IJNRD.ORG ISSN : 2456-4184
INTERNATIONAL JOURNAL OF NOVEL RESEARCH AND DEVELOPMENT (IJNRD) | IJNRD.ORG
An International Open Access, Peer-reviewed, Refereed Journal

# SUBCLINICAL HYPOTHYROIDISM : MANAGEMENT WITH UNANI FORMULATION & DIET , A CASE REPORT

**Abstract**

**Introduction -**Thyroid disorders, with their rising prevalence, especially in India where around 42 million people are affected, pose significant global health concerns. Subclinical hypothyroidism (SCH), a prevalent endocrine disorder, largely impacts adult females. SCH is identified by elevated serum thyrotropin (TSH) levels while maintaining normal free thyroxine (T4) and free triiodothyronine (T3) levels. This case report examines the management of SCH using Unani medicine and specific dietary modifications. **Material & methods -** A 41-year-old female patient presented with symptoms such as weight gain, palpitations, hair loss, and generalized weakness. She showed elevated TSH and normal T3 and T4 levels, leading to an SCH diagnosis. **Methodology -**The treatment administered included "Dawa ud darqiya" (a Unani formulation containing dandelion, burdock, cumin, and honey) and "Hab-e-asgandh" (ashwagandha) twice daily before meals for 45 days, alongside dietary guidelines to avoid goitrogenic foods like kale, cabbage, beans, and peanuts . **Result -** After 50 days, the patient exhibited a notable decrease in TSH levels and symptom relief. **Conclusion-** The incorporation of Unani medicine in managing SCH presents a promising alternative, emphasizing the need for further clinical research to validate the efficacy of such treatments. This study underscores the importance of integrating traditional medicinal systems with contemporary medical practices to address endocrine disorders effectively.

**Key Words**: Subclinical hypothyroidism, hypothyroidism, Unani medicine, TSH,

## Introduction

Thyroid disorders are of global concern. A gradual surge of thyroid disorder is seen in India nowadays .thyroid disorder are arguably ,among the commonest endocrine disorder worldwide & India is also seeing a surge ,it has been estimated that about 42 million people in India suffering from thyroid diseases.

Thyroid diseases are among the NCDs ( non-communicable diseases) that contribute to disability ,although they do not typically results in significant mortality. The proper functioning of various physiological processes in the body including temperature regulation, ,growth, energy metabolism, hemostasis & cellular proliferation & development ,relies on thyroid hormone . Any abnormal elevation or decrease in thyroid hormone levels can lead to thyroid disorder such as hyperthyroidism, hypothyroidism, goitre, Hashimoto's thyroiditis, grave's disease, thyroid nodule & thyroid cancer.[1]

Subclinical hypothyroidism is one of the most common endocrine disorder. Women are affected approximately six times more frequently than men .[2] .it effects 3-15% of adult population. its incidence increases with advanced age, female gender& greater dietary intake [3]. The prevalence of subclinical hypothyroidism ranged between 7.5-8.5% in women & 4.4 & in men [4].

It is defined as an elevated serum thyrotropin (often referred as thyroid stimulating hormone, TSH) levels with normal levels of free thyroxine T4 & free triiodothyronine T3 [5]. subclinical hypothyroidism is generally classified into two categories according to serum TSH levels . mildly increased serum TSH level (4.0-10.0 ml U/L) & more severely increased serum TSH ( >10.0ml U/L ). The milder condition constitutes around 90% of SCH Cases on a population level. [6]

The commencement of replacement therapy with levothyroxine in patients with severe SCH (TSH > 10 ml U/L) is justified by high rate of progression into clinical hypothyroidism which is approximately 2-5% annually or patients are presenting with symptoms of overt hypothyroidism [7].

