

## MANAGEMENT OF CASE OF PRIMARY HYPOTHYROIDISM ON THE PRINCIPLES OF DHATWAGNIMANDYA - A CASE REPORT

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### ABSTRACT

Hypothyroidism is a condition caused by thyroid hormone deficiency. It occurs due to hormonal imbalance & decreased metabolism. Clinical manifestations range from no signs or symptoms to life-threatening conditions. In Ayurveda, it corresponds to *Dhatvagni Mandya*. In this case report the patient presented with puffiness of the face, swelling in both the limbs, muscle (back) pain, loss of appetite, constipation and abnormal weight gain. According to symptomatic presentations, the case was diagnosed as *Dhatvagni mandya*. Clinical presentation and biochemical parameter i.e., Thyroid Stimulating Hormone (TSH) was 12.07uIU/ml which confirmed the case as Hypothyroidism in modern medicine. The multimodal Ayurvedic management approach incorporating *ahara*, *vihara* and *aushadha* was adopted. The case was treated on the line of principles of *Agnimandya*. *Shaman Chikitsa* (pacifying therapy) including internal administration of herbo-mineral formulations such as *Arogyavardhini vati*, *Kanchnaar guggul*, *Punarnava mandur*, *Avipattikar churna*, *Swarna vanga* along with a dietary regimen was prescribed to the patient. After 3 months' treatment, significant symptomatic relief along with reduction of serum TSH level (3.05uIU/ml) without any adverse effects was observed in the patients. It can be inferred from the case that Ayurvedic intervention has enough potential to be employed and utilized in such endocrine disorders.

**Keywords-** Ayurveda, *Dhatawagni*, *Agni*, Hypothyroidism, *Kanchnar Guggul*, *Arogyavardhini vati*.

## INTRODUCTION

Thyroid diseases are among the commonest endocrine disorders worldwide. The prevalence of Hypothyroidism in India is 11% [1] which contributes to about 42 million people. [2] The most common cause of hypothyroidism is the inability of the thyroid gland to produce a sufficient amount of thyroid hormone. [3] Female gender and older age were found to have a significant association with hypothyroidism<sup>4</sup>. The idiopathic form of hypothyroidism occurs mainly in females older than 40 years. [4] Hypothyroidism is not mentioned directly in Ayurvedic texts, but several references are found in various texts which can be correlated clinically to the pathogenesis of hypothyroidism. Signs & symptoms of hypothyroidism can be correlated with symptoms of *Dhatvagni Mandya*. Acharya Vagbhata has given direct relation between *Dhatvagni & Jatharagni*. All the dhatus has their separate *Agni* called *Dhatvagni* & are nothing but part of *Jatharagni*. So, with *Jatharagni*, *Dhatvagni* also gets *manda* (impaired). [5] In the present case study, the symptoms of the patient can be compared with the symptoms of *ama* caused due to *agnimandya*. Clinical symptoms of *agnimandya* are *Srotorodha* (obstruction to body channels), *Gaurava* (heaviness), *Anil Mudhata* (Abnormal movement of *Vata Dosha*), *Aalasya* (laziness), *Apakti* (indigestion), *Malasanga* (obstruction of mala), *Aruchi* (loss of taste), *Klama* (lethargy). [6] These symptoms can be correlated with patient's chief complaints. Thus, principles that correct the functioning of *Agni* will be beneficial in treating various pathologies. The treatment protocol was planned to keep in mind the state of *rogabala* and *aturbala*. The treatment was planned in such a way

that it included *amapachak*, *agnideepan*, *anuloman*, *medohara* and *kapha-vata shamaka* properties. For this purpose, *Arogyavardhini Vati* 500mg, *Punar-nava Mandur* 500mg, *Kanchnaar Guggul* 500mg twice a day and *Avipattikar Churna* 3grams and *Swarna Vanga* 250mg twice a day before the meal was advised for 3 months. (Image 1) The patient was also advised to follow the diet and lifestyle as per the principles of Ayurveda.

### Case Report

A 45-year-old homemaker visited the Out-Patient Department of AIIA, New Delhi with the following chief complaints of puffiness of the face, swelling and stiffness in hands and legs (image 2), weakness, muscle (back) pain, laziness, loss of appetite, constipation and abnormal weight gain since last 1 year. She was advised for Hb%, blood sugar and thyroid profile. Based on laboratory investigation (image 3), she was diagnosed with primary hypothyroidism. No significant family history and history was found. She also had no history of any co-morbidities like hypertension, diabetes, cardiac problem or any other complicated diseases. The patient was having no addiction history. Appetite was subnormal and thirst was normal. His bowel was constipated. The bladder was regular, and sleep was disturbed.

