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Case Report

Evidence Based Case Report - Chronic Hypothyroidism Treated with Individualized Homoeopathic Medicine

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Received: May 30, 2023; **Published:** June 21, 2023

Abstract

Introduction: Underactive thyroid, or hypothyroidism, is a common endocrine condition marked by insufficient thyroid hormone production by the thyroid gland. It affects people of all ages, but women and older people are more likely to experience it. Various factors, such as autoimmune diseases, iodine shortages, prior thyroid surgery or radiation therapy, and congenital defects, might contribute to hypothyroidism. A variety of symptoms and consequences are brought on by the pathophysiology of hypothyroidism, which involves the impairment of normal thyroid hormone production. A lack of thyroid hormones can cause symptoms such as fatigue, weight gain, cold sensitivity, dry skin, hair loss, constipation, depression, and more. Thyroid hormones are essential for controlling a number of biological processes. Hypothyroidism can cause difficulties like heart disease, mental health problems, myxedema coma (a potentially fatal illness), nerve damage, infertility, and birth deformities if left untreated. Lab testing, physical exams and the study of the patient's medical history are all used to diagnose hypothyroidism. Thyroid-stimulating hormone (TSH) levels, thyroid hormones (T4 and T3), and thyroid peroxidase antibodies (TPO) are frequently assessed through blood testing. Sonography is one imaging tool that can be used to examine the thyroid gland for nodules or other abnormalities. Also, complementary and alternative system of medicine plays an important role in the treatment of Hypothyroidism. Homoeopathic literature enlists many medicines for this condition, but there is a paucity of evidence-based published studies.

Case Discussion: A 39 year old female, presented with hypothyroidism for 11 years, suffering from constipation, hair fall and dryness. TSH value was 8.45 µIU/ml at beginning of treatment. Although she was advised lifelong intake of Levothyroxine, she opted for alternative medication. The detailed case was taken, and after analysis, totality was formed, repertorization was done and Natrium Muraticum was prescribed in 1M Potency. Her symptoms were alleviated within a short period, and blood reports revealed that there was decrease in TSH value to 5.12 µIU/ml after 5 months of treatment. Homeopathic medicine Natrium mur., was selected based on the totality of symptoms, was found to be effective in this case. Homeopathic treatment has shown favorable results in this case and demonstrates the scope of Homoeopathy in such cases.

Keywords: *Chronic Hypothyroidism; Homoeopathic Medicine; Thyroid-Stimulating Hormone (TSH); Thyroid Peroxidase Antibodies (TPO)*

Introduction

The word hypothyroidism is from Greek hypo- 'reduced', thyreos 'shield', and eidos 'form' [10].

The thyroid gland is a small butterfly-shaped gland located in the neck that produces hormones that regulate the body's metabolism The endocrine system illness known as hypothyroidism, also known as underactive thyroid, low thyroid, or hypothyreosis, is characterized by insufficient thyroid hormone production by the thyroid gland.

In India and around the world, hypothyroidism is a prevalent endocrine condition, especially in women and the elderly. Depending on the research population and the adopted diagnostic standards, there are substantial variations in the prevalence of hypothyroidism in India. However, some research indicates that India may have a greater rate of hypothyroidism than the rest of the world.

According to estimates, there are approximately 10.95% of Indians who suffer from hypothyroidism, with rates among elderly people and women being higher.

Hypothyroidism can be caused by a variety of factors, including autoimmune disorders, radiation therapy, surgical removal of the thyroid gland, certain medications, and iodine deficiency. It can affect people of all ages, but it is more common in women and older adults.

