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EFFECT OF CLASSICAL VAMANA FOLLOWED BY THUMBI TAILA PRATIMARSHA NASYA IN THE MANAGEMENT OF PRIMARY HYPOTHYROIDISM: A CASE STUDY

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ABSTRACT

Background

Hypothyroidism is a common endocrine disorder characterized by reduced synthesis or action of thyroid hormones, leading to metabolic slowing and multisystem involvement. Conventional management with levothyroxine may be associated with persistent symptoms, dose variability, and long-term adverse effects. From an Ayurvedic perspective, hypothyroidism can be understood as a Kapha-pradhāna Rasa-pradoṣaja Vikāra with Urdhva-jatrugata sthāna-viśeṣa, resembling Galaganḍa, arising due to Agnimāndya, Āma formation, and srotorodha.

Case History

*A 36-year-old female presented with diffuse non-tender neck swelling, progressive weight gain, severe constipation, lethargy, hair fall, dry skin, and heaviness for six months. Laboratory investigations revealed markedly elevated TSH levels suggestive of primary hypothyroidism. Based on Ayurvedic assessment, the condition was diagnosed as Kapha-pradhāna Rasa–Meda duṣṭi. The patient was managed with Deepana-Pachana, Udwarthana, Snehapāna, **Classical** Vamana, followed by Saṃsarjana Krama and Pratimarsha Nasya with Thumbi Taila, along with supportive Śamana therapy.*

Results

Following treatment, the patient showed marked improvement in bowel habits, appetite, energy levels, skin texture, hair fall, and reduction in neck swelling. Clinical severity scores improved significantly, and thyroid function parameters showed a progressive and sustained reduction during treatment and follow-up, indicating improvement in metabolic and endocrine function.

Conclusion

This case demonstrates that Classical Vamana followed by Thumbi Taila Pratimarsha Nasya can effectively manage primary hypothyroidism with Kapha-dominant pathology. The integrative Ayurvedic approach addresses the underlying Āma, Agnimāndya, and srotorodha, offering a safe, holistic, and physiologically rational alternative or adjunct to conventional therapy.

KEYWORDS: *Hypothyroidism, Rasa-pradoṣaja Vikāra, Kapha-pradhāna, Vamana Karma, Pratimarsha Nasya, Thumbi Taila*

INTRODUCTION

Hypothyroidism is an endocrine disorder characterized by inadequate synthesis or reduced action of thyroid hormones (T_4 and T_3), resulting in generalized metabolic slowing and multisystem involvement. It is most commonly caused by autoimmune thyroiditis (Hashimoto's disease) and is diagnosed biochemically by elevated TSH with low free T_4 in primary hypothyroidism [1] . In India, the prevalence of hypothyroidism is reported to be approximately 10–11% in the general adult population, as shown in a large multicentric study of 5,360 subjects (10.95%) and supported by national reviews, with higher rates in specific groups such as pregnant women (11.07%) [2] . Hypothyroidism is an endocrine disorder results from inadequate production of thyroid hormones, chiefly thyroxine (T_4) and triiodothyronine (T_3). Hashimoto's thyroiditis, an autoimmune destruction of thyroid tissue, is the leading cause of primary hypothyroidism. The pathophysiology involves chronic lymphocytic infiltration, progressive glandular fibrosis, impaired hormone synthesis and a compensatory rise in thyroid-stimulating hormone (TSH). Patients typically present with fatigue, cold intolerance, weight gain, constipation, depression, dry skin, hair fall, myxoedematous changes and progressive metabolic slowing.

Diagnosis is based on elevated TSH, low T_4, positive anti-TPO antibodies and supportive imaging when required. Differential diagnoses include subclinical hypothyroidism, postpartum thyroiditis, drug-induced hypothyroidism, iodine deficiency disorder and central hypothyroidism. The standard treatment is

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lifelong levothyroxine therapy; however, limitations include dose fluctuations, poor symptom control in some patients, drug interactions and adverse effects such as palpitations, weight changes and bone demineralization with long-term use. This encourages exploration of integrative approaches that may improve metabolic, endocrine and systemic function.