*Atura Bala Pramana* was assessed by *Dashavidha Pariksha*. [13] *Prakriti* of the patient was *Kapha-Vataja* and *Vikriti* was *Kapha pradhan Vataja*; *Sara* was *Rakta*; *Samhana* was *Madhyam*; *Vyayama shakti* was *Avara*; *Ahara shakti* and *Jarana shakti* was *Avara*; *Satva* was *Avara*; *Satyama* and *Bala* was *Avara*.

### Assessment criteria

Improvement was assessed based on percentage relief observed in the presenting complaints. [14] (table 2) A symptom like acidity was assessed by Gastrointestinal Symptom Rating Scale (GSRS) [15]

Severity	Score	Symptoms
None	0	No symptoms
Mild	1	Aware of symptoms, but easily tolerated
Moderate	2	Discomfort is sufficient to cause interference with normal activities
Severe	3	Incapacitating, with the inability to perform normal activities

## Observations and Results

Considerable improvement was noticed in complaints (Table 1)

## DISCUSSION

The change in lifestyle pattern of the current scenario has triggered several disharmonies in the biological system. Hypothyroidism is one such manifestation. The pathogenesis of Hypothyroidism is due to the abnormal functioning of *Agni*, which in turn affects *Dhatvagni*, eventually brings out the pathological sequence and ultimately the disease condition develops

Thus, *dhatwagnimandya* is the main causative factor in the manifestation of pathology of primary hypothyroidism. *Jatharagni mandya* once created can be treated easily but a vitiation of *Dhatvagni* is difficult to treat. (Image 4) Based on this disease chronicity & its *sadhya-asadhyta* is decided. Moreover, a longer duration of treatment is needed to cure *Ama* at *dhatu* level.<sup>[16]</sup> In this case, according to involved *Doshas* and *samprapti*, *kapha-vata shamaka* line of treatment was adopted. *Prakriti* and *Vikriti* was of same *Doshas* which makes it *sadhya* to treat but take a longer time duration. Along with that *medohara chikitsa* was also adopted which significantly shows lowering the BMI (body mass index) and thus, weight was also reduced from 78kgs to 75kgs. Serum T.S.H. also reduced from 12.07 uIU/ml to 3.05 uIU/ml. (image 5) The patient's symptoms started reducing gradually and kept on reducing at the end of 3 months. But some symptoms like muscle pain and weakness persisted for a long and were gradually reduced. The swelling in the lower limbs was reduced. (Image 6) The patient was advised to follow a dietary and lifestyle regimen. She was also advised to do *Ujjayi Pranayama*.<sup>[17]</sup>

The medicines were discontinued after 3 months, and a repeat thyroid profile was done. The value of T.S.H. was found to be 3.43 uIU/ml. (image7) Then she was advised to undergo a thyroid profile routinely to monitor the values. This shows the patient doesn't have to take the medications for the long term.

## CONCLUSION

In the present case report, the patient was treated on the principles of *dhatwagnimandya* because the exact cause of primary hypothyroidism is unknown. There is a significant decrease in symptoms and TSH value of the patient within 3 months and does not increase after that. This shows the patient doesn't have to take the medicines for lifelong. Thus, it can be concluded that the combination of *Arogyavardhini Vati*, *Kanchanar Guggul*, *Punarnava Mandur*, *Avipattikar Churna* and *Swarn Vanga* was found to be effective in the successful management of a case of primary hypothyroidism without reporting any evidence of side effects or complications. The patient was also advised to practice yoga and pranayama which also helped in the reduction of body mass index and TSH. The above combination showed encouraging results in managing this case. This combination needs to be studied in a greater number of patients for better assessment.