Thyroid is an endocrine gland .its location is in inferior ,anterior neck responsible for the formation & secretion of thyroid hormones & iodine homeostasis within human body . Thyroid produces approximately 90% inactive thyroid hormone or T4 & 10 % active thyroid hormone or T3 . Inactivated thyroid hormone is converted peripherally to either activated thyroid hormone or alternative inactive thyroid hormone .[8]

The thyroid gland produces T4, T3 utilizing iodide obtained either from dietary source or from metabolism of thyroid hormone. & other iodinated compounds . about 100 µg of iodine is required on daily basis to generate sufficient quantities of thyroid hormone . Iodine undergoes a series of organic reactions within the thyroid

gland to produce tetraiodothyronine or thyroxine T4 & triiodothyronine T3 . T4 is considered to be more of a prohormone while T3 is most potent . TSH secreted by thyrotroph cells are located in anterior pituitary gland regulates thyroid gland function & hormone synthesis & release . the secretion of both TSH & TRH is regulated by negative feedback from thyroid hormone predominantly T3 [9]

Tendency of persistent SCH mainly implies CAT (Chronic autoimmune thyroiditis) & tendency for progression to overt hypothyroidism might be related to degree of immunological deterioration & thyroid reserve [10.] Individuals having SCH are usually asymptomatic & diagnosed during routine checkup, although symptoms of hypothyroidism are tiredness, weakness, dry skin, cold intolerance, hair loss, constipation, weight gain, dyspnoea, hoarse voice, paraesthesia .[11]

There's no direct mention of hypothyroidism in Unani system of medicine, however its symptoms given resemblance to su-e-mizaj barid Maddi (derangement in cold temperament) such as imtela (plethora), kasrat -e- luaab dehan (excessive salivation), aaya (tiredness), zof-e-ishteha (loss of appetite), kasrat -e-noum (somnolence) & baroodat -e-jildiya (cold skin [12]. these sign & symptoms are result of excess in abnormal phlegm (hair tabayi balgham).[13]

SUMT (Standard Unani medical terminology) a document proposed by CCRUM in which GOI has standardized & defined various Arabic, persian & urdu clinical & non clinical terminologies used in USM. in SUMT QILLAT -E- DARQIYA defines as the subnormal activity of thyroid & its possible English equivalent is hypothyroidism .according to ancient unani physicians normal temperament of thyroid gland is tend to be hot ,whereas in qillat e darqiya temperament of thyroid gland changes from hot to abnormal cold [14].The pharmacotherapy under USM is based on opposite temperament of disease therefore by contemplating all the above mentioned details it is hypothesised to conduct a clinical study " SUBCLINICAL HYPOTHYROIDISM : MANAGEMENT WITH UNANI FORMULATION & DIET , A CASE REPORT "

**Materials & Methods**

A 41 year old woman was selected who has visited to the OPD at GNGH on24/5/24with the complaints of weight gain , palpitation , hair fall, constipation generalized weakness since past 2 months. Patient is a known case of bronchial asthma & on MDI since past 6 years . patient has no other history of any other co morbidity . on examination patient was concious ,stable, oriented to time & place & responding well to vocal commands . recorded BP -110/70 mmhg, P/R- 72/min, temperature -afebrile ,weight-82 kg, height-5'3 BMI -32 .she was obese class 1

Systemic examination was normal ,no lymphadenopathy or nodular swelling seen . on palpation thyroid gland appears normal in size .patient has no past history of hypothyroidism .patient visited to OPD at GNGH with complaints of weight gain, palpitation, hair loss . During screening it was found that she had elevated levels of TSH & normal levels of T3& T4. Based on sign & symptoms & investigation a diagnosis of subclinical hypothyroidism was made. Patient was treated with dawa ud darqiya 10 ml twice a day before meals & hab-e- asgandh 1 tab twice a day before meals for 45 days with a weekly follow up . along with medicines patient is advised to avoid goitrogenic foods i.e kale, cabbage , beans ,peanuts etc .

Patient was reviewed again after 50 days. a fall off in TSH value was seen along with decline in symptoms that was complained earlier by patient.