Causes [9]

Group	Causes
Primary hypothyroidism	Iodine deficiency (developing countries), autoimmune thyroiditis, subacute granulomatous thyroiditis, subacute lymphocytic thyroiditis, postpartum thyroiditis, previous thyroidectomy, acute infectious thyroiditis
Central hypothyroidism	Lesions compressing the pituitary (pituitary adenoma, craniopharyngioma, meningioma, metastasis, empty sella, aneurysm of the internal carotid artery), surgery or radiation to the pituitary, drugs, injury, vascular disorders (pituitary apoplexy, subarachnoid hemorrhage), autoimmune diseases (lymphocytic hypophysitis, polyglandular disorders)
Congenital hypothyroidism	Thyroid dysgenesis (75%), thyroid dyshormonogenesis (20%), maternal antibody or radioiodine transfer Transiently: due to maternal iodine deficiency or excess, anti-TSH receptor antibodies, certain congenital disorders, neonatal illness Central: pituitary dysfunction (idiopathic, septo-optic dysplasia, isolated TSH deficiency)

Pathophysiology

The healthy operation of many body tissues depends on thyroid hormone. Thyroxine (T4), which is primarily secreted by the thyroid gland in healthy persons, is transformed into triiodothyronine (T3) in other organs by the selenium-dependent enzyme iodothyronine deiodinase. Triiodothyronine binds to the thyroid hormone receptor in the cell nucleus, activating specific genes and causing the creation of particular proteins. The hormone also stimulates the sodium-hydrogen antiporter and other processes including blood vessel development and cell proliferation by binding to integrin on the cell membrane. Only the free, unbound thyroid hormone is biologically active in blood, where 99.97% of thyroid hormone is linked to plasma proteins such thyroxine-binding globulin.

Types

- Primary hypothyroidism: This is the most prevalent kind of hypothyroidism and happens when the thyroid gland is damaged or unable to produce enough thyroid hormone. Numerous conditions, including autoimmune thyroiditis (Hashimoto's thyroiditis), iodine shortage, surgical thyroid gland removal, radiation therapy, or congenital anomalies, can result in primary hypothyroidism.
- Secondary hypothyroidism: This kind of hypothyroidism develops when the thyroid-stimulating hormone (TSH), which stimulates the thyroid gland to generate thyroid hormones, is not produced by the pituitary gland in sufficient amounts. Pituitary tumours, traumatic brain damage, and other conditions that affect the pituitary gland can all result in secondary hypothyroidism.
- Tertiary hypothyroidism is a very uncommon kind of hypothyroidism that develops when the hypothalamus, which creates thyrotropin-releasing hormone (TRH), that stimulates the pituitary gland to produce TSH, fails to produce enough TRH.

Diagnosis

Laboratory testing, a physical exam, and a medical history are frequently used to diagnose hypothyroidism.

As part of the physical examination, the thyroid gland in the neck may be felt for any swelling or nodules, in addition to other symptoms like weight gain, dry skin, and hair loss.

The laboratories tests are used to identify hypothyroidism are:

- Test for thyroid-stimulating hormone TSH, a hormone generated by the pituitary gland that stimulates the thyroid gland to create hormones, is measured by this test in the blood. The pituitary gland is attempting to encourage the thyroid gland to create more hormones when the TSH level is raised in hypothyroidism.
- Thyroid hormone tests: These examinations evaluate the blood's amount of thyroid hormones, such as T4 (thyroxine) and T3 (triiodothyronine). In hypothyroidism, the levels of these hormones are usually low.
- Thyroid peroxidase antibodies (TPO) - High level of antibodies in blood can suggest immune system has attacked the thyroid.

Laboratory testing of thyroid stimulating hormone levels in the blood is considered the best initial test for hypothyroidism.

TSH	T4	Interpretation
Normal	Normal	Normal thyroid function
Elevated	Low	Overt hypothyroidism
Normal/low	Low	Central hypothyroidism
Elevated	Normal	Subclinical hypothyroidism

Sonography can be done for identifying nodules, if they are solid or fluid cyst.