Ayurvedic Perspective

In Ayurveda, hypothyroidism does not correlate with a single named disease but can be understood through its clinical presentation. The symptoms closely resemble Kaphaja Nanātmaja Vikāras**,** with a special site of manifestation (Sthāna-Viśeṣa) in Gala similar to *Galaganḍa*. Additionally, the symptom complex strongly reflects Rasa-pradoṣaja Vikāra[3], where dhushana of Rasa Dhātu leads to impaired metabolic activity , manda agni and hypometabolic activity, manifesting as gaurava (heaviness), shotha (swelling), klama (fatigue), aruchi (loss of appetite), vibandha (constipation), and shita–ruksha gunas (cold and dry qualities). Chronic indulgence in Kapha-vardhaka ahara-vihara nidanas—such as shita, snigdha, madhura ahara; divasapna; avyayama (sedentary habits); and manasika nidanas like chinta and stress—leads to Kapha prakopa and the development of Kaphaja nanathmaja vikaras[4]. [Chronic indulgence in Kapha-vardhaka ahara-vihara nidānas- causes Agnimāndya**,** leading to Āma formation and obstruction in Rasa-Vaha Srotas. The Pūrva-rūpas of Rasa-dushti such as gaurava, ālasya, aruci, malasanga, manda agni and śīta-priyatā are typically observed in many hypothyroid patients.

Clinical Correlation Table no. 1

Symptoms in Hypothyroidism	Correlated Features of Rasa-pradoṣaja Vikāra
Weight gain	Gaurava (heaviness), Srotorodha
Dry skin, hair fall	Rasa-kṣaya lakṣaṇas
Fatigue, lethargy	Ālasya, Anutsāha
Constipation	Malasanga due to Kapha-Āma
Neck swelling	Galaganḍa-sadṛśa Sthāna-viśeṣa
Cold intolerance	Śīta-priyatā of Kapha-vr̥ddhi
Poor appetite	Aruci due to Agnimāndya
Sluggish metabolism	Manda-agni, Rasa-dushti

The Dasha-vidha Langhana is the chikitsa mentioned for rasapradoshaja vikara[5]**,** where Vamana is one of dashabvidha langana [6],which is one of the most effective modalities, especially for Kapha-Ama predominance.

"Kaphavr̥ddhau tu vamanaṁ śreṣṭham" [7]

By expelling morbid Kapha and Āma from the Urdhvajatrugata region, Vamana clears the Srotas, restores Rasa Dhātu, enhances Agni and improves metabolic function.

Since hypothyroidism involves Urdhvajatrugatha, which resembles Galaganḍa as sthana vishesha, hence Nasya plays a crucial role by, regulating Kapha, improving srotoshodhana, enhancing glandular function and balancing Vata-Kapha.

Thumbi Taila[6], documented for Kapha-pradhana disorders, supports local healing, reduces stiffness and swelling and enhances neuro-endocrine regulation in the region.

Considering the close resemblance of hypothyroidism to Rasa-pradoṣaja Vikāra and Kapha-dominant pathogenesis and recognizing the limitations of conventional therapy, a therapeutic protocol combining Classical Vamana followed by Thumbi Taila Pratimarsha Nasya was selected.

Hence, a case exhibiting similar features was taken:

A 36-year-old female with a six-month history of diffuse neck swelling, progressive weight gain, severe constipation, hair fall, dry skin, lethargy, heaviness and markedly elevated TSH (49.4 µIU/mL), without significant systemic involvement.

This clinical presentation closely aligns with Rasa-pradoṣaja and Kapha-pradhāna pathology, making it an appropriate model for assessing Ayurvedic interventions.

AIM & OBJECTIVES

To evaluate the effect of Vamana followed by Pratimarsha Nasya with Thumbi Taila in the management of Hypothyroidism.

MATERIALS AND METHODS

Case Description

A 36-year-old female patient presented to the Panchakarma OPD with complaints of a non-tender diffuse swelling in the neck region persisting for the past six months**.** The swelling was insidious in onset and gradually progressive. She also reported progressive weight gain, reduced appetite and increased fatigability for the past nine months, experiencing exhaustion even without significant physical exertion.

The patient further complained of constipation for the past one year, which had worsened over the preceding three months, becoming chronic in nature. The constipation was characterized by infrequent, hard bowel movements associated with a sense of incomplete evacuation. Additional complaints included hair fall for one year, dryness and roughness of skin, generalized lethargy, heaviness of the body and sluggish digestion**,** all of which showed a progressive course.