## REFERENCES

1. Bagcchi S: Lancet Diabetes Endocrinol: Hypothyroidism in India: more to be done. 2014 Oct; 2(10):778.
2. Unnikrishnan AG, Menon UV, Indian Journal of Endocrinology Metabolism: Thyroid disorders in India: An epidemiological perspective. 2011 Jul;15(Suppl2): S78–81.
3. Patil N, Rehman A, Jialal I. Hypothyroidism. In: StatPearls [Internet]. Treasure Island (FL): StatPearls Publishing; 2021 [cited 2021 Aug 26]. Available from: <http://www.ncbi.nlm.nih.gov/books/NBK519536/>
4. Unnikrishnan AG, Kalra S, Sahay RK, Bantwal G, John M, Tewari N. Prevalence of hypothyroidism in adults: An epidemiological study in eight cities of India. Indian J Endocrinol Metab. 2013;17(4):647–52.
5. Ashtanga Hridaya, edited by Dr Anna Moreshwar Kunte, Chaukhambha Surbharati Prakashan, Varanasi, Reprint Edition, 2002 SutraSthana, Doshopakramniya Adhyaya, 13/23,24. Page no. 216
6. Charaka Samhita, Edited by Dr Brahmanand Tripathi, Chaukhambha Surbharati Prakashan, Varanasi, Reprint Edition 2009 Chikitsa Sthana, Gahani Dosha Chikitsa Adhyaya, 15/42,43. Page no. 559
7. Kaviraj Shri Govinda Das Sen, editor. Bhaishajyaratnavali, Kushtarogadhikara 54/111-117. Varanasi: Chaukhamba Prakashan, Page no. 871, Edition-

- 2021, Publication- Chaukhambha Subharti Prakashan- Varanasi
8. Kaviraj Shri Govinda Das Sen, editor. Bhaishajyaratnavali, Pandurogadhikara 12/63-65. Varanasi: Chaukhamba Prakashan, Page no. 381, Publication- Chaukhambha Subharti Prakashan- Varanasi
  9. Prof. Padamshri Krishna Chunekar, editor. Bhava Prakash Nighantu, Guduchyadi Varga Chapter 6 (IV) verse 102-104, page no. 254, Edition-2020, Publication- Chaukhambha Orientalia
  10. Kaviraj Shri Govinda Das Sen, editor. Bhaishajyaratnavali, Sotharogadhikara 42/24. Varanasi: Chaukhamba Prakashan, Page no.769, Publication- Chaukhambha Subharti Prakashan- Varanasi
  11. Kaviraj Shri Govinda Das Sen, editor. Bhaishajyaratnavali, Amlapittarogadhikara 56/24-28. Varanasi: Chaukhamba Prakashan, Page no. 903, Publication- Chaukhambha Subharti Prakashan- Varanasi
  12. Kaviraj Shri Govinda Das Sen, editor. Bhaishajyaratnavali, Prameharogadhikara 37/164-167. Varanasi: Chaukhamba Prakashan, Page no. 712, Publication- Chaukhambha Subharti Prakashan- Varanasi
  13. Nath P, Dwivedi RR, Mandal SK. Atura Bala Pramaana Through Dasvidha Pariksha. Journal of Ayurveda 2009;3:35-54.
  14. Mridul R, Thakar A. A comparative clinical study of Vamana and Virechana Karma along with Shamana therapy in the management of Hypothyroidism. Department of Panchakarma, IPGT & RA, Thesis submitted to Gujarat Ayurved University, Jamnagar, 2016
  15. Pawar VSD, Deshpande DMS: Agni, Dhatvagnimandya, Hypothyroidism: 2016;3
  16. Junghard O, Wiklund I. Validation of a Four-Graded Scale for Severity of Heartburn in Patients with Symptoms of Gastroesophageal Reflux Disease. Value Health. 2008;11(4):765–70.
  17. Dr S.Vinudha, B.N.Y.S, the efficacy of Ujjayi Pranayama on Hypothyroidism in adults – A randomized controlled trial, Department of Yoga Government Yoga & Naturopathy Medical College & Hospital, Arumbakkam, Chennai, 2016 - 2019

**Table 1:** Efficacy of therapy on chief complaints

Symptoms	Before treatment	After 1 month	After 2 months	After 3 months
Bodyweight	78kgs	78kgs	76kgs	75kgs
BMI	30.5 kg/m <sup>2</sup>	30.5 kg/m <sup>2</sup>	29.7 kg/m <sup>2</sup>	29.3 kg/m <sup>2</sup>
Swelling in lower limbs (in cms)	39 cms	38.5 cms	38 cms	38 cms
Puffiness	2	1	1	0
Weakness	4	3	2	1
Lethargy	2	2	1	0
Muscle pain	3	2	2	1
Constipation	F <sub>2</sub> C <sub>1</sub> S <sub>1</sub>	F <sub>1</sub> C <sub>1</sub> S <sub>0</sub>	F <sub>0</sub> C <sub>1</sub> S <sub>0</sub>	F <sub>0</sub> C <sub>1</sub> S <sub>0</sub>
Acidity	2	1	0	0