Clinical features

Depending on the severity of the ailment, the person's age, and any underlying medical issues, the clinical signs of hypothyroidism can differ greatly. Hypothyroidism's typical warning signs and symptoms may include:

• Weakness and weary
• Gaining weight or having trouble losing it
• Cold sensitivity
• Dry skin
• loss of hair or thinning
• broken nails
• Constipation
• Depression
• Memory and attention issues
• Loss of appetite
• Nausea
• Painful and tight muscles
• Abnormalities in women's menstruation

Complications

S.no.	Diseases	Detail
1.	Cardiovascular disease	Due to elevated levels of triglycerides and cholesterol in the blood, hypothyroidism might raise the chance of developing heart disease, such as coronary artery disease.
2.	Mental illness	Depression, anxiety, and other mood disorders are examples of mental health issues.
3.	Myxedema coma	In a small percentage of cases, severe hypothyroidism can cause myxedema coma, a potentially fatal illness that can cause coma, respiratory failure, and even death.
4.	Nerve damage	Long-term untreated hypothyroidism can cause peripheral neuropathy, which results in numbness, tingling, and weakening in the limbs.
5.	Infertility	Hypothyroidism can prevent women from ovulating, which might result in infertility
6.	Birth defects	Untreated hypothyroidism increases a pregnant woman's risk of giving birth to a child with birth abnormalities
7.	Goiter	
8.	Myxedema coma	It is an uncommon but deadly illness that is a medical emergency and calls for rapid care, may develop in patients with extreme hypothyroidism. Myxedema coma symptoms can include extreme confusion or drowsiness, a cold, low blood pressure, and slowed breathing

Miasmatic approach

According to homoeopathic literature, Banerjea SK has stated that psora is the root cause of sickness and is caused by underlying imbalances in the life force or vital power of the body. As per the miasmatic approach, predisposition to specific diseases can be passed down from one generation to the next and is the root cause of chronic disorders. The psora, being the mother of all diseases, can cause functional changes in the system as a psoric manifestation.

Hypothyroidism, being a functional disorder, can be managed by miasmatic treatment.

Management

In adults with newly diagnosed hypothyroidism who are under 60 and without ischaemic heart disease it is safe and efficient to start on a full replacement dose of levothyroxine:

1. Levothyroxine replacement dose is related to body mass; a daily dose of about 1.6 µg levothyroxine/kg body mass is adequate replacement for most adults (equivalent to 100 µg daily or 125 µg daily for an average size woman or man, respectively) [8].
2. In homoeopathy after detailed case taking, individualized homoeopathic medicine is prescribed based on totality of symptoms which are then repertorized to reach the simillimum. There are remedies for different organ symptoms, sides and modalities. Different authors have different views according to their clinical experiences.

Similimum can be given on the basis of causes:

- Caused by physical cause - e.g injury - Conium
- Emotional e.g - grief - Amyl. - nitr, Chloralum
- Physiological - Sarcodes
- Since - Puberty - cal. Iod., Thyroidinum
Pregnancy - Thyroidinum, Calc iod.
- Pathological - toxic - Lycopus
- Cardiac complaints - Cactus, Ars Alb., Spongia
- Associated with - infertility - Ferr met., Ferr iod.

Case Report

A 39 year old female suffering from Hypothyroidism since 2011 came with chief complaint of constipation from 5 - 6 month.

She came to the outpatient department of Bharati Vidyapeeth homoeopathic medical hospital.

She complained of headache, nausea at morning, pain in lower abdomen, heaviness of lower abdomen, pain in throat, irritation in throat, with dryness which is agg. From milk and ice cream.

The laboratory investigation done on 6/12/2022 showed elevated TSH - 8.45 µIU/ml, where T3, T4 were normal; which confirmed hypothyroidism. And as Alternative system of medicine plays an important role in the treatment of Hypothyroidism, Homoeopathic literature enlists many medicines for this condition, but there is a paucity of evidence-based published studies.

History of presenting illness

Patient was apparently healthy for 3 months back, when she developed sudden pain in the epigastric region and right hypochondrium, she was so distressed with the pains and gastric troubles after eating food. She stated pain in the epigastric region is aggravated after having food, milk and at night. Mouth ulcers, sore throat and hair fall aggravated before menses.

Constipation since 3 months with stitching pain, Post-delivery hernia after caesarean section.