There was no history of cold intolerance, hoarseness of voice, menstrual irregularities or neuropsychiatric symptoms. On systemic inquiry, no symptoms related to the cardiovascular, respiratory or neurological systems were elicited.

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The patient had no history of diabetes mellitus, hypertension, cardiac illness or other chronic systemic diseases. Family history was non-contributory**,** with no known thyroid or hormonal disorders among first-degree relatives. Appetite was reduced, sleep was adequate, bowel habits were constipated, and micturition was normal.

On General Physical examination,Vital parameters were within normal limits**.** Systemic examination did not reveal any abnormalities.
Laboratory investigations revealed complete blood count within normal limits. Thyroid function tests showed a markedly elevated Thyroid-stimulating hormone (TSH) level of 49.4 µIU/mL**,** suggestive of severe hypothyroidism. Other relevant biochemical parameters were within normal limits.

Vayakthika vruthantha
Aharaja: Regular intake of sweets, evening fried snacks and curd rice on alternate days (*Abhishyandi Ahara*).
Viharaja: Daytime sleep, late-night sleeping and *Ratri Jagarana* with a sedentary lifestyle.
Addiction: Tea three times daily.

Clinical Findings

- General condition: Fair
- Built: Obese (over weight)
- Pulse: 62 beats/min
- RR: 18 cycles/min
- BP: 110/80 mm Hg
- Temperature: 98 F

Table no:2 Astha sthana & Dashavidha pariksha

Astha sthana pariksha		**Dashavidha pariksha**	
Nadi	Kapha –vata	**Doṣa**	kapha –vata
Mala	Constipated, once in 2-3 days	**Dūṣya**	Rasa, Meda
Mutra	Prakruta, 6-8 times/day	**Vikṛti**	kapha –vata
Jihvā	Liptha, coated tongue observed	**Prakṛti**	Kapha-pradhāna Vāta
Dṛk	Prakruta	**Vaya**	Madhyama
Śabda	Prakruta	**Satva**	Madhyama
Sparśa	Rūkṣa tvak +	**Satmya**	Madhyama
Ākṛti	Sthoola	**Vyāyāma Śakti**	Madhyama
		Āhāra Śakti	Madhyama
		Sāra	Madhyama

Table No:3 Systemic Examination

System	**Findings**
CNS & Mental status	Conscious, oriented; functions intact
Respiratory	Normal
Gastrointestinal	Tongue coated; abdomen soft
Cardiovascular	Heart sounds normal
Thyroid	Diffuse, non-tender neck swelling

LOCAL EXAMINATION OF THYROID GLAND

Inspection

- Swelling – Present at neck, non tender
- Scar – Absent
- Nodules – Absent
- Distended veins – Absent

Palpation

- Temperature – Normal
- Tenderness – Absent.



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Table no 4: Examination Findings

Parameter	Findings
General Condition	Stable, mild puffiness of face noted
Thyroid Gland	Diffuse, non-tender enlargement palpable; no nodularity or bruit detected
Skin Examination	Dry and coarse (*Ruksha Twacha*), rough texture with mild itching; skin over the face appeared pale and dull
Hair and Nails	Hair thinning and diffuse hair fall present; nails appeared brittle
Pulse	Bradycardia observed (62 beats per minute)
Reflexes	Hypo-reflexia noted; plantar reflex sluggish
Bowel Habits	Constipation persistent, hard stool passed with difficulty
Appetite and Digestion	Reduced appetite (*Agnimandya*); feeling of heaviness after meals
Sleep and Activity	Sleep adequate but with sluggish morning response and fatigue on minimal exertion
Menstrual History	Regular cycles with moderate flow; no abnormalities reported
Laboratory Investigations	Thyroid Stimulating Hormone (TSH): **49.4 µIU/mL** (markedly elevated), suggestive of **primary hypothyroidism**

Table no 5 : Clinical Scoring of Hypothyroidism Based on Zulewski's Parameters

Parameter	Patient Finding	Score (0/1)
Dry skin	Present (Rūkṣa Twacha)	1
Cold skin	Not mentioned / Not present	0
Puffy face	Mild facial puffiness present	1
Constipation	Present, severe	1
Weight increase	Present	1
Hoarseness of voice	Not reported	0
Hearing impairment	Not reported	0
Bradycardia (< 60 bpm)	60–62 bpm (borderline, not <60)	0
Relaxed ankle reflex	Hypo-reflexia present	1
Delayed relaxation of reflexes	Present (sluggish plantar reflex)	1
Cold intolerance	Not reported	0
Fatigue / Lethargy	Present	1

