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Management of "Qillat-E-Ifraz-E-Ghudde Darqiyya" (Subclinical Hypothyroidism) Using Unani Medicines: A Case Report

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ABSTRACT

Hypothyroidism, referred to in Unani medicine as Qillat-e-Ifraz-e-GhuddeDarqiyya, is a common endocrine disorder affecting thyroid gland function. Classical Unani physicians have elaborated upon thyroid-related conditions in their texts, describing goitre-like presentations and their humoral bases. According to Unani principles, the normal temperament (Mizaj) of the thyroid gland is Harr (hot); in hypothyroidism, this becomes Su'-i-Mizaj Barid (abnormally cold temperament). The condition is classified as a Balghamai (phlegmatic) disease. In contemporary medicine, hypothyroidism denotes reduced production of thyroid hormones, with clinical features including weight gain, hair loss, lethargy, dry skin, voice change, and constipation. Subclinical hypothyroidism is characterised by an elevated Thyroid Stimulating Hormone (TSH) with normal Free T3 and Free T4 levels. The present case report documents the successful management of subclinical hypothyroidism in a 22-year-old woman using the Unani compound formulation JawarishJalinoose at a dose of 2 g twice daily on an empty stomach, administered over a period of two months. A significant reduction in TSH levels from 20.02 mIU/ml to 4.22 mIU/ml was observed, along with marked clinical improvement.

Keywords: *Subclinical Hypothyroidism, Qillat-e-Ifraz-e-GhuddeDarqiyya, JawarishJalinoose, Unani Medicine, Su'-i-Mizaj Barid, TSH, Phlegmatic Disorders.*

INTRODUCTION

The term hypothyroidism is derived from the Greek words hypo- meaning "reduced," thyreos meaning "defence," and eidos meaning "form." Primary hypothyroidism refers to hormonal inadequacy caused by intrinsic thyroid gland dysfunction, which disrupts the synthesis and secretion of thyroxine (T4) and triiodothyronine (T3). A decline in serum thyroid hormone concentration triggers compensatory hypersecretion of Thyroid Stimulating Hormone (TSH), resulting in elevated serum TSH concentrations. The condition affects over 1% of the general population and approximately 5% of individuals over the age of 60 [1,2,3].

The prevalence of hypothyroidism in India varies by geographic location. Inland cities such as Kolkata, Delhi, Ahmedabad, Bangalore, and Hyderabad demonstrate a higher prevalence of 11.7% compared to coastal cities such as Mumbai, Goa, and Chennai, which report approximately 9.5%. A survey by the Indian Thyroid Society estimates that one in ten adults in India suffers from hypothyroidism, with a significant proportion remaining undiagnosed [4]. Untreated hypothyroidism impairs quality of life, work performance, and economic productivity, and may progress to serious complications including infertility, myxoedema coma, hypothermia, severe cardiac failure, pericardial effusion, cerebellar ataxia, seizures, and psychosis [5].

In conventional medicine, levothyroxine is the standard treatment for hypothyroidism. However, it carries risks of suppressing TSH to subnormal levels and may cause adverse effects including osteoporosis, atrial fibrillation, and myocardial ischaemia. This necessitates exploration of alternative therapeutic approaches with a favourable safety profile [6].

The history of thyroid disease dates to antiquity. The earliest written records from China circa 2700 B.C. describe goitre in mountainous populations, treated with burnt sponge, algae, and seaweed. Chinese physicians also developed methods to treat cretinism using thyroid glands from sheep and deer and were able to differentiate benign from malignant goitres [7,8,9].

Classification of Hypothyroidism

Hypothyroidism is broadly categorised into the following types:

1. Primary Hypothyroidism

Resulting from permanent loss or reduction of thyroid gland function. This includes:

- Subclinical Hypothyroidism: A mild form in which thyroid hormone levels are marginally low without overt clinical symptoms.
- Overt Hypothyroidism: A severe form with significantly reduced thyroid hormone levels and pronounced symptoms.