**Discussion**

Subclinical hypothyroidism is an emerging endocrine disorder that too in a very fast pace affecting mainly adult females. autoimmunity, environmental factors, nutritional deficiencies play a pivotal role in commencement of disease putting up with levothyroxine in cases of SCH is still debatable therefore people are turning more into conventional methods. besides limited treatment of SCH there's drawback of having multiple side effects [15] .in ayurveda thyroid stimulating medications are used, Medhya medications (nootropics) to act at hypothalamic pituitary level .[19]

USM provides a safer approach with effective outcome. The concept of su-e-mizaj barid maddi (derangement in cold temperament) was mentioned in old classical books of unani medicine like Firdous al hikmat (wisdom of paradise), al Hawi fil tib (liber continence), Kamil-us-sana (liber regium), al qanoon fit tib (canon of medicine), zakheera khwarzam shahi (treasure of Khwarazm shah)[12]

Hence present study has been conducted to authenticate the effect of dawa ud darqiya in subclinical hypothyroidism.

Dawa- ud -darqiya is a unani compound formulation containing dandelion ,burdock ,cumin & honey .

Dandelion is a rich source of antioxidant, mineral & taraxasterol that is having anti-inflammatory effect, hence increasing antioxidant levels in blood & boosting up overall thyroid health .[16]

Burdock plant (Arctium lappa) is profuse in iodine content, which is vital to reduce elevated thyroid hormone hence optimizing thyroid function .[17]

Black cumin seed or powder has been used to treat inflammatory disorder & shows significant result in decreasing TSH value .[18]

Asgandh ( ashwagandha ) has been shown to be more effective in treatment of subclinical hypothyroidism . the substance that mainly stimulates thyroid activity is withaferin A. The antioxidant effect of withaferin A normalizes the function of thyroid gland .[20]

Hence after administering Dawa- ud- darqiya along with Hab-e- asgandh for 2 months, thyroid profile shows a significant decline in TSH value.

**Conclusion**

The scrutinization indicated the efficacy of dawa-ud-darqiya & hab-e-asgandh on SCH. Hence showing encouraging results. On this basis further study may be carried out to elaborate clinical trial .

**Conflict of Interest**

No potential conflict of interest relevant to this article was reported.

**References**


1. Khosravi M, Azizi R, Fallahzadeh H, Mirzaei M. Prevalence, Incidence, and Risk Factors of Hypothyroidism in Adult Residents of Yazd Greater Area, 2015-2021: Results of Yazd Health Study. Iran J Med Sci. 2024 Oct 1;49(10):623-631. doi: 10.30476/ijms.2023.99865.3208. PMID: 39449774; PMCID: PMC11497322.
2. Deshmukh V, Behl A, Iyer V, Joshi H, Dholye JP, Varthakavi PK. Prevalence, clinical and biochemical profile of subclinical hypothyroidism in normal population in Mumbai. Indian J Endocrinol Metab. 2013 May;17(3):454-9. doi: 10.4103/2230-8210.111641. PMID: 23869302; PMCID: PMC3712376.
3. https://scholar.google.com/scholar_lookup?title=Principles%20and%20practice%20of%20screening%20for%20disease&author=JMG%20Wilson&author=G.%20Junger&publication_year=1968&#d=gs_qabs&t=1736353159702&u=%23p%3DVAg3ak20aEQJ
4. Kim YA, Park YJ. Prevalence and Risk Factors of Subclinical Thyroid Disease. Endocrinol Metab. 2014;29(1):20-29.
5. Biondi B, Cappola AR, Cooper DS. Subclinical Hypothyroidism: A Review. JAMA. 2019;322(2):153–160. doi:10.1001/jama.2019.9052
6. Pearce SH, Brabant G, Duntas LH, Monzani F, Peeters RP, Razvi S, Wemeau JL. 2013 ETA Guideline: Management of Subclinical Hypothyroidism. Eur Thyroid J. 2013 Dec;2(4):215-28. doi: 10.1159/000356507. Epub 2013 Nov 27. PMID: 24783053; PMCID: PMC3923601.