Total Zulewski Hypothyroid Score = 7/12, indicating a clinical picture consistent with hypothyroidism**.**

Samprapti In the present case study due to Nidāna-sevana, Jatharāgni and Rasadhātvāgni become impaired, leading to Āma formation and Rasavaha–Medovaha Srotodusṭi, which causes Kapha-vṛddhi, Rasa-dusṭi, Dhatu dusti and Srotorodha culminating in a Kapha-pradhāna clinical state resembling hypothyroidism.

Nidana-sevana (Kapha-vardhaka nidana)

↓

Agnimāndya (↓ Jatharāgni → ↓ Rasa-dhātvāgni)

↓

Ama-utpatti

↓

Rasa Dhātu Dusṭi (Āma-yukta Rasa, apakva dhātu)

↓

Rasavaha & Medovaha Srotodusṭi (Saṅga / Srotorodha)

↓

Kapha Prakopa (Kapha sanchaya & vṛddhi)

↓

Kapha-Āvaraṇa of Vāta (Impaired Vāta gati → hypometabolism)

↓

Dhātu Poṣaṇa Vaiguṇya (Rasa–Meda dhātu - dhusti)

↓

Kapha-pradhāna Avasthā (Manda kriyā, sthiratā, śīta guṇa)

↓

Sthāna-viśeṣa: Urdhva-jatrugata (Gala-pradeśa – Galaganḍa-sadrśa)

↓

Hypothyroid-like Clinical Manifestations

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Chikitsa

Table no 6: Intervention

Procedure	Medicated Substances Used	Observation
Purva Karma – Deepana & Pachana with Udwarthana (4 days)	**Abhyantara** *Trikatu Churna* (3 g twice daily before food) with warm water **Bahya** Udhwarthana with (Kolakulathadi+ triphala + swetha sarshapa) Choorna,	Nirama lakshana was observed on 4th day Ksuddha Vruddi , jihva nirlipta, Malabadhatta was reduced
Snehapana – Internal Oleation (5 days)	Abyantara Vardhaman matra Snehapana with Mahatiktaka Ghruta: **Day 1:** 30 ml **Day 2:** 50 ml **Day 3:** 70 ml **Day 4:** 90 ml **Day 5:** 110 ml Ushna jala given after snehapana . Daily dose based on jeerna and jeyamana lakshana and digestion of previous day were calculated .	(Vatanulomana Deeptagni snigndha varchas asamhat varchas mrudvanga snigdhata snehodvega glani) Are the lakshanas observed on 5 th day of snehapana On 5th day patient had samyak snigdha lashana Adhasta sneha darshana Varcha snigdhata.
Vishrama Kala (Rest Day – 1 day)	*Abhyanga* with *murchita Taila* followed by *Bashpa Sweda* On the same day evening patient was given kapha vardhaka ahara i.e sweets prepared of ghee in the afternoon and curd rice at night.	
Pradhana Karma – Vamana (24/07/2025)	**Akanta pana:** Cow milk ~1.5 L. was used **Vamaka drugs:** Madana phala pippali churna 4 g + Yashtimadhu churna 3 g + Vacha churna 2 g + Saindhava lavana 1 g mixed with honey. **Vamanopaga:** Yashtimadhu decoction ~ 4 L, ushnodhaka ~ 2 L.	Vamana karma Observation • Vaigiki-6 vegas. • Maniki-550ML • Laingiki- Kosta lagavatha, shuddi in hrit, parshva, kanta, dehalagavat. • Antiki – pitanta. **Outcome:** Achieved proper Vamana with madyama shuddi , relief in constipation and improved appetite.
Paschat Karma – Samsarjana Krama (4 days)	Dhoomapana was given Rest on the day of vamana Samsarjana karma was carried for (5 days as it was madyama shuddi)	Proper restoration of Agni (digestion); patient tolerated all stages well.
Post-Vamana Follow-up – Pratimarsha Nasya (30 days)	**Pratimarsha Nasya:** Thumbi Taila, 2 bindus in each nostril; at night for 30 days.	Improvement in symptoms, better digestion and appetite, reduction in neck swelling, increased energy.
Follow-up – Oral Medicine (Next 30 days)	**Kanchanara Guggulu:** 2 tablets after breakfast and 2 tablets after dinner for 30 days.	Continued reduction in neck swelling, better metabolism, sustained improvement on follow-up.