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- Goitrous Hypothyroidism: Characterised by compensatory thyroid gland enlargement due to gradual hormonal decline.

2. Central Hypothyroidism

Results from inadequate stimulation of a structurally normal thyroid gland, encompassing:

- Secondary Hypothyroidism: Due to pituitary gland dysfunction and reduced TSH secretion.
- Tertiary Hypothyroidism: Due to hypothalamic dysfunction and reduced TRH secretion, leading to downstream TSH deficiency.

Approximately 95% of all hypothyroidism cases are of the primary type [10].

Subclinical Hypothyroidism

Subclinical hypothyroidism is defined by normal serum thyroxine (T4) levels with elevated TSH. The condition follows a log-linear inverse relationship between TSH and T4 in most individuals; however, non-linear relationships exist and account for variable TSH elevations at borderline T4 levels. The prevalence ranges from 3–10% in the general population and rises to 18–20% in older adults. The condition is more common in women [11].

Subclinical hypothyroidism may be asymptomatic or present with mild features of overt hypothyroidism. Common symptoms include:

- Fatigue and lethargy
- Weight gain
- Cold intolerance
- Constipation
- Dry skin and hair loss
- Anxiety and depression

Aetiology

Causes of subclinical hypothyroidism include:

1. Autoimmune thyroid disease (Hashimoto's thyroiditis)
2. Partial thyroidectomy or head and neck surgery
3. Radioactive iodine therapy for hyperthyroidism
4. Medications: lithium, amiodarone, interferon-alfa, tyrosine kinase inhibitors
5. Viral thyroiditis
6. Congenital causes: iodine deficiency, endemic cretinism [12,13]

Diagnosis

Serum TSH is the most sensitive initial test for evaluating primary hypothyroidism. A normal or low TSH effectively excludes primary hypothyroidism. When serum T4 is low and TSH is elevated, the diagnosis of overt primary hypothyroidism is confirmed. When T4 is normal but TSH is elevated, the diagnosis is subclinical hypothyroidism. In autoimmune thyroiditis, anti-thyroperoxidase (anti-TPO) and anti-thyroglobulin (anti-TG) antibodies are typically elevated. Basal body temperature (BBT) serves as a sensitive functional indicator of thyroid activity, and a delayed ankle reflex is a notable clinical sign [14].

UNANI CONCEPT OF HYPOTHYROIDISM:

In the Unani system of medicine, hypothyroidism is described as Qillat-e-Ifraz-e-GhuddeDarqiyya, referring to diminished secretion of the thyroid gland. Classical scholars have elaborated on thyroid and goitre-related conditions across several authoritative texts.

Buqrat (Hippocrates) noted that diseased cervical glands could become tubercular and lead to struma. Isma'il Jurjani's Treasure of Medicine (Zakhira Khawarizm Shahi) was the first work to associate exophthalmos with thyrotoxic disease, corresponding to what is now recognised as Grave's disease. 'Ali ibn 'Abbas Majusi described Waram (swelling) caused by Balgham-e-Ghaliz (viscid phlegm), resulting in Ghaysngha (goitre) [12,15].

According to Unani principles, the normal temperament of the thyroid gland is Harr (hot). In hypothyroidism, this becomes Su'-i-Mizaj Barid (abnormally cold temperament). Scholars classify hypothyroidism as a Balghamai (phlegmatic) disease. The dominance of Ghalaba'-i-Balgham (excess phlegm) produces symptoms including bradycardia, weak pulse, muscle sluggishness, facial puffiness, oedema, cold extremities, and cognitive slowing — all consistent with the clinical manifestations of hypothyroidism [16].

Raban Tabri stated in his Firdoos-ul-Hikmat that Bukhara (vapours) of Ghidha' (food), combined with BurudatwaRutubat, ascend to the brain, weakening the nerves and producing excessive sleep [17]. Ibn Hubal Baghdadi (1122–1213) in Kitab al-Mukhtaratfi'l-Tib and Hakeem Mohammad Azam Khan (1814–1902) in Ikseer-e-Azam described Subat (hypersomnia) as a feature of dominant abnormal Balgham [18,19].