7. Quamri, Mohammed & Farooqui, Shazia. (2021). Clinical Hypothyroidism: Treatment with Unani Formulation-Case Report. 10. 1-6
8. Armstrong M, Asuka E, Fingeret A. Physiology, Thyroid Function. [Updated 2023 Mar 13]. In: StatPearls [Internet]. Treasure Island (FL): StatPearls Publishing; 2025 Jan-. Available from: https://www.ncbi.nlm.nih.gov/books/NBK537039/
9. Institute of Medicine (US) Committee on Medicare Coverage of Routine Thyroid Screening; Stone MB, Wallace RB, editors. Medicare Coverage of Routine Screening for Thyroid Dysfunction. Washington (DC): National Academies Press (US); 2003. 2, Pathophysiology and Diagnosis of Thyroid Disease. Available from: https://www.ncbi.nlm.nih.gov/books/NBK221541/#
10. Yoo WS, Chung HK. Subclinical Hypothyroidism: Prevalence, Health Impact, and Treatment Landscape. Endocrinol Metab. 2021;36(3):500-513.
11. Jameson JL, Kasper DL, Longo DL, Fauci AS, Hauser SL, Loscalzo J, editors. Harrison's Principles of Internal Medicine. 21st ed. New York: McGraw-Hill Education; 2020.
12. Md & Quamri, Mohammed. (2020). Herbal preparations in the management of hypothyroidism in Unani medicine. Drug metabolism and personalized therapy. -1. 10.1515/dmdi-2020-0123. )
13. Md & Quamri, Mohammed & Sofi, Ghulamuddin & Tarique, Barkati. (2019). Understanding hypothyroidism in Unani Medicine. Journal of Integrative Medicine. 17. 10.1016/j.joim.2019.05.006. )
14. Alam, Md & Quamri, Mohammed. (2020). Herbal preparations in the management of hypothyroidism in Unani medicine. Drug metabolism and personalized therapy. -1. 10.1515/dmdi-2020-0123
15. Hasan I. Unani Management of Hypothyroidism (Qillat e Ifraz e Darqiyya): An Overview. J Pharma Ayurved Res. 2023;3(1):13-20. eISSN: 2582-8428.
16. Brewed Leaf Love. All About Tea Archives - Brewed Leaf Love. Available from: https://brewedleaflove.com/category/tea-guides/. Accessed 2025 Feb 06.
17. Bharat D. Burdock Root: Health Benefits, Nutrition, Uses For Skin And Hair, Recipes, Side Effects. Available from: https://www.netmeds.com/health-library/post/burdock-root-health-benefits-nutrition-uses-for-skin-and-hair-recipes-side-effects. Accessed 2025 Feb 06.
18. Tajmiri S, et al. Nigella sativa treatment and serum concentrations of thyroid hormones, transforming growth factor β (TGF-β) and interleukin 23 (IL-23) in patients with Hashimoto's thyroiditis. Eur J Integr Med. 2016 Mar 10.

19. Binu, Megha & Patil, Sheetal. (2024). REVIEWING THE POTENTIAL OF COMPLEMENTARY THERAPIES IN TREATING HYPOTHYROIDISM. Journal of Nonlinear Analysis and Optimization. 15. 125-133. 10.5281/zenodo.10715615.

20. Mikulska P, Malinowska M, Ignacyk M, Szustowski P, Nowak J, Pesta K, Szeląg M, Szklanny D, Judasz E, Kaczmarek G, Ejiohuo OP, Paczkowska-Walendowska M, Gościniak A, Cielecka-Piontek J. Ashwagandha *(Withania somnifera)*-Current Research on the Health-Promoting Activities: A Narrative Review. Pharmaceutics. 2023 Mar 24;15(4):1057. doi: 10.3390/pharmaceutics15041057. PMID: 37111543; PMCID: PMC10147008.