**Table 2:** Scoring of symptoms

Symptoms	Score	Symptoms	Score
<b>Puffiness</b>		<b>Lethargy</b>	
Absent	0	Doing work satisfactorily with proper vigour in time	0
Occasional	1	Doing work without desire but in time	1
Peri-orbital oedema in the morning relieved later	2	Doing work without desire, unsatisfactorily, with a lot of mental pressure & not in time	2
Persistent	3	Not starting any work in his/her responsibility, doing little work very slow	3
<b>Weakness</b>		Does not have any initiation & not want to work even after pressure	4
Able to exercise without difficulty	0	<b>Muscle ache</b>	
Able to do mild exercise	1	No	0
Able to do only mild work	2	Relieved by rest	1
Able to do mild work with difficulty	3	Not relieved by rest. Relieved by external application	2
Not able to do even mild work	4	Requires external application and internal medication	3
Unable to do even day to day routine work	5	Present consistently	4

Frequency (F)		Consistency (C)		Straining (S)	
Once a day	0	Shithila	0	No	0
Once in two days	1	Madhyama	1	Occasionally Bearable	1
Once in three days	2	Kathina	2	Frequently, Severe	2
Once in more than three days	3	Granthil	3		

Image 1: Rationale of drug chosen for the study

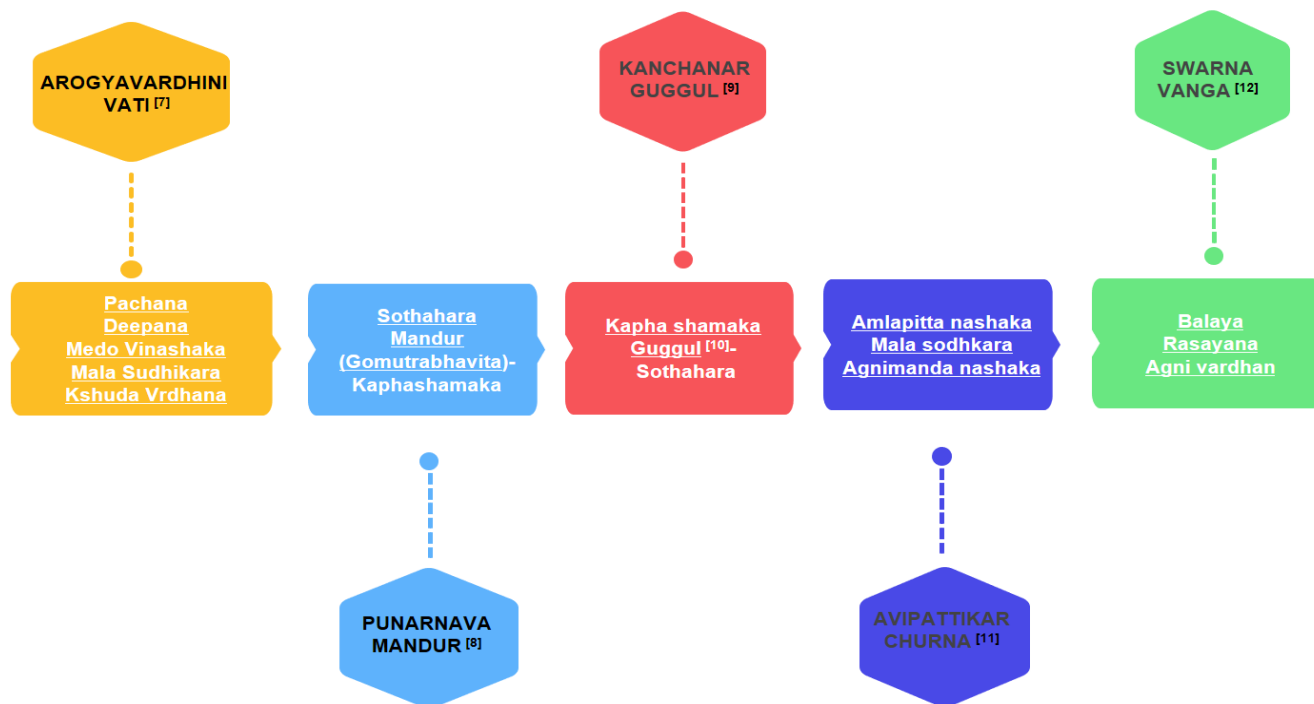


Image 2: Swelling in the lower limb (39cms) before management



Image 4: Sampapti of Dhatwagnimandya

Image 3: Thyroid profile before management

TEST NAME	RESULTS	UNITS	BIOLOGICAL REF-INTERVAL
<b>THYROID FUNCTION TEST</b>			
Triiodothyronine (T3) * (Chemiluminescence)	1.41	ng/ml	0.8-2.2
Thyroxine (T4) * (Chemiluminescence)	8.57	ug/dl	5.1-14.1
THYROID STIMULATING HORMONE (TSH) (Chemiluminescence)	12.70	uIU/mL	0.2-6.0

Above mentioned reference ranges are standard reference ranges.

AGE RELATED GUIDELINES FOR REFERENCE RANGES FOR TSH

TSH (uIU/ml)	NEW BORN (11-28.9)	INFANT (1.7-9.1)	CHILD (0.7-6.4)	ADULT (0.2-6.0)