Signs and Symptoms in Unani Framework [20]

The signs and symptoms of Su'-i-Mizaj Barid correlate extensively with the clinical features of hypothyroidism, as summarised in Table 1:

Table 1: Symptomatic Correlation Between Su'-i-Mizaj Barid (Deranged Cold Temperament) and Hypothyroidism

Symptoms of Derangement in Cold Temperament (Unani)	Symptoms of Hypothyroidism
Siman Mufrit	Weight gain
Intithar al-Sha'r	Loss of hair
Adam-Tahmil al-Bard	Cold intolerance
Kaahili	Lethargy
Qabd	Constipation
Du'f al-Bah	Loss of libido
Kasrat-e-Naum	Excessive sleep / Dry and coarse skin
Kasrat-e-Luab	Excessive salivation
Waja' al-Mafasil	Joint pain

Ajnas-e-Ashra: Constitutional Parameters

The ten constitutional parameters (Ajnas-e-Ashra) provide a systematic profile of the Balghamai constitution observed in hypothyroid patients:

Table 2: Ajnas-e-Ashra Parameters in Balghamai Constitution

S.No	Ajnas-e-Ashra (Parameter)	Unani Term	Description
1.	Complexion	*Jassi*	Whitish
2.	Built	*Farbahi*	Muscular & thin
3.	Touch	*Barid wa Narm*	Cold & soft
4.	Hair	*Qillat-e-sha'ar*	Black and thin, slow growth
5.	Movement	*Susti*	Dull
6.	Diet (Most liked)	*Haar Yabis Ghiza*	Hot & dry
7.	Weather (Most suitable)	*Mausam-e-Saif*	Summer
8.	Sleep	*Kasrat-e-Naum*	In excess
9.	Pulse	*Bati*	60–70/min
10.	Emotions	*Kahili wa Susti ki Zyadati*	Nervous / Lethargic

Aetiology in Unani Literature
The causes of Su'-i-Mizaj Barid Balghamai (deranged cold phlegmatic temperament) as described in classical Unani texts include alteration of the Asbab-e-Sitta Zarooriya (six essential prerequisites), particularly:

- Ghayr Tab'iBalgham (abnormal phlegm)
- Zoaf-e-Dimagh (cerebral debility)
- Zoaf-e-Kabid (hepatic debility)
- Zoaf-e-Tihal (splenic debility)
- Zoaf-e-Kulya (renal debility)
- Su-ul-Qinyah (anaemia)
- Qillat-e-Harkat (sedentary lifestyle)
- GhairTabayiIstefragh (excessive evacuation/diarrhoea)
- HararatMuqassira (hypothermia)
- Excessive use of Barid-wa-MartoobGhidha' (cold and moist foods)

PATHOPHYSIOLOGY (UNANI PERSPECTIVE)
Su'-i-Mizaj (temperamental derangement) refers to an imbalance in the natural temperament of the body or a specific organ. Su'-i-Mizaj Barid indicates dominance of the cold quality. Cold temperament is evidenced by symptoms such as excessive sleep, anorexia, increased pallor, decreased bodily activity, and Nabdh Bati (slow pulse) [21,22]. The body fluids are classified into Rutubat Ula (primary fluids circulating within blood vessels) and Rutubat Thaniya (secondary fluids that have passed from capillaries into tissues). Disruption in the transformation and circulation of these fluids underlies the phlegmatic pathology seen in hypothyroidism [23,24].

