeutic strategy therefore emphasized *Ama Pachana*, *Deepana-Pachana*, *Anulomana*, *Kapha-Meda Shamshamana*, *Apatarpana*, and *Lekhana*. The formulations were selected to address impaired digestion, bowel irregularity, *Kapha-Meda* accumulation, and metabolic dysfunction. Dietary regulation and lifestyle modification, including regular exercise and breathing practices, were integral components of the intervention.

The improvement observed may therefore reflect the combined effect of Ayurvedic medications, local application, dietary modification, and lifestyle measures. Classical evidence supports the use of *Medohara* and *Lekhaniya* approaches for disorders involving excessive *Meda*, while experimental evidence has reported hypolipidemic activity of *Arogyavardhini Vati* [17,18]. However, these findings cannot establish the efficacy of the individual formulations in hypothyroidism.

An important limitation is that the patient had been receiving thyroxine 75 μ g/day before Ayurvedic treatment, and the manuscript does not clearly document its continuation or discontinuation during the intervention. Therefore, the contribution of thyroid hormone therapy to the observed TSH reduction cannot be excluded. Additionally, this single case involved multiple interventions without a comparator, limiting causal inference.

Overall, this case demonstrates a favourable clinical and biochemical response following an individualized multimodal Ayurvedic approach. The findings are hypothesis-generating and warrant confirmation through prospective controlled studies with standardized Ayurvedic assessment, objective thyroid imaging, clearly documented thyroid hormone use, and longer follow-up.

Conclusion

This single case demonstrates the efficacy of a structured *Ayurvedic* protocol addressing *Amashaya Dushti* as the root cause of *Medovridhhi* in a patient with hypothyroidism, achieving substantial symptom relief, with TSH normalisation over 18 weeks, which supports the effectiveness of the intervention implemented. These findings support the diagnostic principles of *Nidanarthakara Roga* and its *Hetu viparita chikitsa* and advocate

further multicentre trials to validate the approach for broader clinical diagnosis.

Future Scope of the Study

This is single case study, however large-scale clinical trials and long-term follow-up studies can be conducted in future following these protocols to strengthen its credibility.

Patient Perspective

The patient experienced significant relief in symptoms, noticeable weight reduction, and improved energy levels, which enhanced daily functioning and overall quality of life.

Ethical Statement

Written informed consent was obtained from the patient for publication of this case report. (See Supplementary data)

State of human and animal rights

The intervention adhered to the ethical requirements.

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Conflicts of Interest

The authors declare no conflicts of interest related to this case report.

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