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SUGGESTED THYROID ANTIBODIES TPO / ATG  
TSH VALUE BETWEEN 6 TO 10 INDICATE SUBCLINICAL / MILD HYPOTHYROIDISM THESE PATIENTS ARE TO BE TREATED. IF THYROID ANTIBODIES ATG / TPO IS POSITIVE IN NEGATIVE THYROID ANTIBODIES CASES TSH LEVELS ARE MONITORED 6 MONTHLY

Note: TSH levels are subject to circadian variation, reaching peak levels between 2 & 4 AM and at a minimum between 8-10 PM. The variation is of the order of 50%. Time of day has influence on the measured serum TSH concentrations. Dose and time of drug intake also influence the test result.

IBL Generation Ultrasensitive kits are used.

Serum total T3, T4 and TSH measurement form three components of thyroid screening panel and are useful in diagnosing various disorder of thyroid gland function.

1. Primary hyperthyroidism is accompanied by elevated serum T3 and T4 values along with decreased TSH level.
2. Primary hypothyroidism is accompanied by depressed serum T3 and T4 values and elevated serum TSH level.
3. Normal T4 level accompanied by high T3 level and low TSH are seen in subjects with T3 thyrotoxicosis.
4. Normal or low T3 & high T4 level indicates T4 thyrotoxicosis (problem is conversion of T4 to T3)
5. Normal T3 & T4 level and low TSH indicate mild subclinical HYPERTHYROIDISM.
6. Normal T3 & low T4 along with high TSH is seen in HYPOTHYROIDISM.
7. Normal T3 & T4 level with high TSH indicate MILD / SUBCLINICAL HYPOTHYROIDISM.
8. Slightly elevated T3 level may be found in pregnancy and in estrogen therapy while depressed level may be expected in severe illness, malnutrition, renal failure and during therapy with drugs like propylthiouracil.
9. Although elevated TSH level are nearly always indicative of primary hypothyroidism, rarely they can result from secreting pituitary tumours (secondary hyperthyroidism).

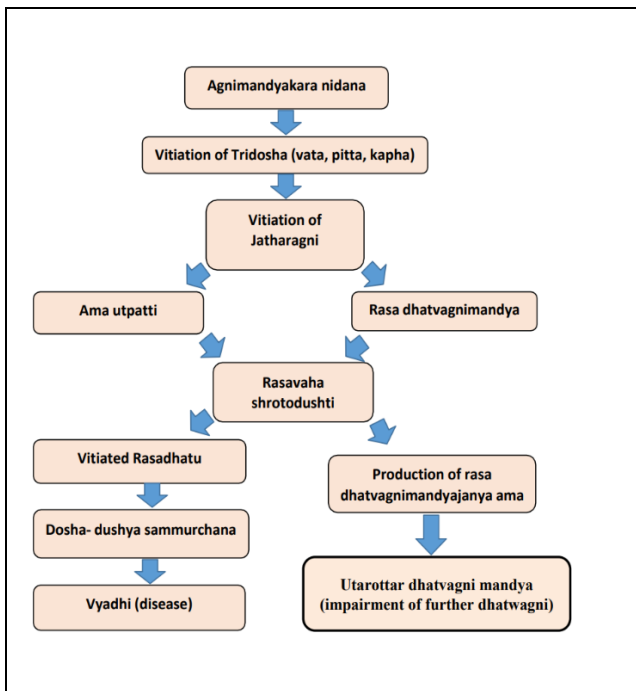
Result is to be correlated clinically.