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OBSERVATION AND RESULTS

Table no.7: T3, T4 and TSH values at different intervals.

Day/Phase	Intervention	TSH (mIU/mL)	Zulewski's Clinical Score	Clinical Observations
Pre-treatment	Baseline	49.4	7	Severe constipation, hair fall, dry skin, lethargy
Post vamana karma	-	23.9	3	Improved bowel movements, reduced lethargy
Post 30 days Pratimarsha Nasya	Katu Thumbi Taila	11.7	0	Hair fall reduced, skin improved, alertness better
Kanchana guggulu 2-0-2 a/f on Follow-up	Maintenance phase	7.05	0	Overall well-being improved, metabolism enhanced

OBSERVATIONS & RESULTS

Table no. 8: Clinical Symptoms Improvement

Symptom	Before Treatment	After Vamana	After 21 days Nasya
Constipation	Severe, hard stool	Mild	Normal
Skin dryness	Severe	Improved	Smooth, hydrated
Hair fall	Heavy	Reduced	Minimal
Facial puffiness	Present	Reduced	Absent
Lethargy	Severe	Moderate	Absent
Appetite	Poor	Improved	Normal
Neck swelling	Diffuse	Reduced	Significantly reduced
Bowel movement	Once Every 2–3 days	Every 2 days	Daily

DISCUSSION

This case highlights the therapeutic efficacy of classical Vamana Karma followed by Thumbi Taila Pratimarsha Nasya in the management of primary hypothyroidism with Kapha-pradhana and Rasa–Meda dushti symptoms. The patient presented with typical hypothyroid manifestations including neck swelling, constipation, weight gain, lethargy, dry skin, and markedly elevated thyroid-stimulating hormone levels, which shows a similar clinical symptoms with Rasa-pradoshaja vikara**,** Kapha vriddhi**,** and srotorodha described in Ayurveda.

Vamana, indicated as the prime therapy for aggravated Kapha, resulted in effective elimination of Kapha–Ama, improvement in digestion and bowel habits, reduction in swelling, and restoration of Agni**,** indicating successful srotoshodhana. Subsequent Pratimarsha Nasya with Thumbi Taila, indicated for Urdhva-jatrugata disorders, likely enhanced local glandular function, reduced residual Kapha, and supported neuro-endocrine regulation of the thyroid region.

The progressive improvement observed during follow-up, along with reduction in clinical symptom severity and improvement in functional status, suggests a sustained enhancement of metabolic and thyroid activity. By clearing obstructed srotas, restoring Rasa dhatu, and balancing Vata–Kapha, the combined Shodhana and Shamana approach effectively addressed the underlying pathophysiology.

These findings support the role of an integrated Ayurvedic protocol - particularly Vamana followed by Nasya - as a safe, holistic, and physiologically rational approach in the management of hypothyroidism, either as an adjunct or, in selected cases, as an alternative to long-term hormone replacement therapy.

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Table no 9 : Probable Mode of Action of Vamana and prathimarsha nasya in Hypothyroidism

Domain	Probable Action	Outcome
According to Ayurveda	Kapha–Ama Shodhana	Clears Rasavaha–Medovaha srotorodha
	Agni Dipana	Restores Jatharagni and Rasa–Meda Dhatwagni, correcting hypometabolism
Vata Anulomana	Relieves Kapha-induced Vata avaraṇa, normalizing regulation	Vata Anulomana
Scientific	Anti-inflammatory & detox effect	Reduces metabolic inflammation affecting thyroid function
	Gut–endocrine modulation	Improves nutrient absorption and HPT-axis regulation
	Enhanced peripheral metabolism	Supports $T_4 \rightarrow T_3$ conversion
Post-Vamana	Samsarjana Krama	Stabilizes Agni(metabolic rate increases), dhatu poshana and bowel function
Adjuvant	Pratimarsha Nasya with Thumbi taila	Clears Urdhva-jatrugata srotas; balances Vāta–Kapha **(*Pratimarsha Nasya*):** Daily mild stimulation sustains HPT axis activity. Gradual improvement in thyroid gland responsiveness results in increased endogenous T3/T4 production. Metabolic markers like BMR, glucose and lipid handling begin to improve.
	Kanchanara Guggulu	Kapha-Meda hara; reduces Shotha at greeva pradesha and elevated TSH
Overall	Integrated effect	Restores metabolic–endocrine homeostasis and improves hypothyroid symptoms