Past history

- She had a H/O Hypothyroidism since 2011, took allopathic medicine for 4 years then stopped.
- Now she is not on any medication.
- Family history: Father - suffering from HTN.
- Gynaec and obstetrics history - LMP - 26/11/22.
- Cycles - 4/28 cycles.
- 1st 2 days heavy bleeding.
- Concomitants - Dysmenorrhea.
- Treatment history: No treatment history.

Personal history

- Diet and food habits- Vegetarian
- Appetite: Loss of appetite in morning, 3 meals/day
- Thirst: Thirstless, 1-1.5 lt/ day
- Desire: craving for sweets
- Aversion: nothing specific
- Stool: Constipated, not satisfactory, hard stool, straining ++, Dark colour
- Urine: 3 - 4 times a day, increased
- Sweat: Underarms
- Sleep: Disturbed due to pain
- Dreams: Horrible
- Thermal reactions: Chilly patient.

Mental generals:

- She is sad, without any reason, cries without any reason.
- Her disease began after she felt embarrassed at work.
- There is no desire to do any work.
- Low confidence
- Confusion of mind
- Over thinking.

Repertorisation

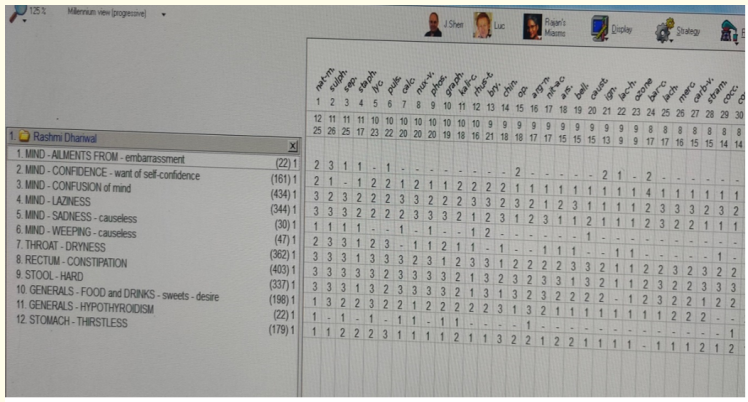


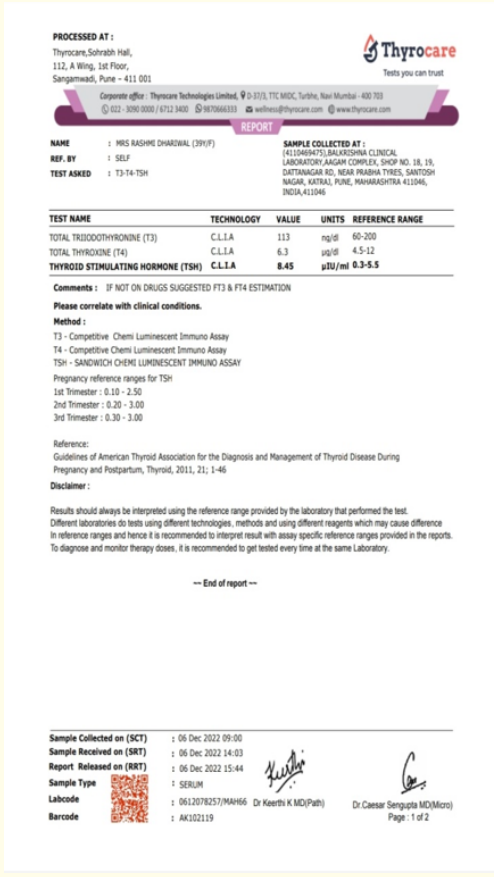
Figure A

Totality of symptoms

- Ailments from embarrassment
- Low confidence
- Confusion of mind
- Laziness
- Sadness without knowing why
- Weeping, without knowing why
- Dryness of throat
- Constipation with hard stool and straining
- Desires for sweet
- Thirstless.