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Image 5: Thyroid profile after the management of 3 months



S.No. : 927 08012021	Age/Sex : 44 Yrs. / FEMALE	Collected On : 22/Apr/2021 9:30AM
Name : Mrs. REENA DEVI	Sample Type : SERUM	Reported On : 22/Apr/2021 4:46PM
Referred By : GALAXY DIAGNOSTICS	Sample By : Amit	Printed On : 22/Apr/2021 5:06PM

TEST NAME	RESULTS	UNITS	BIOLOGICAL REF-INTERVAL
<b>THYROID FUNCTION TEST</b>			
Triiodothyronine (T3) * (Chemiluminescence)	1.41	ng/ml	0.8-2.2
Thyroxine (T4) * (Chemiluminescence)	8.57	ug/dl	5.1-14.1
THYROID STIMULATING HORMONE (TSH) (Chemiluminescence)	3.05	uIU/mL	0.2-6.0

Above mentioned reference ranges are standard reference ranges.

AGE RELATED GUIDELINES FOR REFERENCE RANGES FOR TSH

TSH (uIU/ml)	NEW BORN	INFANT	CHILD	ADULT
	1.0 - 18.9	1.7 - 9.1	0.7 - 6.4	0.2 - 6.0

SUGGESTED THYROID ANTIBODIES TPO / ATG  
TSH VALUE BETWEEN 0.1 TO 10.0 INDICATE SUBCLINICAL / MILD HYPOTHYROIDISM. THESE PATIENTS ARE TO BE TREATED. IF THYROID ANTIBODIES ATG / TPO IS POSITIVE. IN NEGATIVE THYROID ANTIBODIES CASES TSH LEVELS ARE MONITORED 6 MONTHLY.

Note: TSH levels are subject to circadian variation, reaching peak levels between 2 AM 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 concentration. Dose and time of drug intake also influence the test result.

Third Generation Ultrasensitive kits are used.

Serum total T3, T4 and TSH measurement form three components of thyroid screening panel and are useful in diagnosing various disorder of thyroid gland function.

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- Normal T4 level accompanied by high T3 level and low TSH are seen in patients with T3 thyrotoxicosis.
- Normal or low T3 & high T4 level indicates T4 thyrotoxicosis (problem is conversion of T4 to T3).
- Normal T3 & T4 level and low TSH indicate mild/subclinical HYPERTHYROIDISM.
- Normal T3 & low T4 along with high TSH is seen in HYPOTHYROIDISM.
- Normal T3 & T4 level with high TSH indicate MILD/SUBCLINICAL HYPOTHYROIDISM.
- Slightly elevated T3 level may be found in pregnancy and in estrogen therapy while decreased level may be encountered in severe illness, malnutrition, recent failure and during therapy with drugs like propranolol.
- Although elevated TSH level are nearly always indicative of primary hypothyroidism, rarely they can result from secreting pituitary tumours (secondary hyperthyroidism).

Result is to be correlated clinically.

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Image 6: Swelling in lower limbs reduced (38cms) after the management of 3 months



Image 7: Thyroid profile after 1 month of discontinuing medicine

S.No. : 927 08012021	Age/Sex : 44 Yrs. / FEMALE	Collected On : 27/May/2021 9:30AM
Name : Mrs. REENA DEVI	Sample Type : SERUM	Reported On : 27/May/2021 3:30PM
Referred By : GALAXY DIAGNOSTICS	Sample By : Vinod	Printed On : 27/May/2021 4:13PM

TEST NAME	RESULTS	UNITS	BIOLOGICAL REF-INTERVAL
<b>THYROID FUNCTION TEST</b>			
Triiodothyronine (T3) * (Chemiluminescence)	1.32	ng/ml	0.8-2.2
Thyroxine (T4) * (Chemiluminescence)	7.92	ug/dl	5.1-14.1
THYROID STIMULATING HORMONE (TSH) (Chemiluminescence)	3.43	uIU/mL	0.2-6.0

Above mentioned reference ranges are standard reference ranges.

AGE RELATED GUIDELINES FOR REFERENCE RANGES FOR TSH

TSH (uIU/ml)	NEW BORN	INFANT	CHILD	ADULT
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