CONCLUSION

This case study demonstrates that Classical Vamana followed by Thumbi Taila Pratimarsha Nasya is an effective and safe Ayurvedic approach for managing primary hypothyroidism with Kapha-pradhāna and Rasa-pradoṣaja pathology. Significant clinical improvement in bowel habits, energy levels, skin and hair quality, and reduction in neck swelling was observed, along with sustained improvement in metabolic and thyroid function. Vamana effectively eliminated Kapha–Āma, restored Agni, and cleared srotorodha, while Pratimarsha Nasya supported Urdhvajatrugata srotoshodhana and glandular regulation. This integrative protocol highlights the potential role of Ayurvedic Śodhana and Śamana therapies in hypothyroidism, warranting further validation through larger clinical studies.

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TEST ASKED : TSH - ULTRASENSITIVE

SAMPLE COLLECTED AT :
(11132),K R HOSPITAL MYSORE,IRWIN ROAD OPP MMC MYSORE.,570001

TEST NAME	TECHNOLOGY	VALUE	UNITS	Bio. Ref. Interval.
TSH - ULTRASENSITIVE	E.C.L.I.A	49.4	µIU/mL	0.54-5.30

Comments :
The Biological Reference Ranges is specific to the age group. Kindly correlate clinically.

Method :
USTSH - Fully Automated Electrochemiluminescence Sandwich Immunoassay

Pregnancy reference ranges for TSH/USTSH :
Trimester || T3 (ng/dl) || T4 (µg/dl) || TSH/USTSH (µIU/ml)
1st || 83.9-196.6 || 4.4-11.5 || 0.1-2.5
2nd || 86.1-217.4 || 4.9-12.2 || 0.2-3.0
3rd || 79.9-186 || 5.1-13.2 || 0.3-3.5

References :
1. Carol Devilla, C I Parhon. First Trimester Pregnancy ranges for Serum TSH and Thyroid Tumor reclassified as Benign. Acta Endocrinol. 2016; 12(2) : 242 - 243
2. Kulhari K, Negi R, Kalra DK et al. Establishing Trimester specific Reference ranges for thyroid hormones in Indian women with normal pregnancy : New light through old window. Indian Journal of Contemporary medical research. 2019; 6(4)

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— End of report —

Sample Collected on (SCT) : 23 May 2025 12:30
Sample Received on (SRT) : 24 May 2025 00:02
Report Released on (RRT) : 24 May 2025 04:02
Sample Type : SERUM
Labcode : 2305112241/KAR12
Barcode : DO580378

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REF. BY : DR MEGHANA
TEST ASKED : TSH - ULTRASENSITIVE

SAMPLE COLLECTED AT :
(11132),K R HOSPITAL MYSORE,IRWIN ROAD OPP MMC MYSORE.,570001

TEST NAME	TECHNOLOGY	VALUE	UNITS	Bio. Ref. Interval.
TSH - ULTRASENSITIVE	E.C.L.I.A	22.9	µIU/mL	0.54-5.30

Comments :
The Biological Reference Ranges is specific to the age group. Kindly correlate clinically.

Method :
USTSH - Fully Automated Electrochemiluminescence Sandwich Immunoassay

Pregnancy reference ranges for TSH/USTSH :
Trimester || T3 (ng/dl) || T4 (µg/dl) || TSH/USTSH (µIU/ml)
1st || 83.9-196.6 || 4.4-11.5 || 0.1-2.5
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— End of report —

Sample Collected on (SCT) : 08 Jul 2025 13:00
Sample Received on (SRT) : 08 Jul 2025 23:59
Report Released on (RRT) : 09 Jul 2025 02:21
Sample Type : SERUM
Labcode : 0807126809/KAR12
Barcode : DN849524

Dr Syeda Sumaiya MD(Path)

Scan QR code to verify authenticity of reported results; active for 30 days from release time.