Prescription: Based on totality of symptoms, natrium muraticum 1M was prescribed on 5/12/2022, along with thyroidinum 6x. Mentally, she was sad, depressed without any reason and wanted to share her feelings but no one is there to listen leading to over thinking and confusion of mind. On examination no abnormality was detected. While analyzing the case, the general and particular symptoms were classified per intensity and evaluated as per their merit. Characteristic mental generals, physical generals, particulars and a few diagnostic symptoms were considered for erecting the totality of symptoms. Considering the totality, synthesis repertory was selected and repertorization was done with RADAR software. After repertorization, from the list of drugs, Natrium Mur. was selected after further confirmation from Materia Medica. It was prescribed in 1M potency Stat.

Investigation reports



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REPORT

NAME : MRS RASHMI DHARIWAL (39Y/F)
REF. BY : SELF
TEST ASKED : T3-T4-TSH

SAMPLE COLLECTED AT :
(41104694751),BALKRISHNA CLINICAL LABORATORY,AAGAM COMPLEX, SHOP NO. 18, 19, DATTANAGAR RD, NEAR PRABHA TYRES, SANTOSH NAGAR, KATRAJ, PUNE, MAHARASHTRA 411046, INDIA,411046

TEST NAME	TECHNOLOGY	VALUE	UNITS	REFERENCE RANGE
TOTAL TRIIODOTHYRONINE (T3)	C.L.I.A	113	ng/dl	60-200
TOTAL THYROXINE (T4)	C.L.I.A	6.3	µg/dl	4.5-12
THYROID STIMULATING HORMONE (TSH)	**C.L.I.A**	**8.45**	**µIU/ml**	**0.3-5.5**

Comments : IF NOT ON DRUGS SUGGESTED FT3 & FT4 ESTIMATION

Please correlate with clinical conditions.

Method :

T3 - Competitive Chemi Luminescent Immuno Assay
T4 - Competitive Chemi Luminescent Immuno Assay
TSH - SANDWICH CHEMI LUMINESCENT IMMUNO ASSAY

Pregnancy reference ranges for TSH
1st Trimester : 0.10 - 2.50
2nd Trimester : 0.20 - 3.00
3rd Trimester : 0.30 - 3.00

Reference:
Guidelines of American Thyroid Association for the Diagnosis and Management of Thyroid Disease During Pregnancy and Postpartum, Thyroid, 2011, 21; 1-46

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) : 06 Dec 2022 09:00
Sample Received on (SRT) : 06 Dec 2022 14:03
Report Released on (RRT) : 06 Dec 2022 15:44
Sample Type : SERUM
Labcode : 0612078257/MAH66 Dr Keerthi K MD(Path)
Barcode : AK102119

Dr.Caesar Sengupta MD(Micro)

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REPORT

NAME : MRS RASHMI DHARIWAL (40Y/F)
REF. BY : SELF
TEST ASKED : T3-T4-USTSH

SAMPLE COLLECTED AT :
(41104694751),BALKRISHNA CLINICAL LABORATORY,AAGAM COMPLEX, SHOP NO. 18, 19, DATTANAGAR RD, NEAR PRABHA TYRES, SANTOSH NAGAR, KATRAJ, PUNE, MAHARASHTRA 411046, INDIA,411046

TEST NAME	TECHNOLOGY	VALUE	UNITS	REFERENCE RANGE
TOTAL TRIIODOTHYRONINE (T3)	C.M.I.A	89	ng/dL	58 - 159
TOTAL THYROXINE (T4)	C.M.I.A	6.5	µg/dL	4.87 - 11.72
TSH - ULTRASENSITIVE	**C.M.I.A**	**5.12**	**µIU/mL**	**0.35 - 4.94**

Please correlate with clinical conditions.