Page : 1 of 2



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First National Diagnostic Chain to have 100% of its Labs with NABL Accreditation*

NAME : MAMATHA B (36Y/F)
REF. BY : DR MEGHANA
TEST ASKED : TSH - ULTRASENSITIVE

Sample Collected At
(11132),K R HOSPITAL MYSORE,IRWIN ROAD OPP MMC MYSORE.,570001

TEST NAME	TECHNOLOGY	VALUE	UNITS	Bio. Ref. Interval.
TSH - ULTRASENSITIVE	E.C.L.I.A	13.7	µIU/mL	0.54-5.30

Comments :
The Biological Reference Ranges is specific to the age group. Kindly correlate clinically.

Method :
USTSH - Fully Automated Electrochemiluminescence Sandwich Immunoassay

Pregnancy reference ranges for TSH/USTSH :
Trimester || T3 (ng/dl) || T4 (µg/dl) || TSH/USTSH (µIU/ml)
1st || 83.9-196.6 || 4.4-11.5 || 0.1-2.5
2nd || 86.1-217.4 || 4.9-12.2 || 0.2-3.0
3rd || 79.9-186 || 5.1-13.2 || 0.3-3.5

References :
1. Carol Devilla, C I Parhon. First Trimester Pregnancy ranges for Serum TSH and Thyroid Tumor reclassified as Benign. Acta Endocrinol. 2016; 12(2) : 242 - 243
2. Kulhari K, Negi R, Kalra DK et al. Establishing Trimester specific Reference ranges for thyroid hormones in Indian women with normal pregnancy : New light through old window. Indian Journal of Contemporary medical research. 2019; 6(4)

Disclaimer :Results should always be interpreted using the reference range provided by the laboratory that performed the test. Different laboratories do tests using different technologies, methods and using different reagents which may cause difference. In reference ranges and hence it is recommended to interpret result with assay specific reference ranges provided in the reports. To diagnose and monitor therapy doses, it is recommended to get tested every time at the same Laboratory.

— End of report —

Sample Collected on (SCT) : 18 Aug 2025 14:00
Sample Received on (SRT) : 19 Aug 2025 00:16
Report Released on (RRT) : 19 Aug 2025 04:27
Sample Type : SERUM
Labcode : 1808111991/KAR12
Barcode : DR174257

Dr Syeda Sumaiya MD(Path) Dr.Anuswara MBBS,MD (Biochem)

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Patient Name : MAMATHA (36Y/F)
Referred By : DR MEGHANA
Sample Collected At : (11132),K R HOSPITAL MYSORE,IRWIN ROAD OPP MMC MYSORE.,570001

Sample Collected on (SCT) : 18 Sep 2025 10:20
Sample Received on (SRT) : 18 Sep 2025 00:06
Report Released on (RRT) : 18 Sep 2025 01:53
Sample Type | Barcode : SERUM | DO540648

TEST NAME	TECHNOLOGY	VALUE	UNITS	Bio. Ref. Interval.
TSH - ULTRASENSITIVE	E.C.L.I.A	7.05	µIU/mL	0.54-5.30

Comments :
The Biological Reference Ranges is specific to the age group. Kindly correlate clinically.

Method :
USTSH - Fully Automated Electrochemiluminescence Sandwich Immunoassay

Pregnancy reference ranges for TSH/USTSH :
Trimester || T3 (ng/dl) || T4 (µg/dl) || TSH/USTSH (µIU/ml)
1st || 83.9-196.6 || 4.4-11.5 || 0.1-2.5
2nd || 86.1-217.4 || 4.9-12.2 || 0.2-3.0
3rd || 79.9-186 || 5.1-13.2 || 0.3-3.5

References :
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2. Kulhari K, Negi R, Kalra DK et al. Establishing Trimester specific Reference ranges for thyroid hormones in Indian women with normal pregnancy : New light through old window. Indian Journal of Contemporary medical research. 2019; 6(4)

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— End of report —

Note Done : TSH - ULTRASENSITIVE

Dr Syeda Sumaiya MD(Path)

Dr.Anuswara MBBS,MD (Biochem)

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