Method :

T3 - Fully Automated Chemi Luminescent Microparticle Immunoassay
T4 - Fully Automated Chemi Luminescent Microparticle Immunoassay
USTSH - Fully Automated Chemi Luminescent Microparticle 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

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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) : 19 Apr 2023 09:40
Sample Received on (SRT) : 19 Apr 2023 14:50
Report Released on (RRT) : 19 Apr 2023 17:19
Sample Type : SERUM
Labcode : 1904080542/MAH66 Dr Keerthi K MD(Path)
Barcode : Z8156772

Figure B

Follow up	Date	Complaints	Prescription
1st Follow up	29-12-2022	1. Unsatisfactory stools, hard stools, straining + 2. Headache is relieved 3. No accumulation of gas in abdomen, bloating is relieved. 4. Hairfall increased from 10 days 5. Sadness is 50% gone.	1. Natrium Mur. 1M stat 2. Thyroidinum 6x 4pills -morning
2nd Follow up	27-01-2023	1. Stools are better, less straining is required. 2. Hairfall is decreased 3. Thirst - has to remind herself to have water 4. Hyperpigmentation on face. 5. Feels good, less sad.	1. Thyroidinum 6x 2. Natrium Mur. 1M - morning 1 powder dose
3rd follow up	13-02-2023	1. Constipation is better. 2. Hairfall decreased 3. Low feeling without any reason 4. Cracks on toe of leg	1. PL 4 Pills x BD 2. Thyroidinum 6x - 4 pills - morning
4th follow up	25-03-2023	1. Constipation not relieved 2. Abdominal bloating is decreased 3. Hairfall decreased 50% 4. Cracks on toes of both legs 5. Sadness without reason is decreased 6. Headache on food timings.	1. Thyroidinum 6x 4 pills 2. Natrium Mur 1M 3 doses
5th follow up	27-04-2023	1. Constipation relieved 2. Hair fall decreased 3. Nausea feeling better morning 4. Tired feeling more at morning 5. Investigations done 19/4/23 showed T3, T4. TSH in normal ranges	1. Thyroidinum 6x 4 pills - morning 2. PL 4 pills x BD

Discussion

This is the case report of a 39 year old female patient suffering with Hypothyroidism since 11 years. As per the literature, women are more susceptible to thyroid gland dysfunction and this case also substantiates it. The socioeconomic status of the patient was good, which also correlates with the risk factors mentioned in the literature. The patient was moderately built which contradicts the fact that Hypothyroidism is mostly found in people with high BMI. The conservative treatment of Hypothyroidism in the conventional system of medicine has a very limited scope and has its own limitations. In this case, the patient was apprehensive about following any surgical procedure. Hence, she opted for an alternative system of medicine, though advised for lifelong intake of Levothyroxine medication by Endocrinologist. Homoeopathy is a system of therapeutics that treats the patient, not the disease. It also aims at rapid, gentle, and permanent restoration of health. Homoeopathic medicines can be selected based on causation, prominent modality, miasms, constitution, the totality of the symptoms, etc. In this case, there were significant mental, physical, particular, and pathological symptoms. Hence the case was analyzed through Kent's approach emphasizing on the general and mental symptoms in erecting the totality of symptoms. The clarity of the symptoms, in this case, facilitated prompt selection of the right individualistic remedy. In this case, after repertorisation, Nat. mur, sulph., sep., staph., Lyc. Emerged as the leading remedies. Natrium Muraticum, as constitutional medicine was prescribed in 1M potency, was prescribed based on Kent's series in degrees, which improved the patient dynamically at mental and physical levels. This suggests its efficacy as an individualistic remedy well selected on the basis of symptom similarity helps in relieving constipation and sadness. Natrium Mur was selected on the bases of totality of symptoms and marked symptom that is sadness and constipation, As Natrium mur has marked action on GIT, endocrine system and mucus membranes. The Thyroid profile changes of TSH, shows that documentary evidence of improvement.

Conclusion

This case report demonstrates the efficacy of individualised homoeopathic treatment for hypothyroidism based on the totality of symptoms. Only slight constipation and hairfall remained after receiving homoeopathic treatment, rest all of the patient's indications and symptoms vanished along with an improvement in overall health.

However, as this is only one case study, more investigation is needed to demonstrate the effectiveness of individualised homoeopathic medications.

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Volume 12 Issue 7 July 2023