Risk Factors in Unani Literature [25]
In the Unani system of medicine, risk factors predisposing to Su'-i-Mizaj Barid Maddi include:

- Consumption of Ghidha'-e-Kaseef (viscid, heavy diet)
- Intake of Barid Mashroobat (cold beverages)
- Qillat-e-Harkat (sedentary lifestyle)
- Disturbances in Asbab-e-Sitta Zarooriya (six essential prerequisites for health)

PRINCIPLES OF TREATMENT (USOOL-E-ILAJ)
In the Unani system, the foundational goal of treatment is to correct Mizaj Ghayr Tabi'i (abnormal temperament) and restore Asbab-e-Sitta Zarooriya to their natural state, thereby re-establishing normal bodily heat.

Management of subclinical hypothyroidism is based on three principal modalities:
1. Ilaj bilGhidha' (Dietotherapy)
Since hypothyroidism is associated with a cold temperament, the therapeutic diet should be hot in nature (Harr), incorporating foods with Jayid-ul-Kaymus (good chyme), Lateef (light consistency), and Saree-ul-Hadm (easy digestibility).

2. Ilaj bi'l Dawa' (Pharmacotherapy)
Unani physicians prescribe single (Mufrad) and compound (Murakkab) drugs of Harr Yabis Mizaj (hot and dry temperament). These serve as Mudirr-i-Bawl (diuretics), Mudirr-i-Hayd (emmenagogues), Munaffidh-e-Balgham (expectorants), Mulatif (demulcents), Jali (detergents), and Musaffi (blood purifiers). Following Tanqiya-i-Balgham (phlegm elimination), Musakhkhin (thermogenic) drugs are administered to restore normal temperament.

Single thermogenic drugs include: Bisbasa, Filfil Siyah, Qaranfal, Darchini, Zira, Zanjabeel, Za'fran, 'Asl (Honey), Azaraqi, and others.
Compound formulations used include: JawarishBisbasa, JawarishKamuni, JawarishJalinoose, Ma'junZanjabeel, and Ma'junChobchini.

3. 'Ilaj bi'l Tadbir (Regimenal Therapy)
Specific Regimenal therapies assist in restoring temperamental balance through Imala (transference) and Tanqiya-e-Mawad (evacuation of morbid matter). These include: Mu'arriq (diaphoresis), Riyadat (exercise), Hammam (steam bath), Qai (emesis), Idrar (promotion of urination), Ishal (purgation), Hijama (cupping therapy), Fasd (bloodletting), and Ta'liq (leech therapy) [25,26,27].

CASE REPORT
Patient Information
A 22-year-old woman presented to the Outpatient Department (OPD) of Anna Hospital with complaints of weight gain, generalised swelling (particularly facial puffiness), hair loss, constipation, fatigue, and headache persisting for six months. She had no prior history of hypertension, diabetes, tuberculosis, thyroid disorder, or ischaemic heart disease, and denied any use of thyroxine or other thyroid medications.

Clinical Findings
The patient was conscious and fully oriented to time, place, and person, with no focal neurological deficits. She was febrile. Vital signs on presentation (Table 3)were as follows:

Table 3: Vital Signs on Presentation

Temperature	Pulse Rate	Blood Pressure	Respiratory Rate	Weight
99°F	80/min	120/80 mmHg	18/min	64 kg

Systemic examination was otherwise unremarkable. There was no visible or palpable swelling of the neck.

Diagnostic Assessment
Laboratory investigations revealed elevated TSH with normal Free T3 and Free T4 levels, supporting a diagnosis of Subclinical Hypothyroidism. Detailed thyroid function test results are presented in Table 4.

Table 4: Thyroid Function Tests at Baseline

Investigation	Result	Normal Range	Interpretation
TSH	20.02 mIU/ml	0.4–4.0 mIU/ml	Elevated
Free T3	2.69 µg/dL	2.3–4.2 pg/mL	Normal
Free T4	0.84 ng/dL	0.8–1.8 ng/dL	Normal

Based on clinical history, examination findings, and laboratory parameters, a diagnosis of Subclinical Hypothyroidism (Qillat-E-Ifraz-E-Ghudde Darqiyya) was established.

Dietary Advice
The patient was advised to restrict intake of beef, mutton, chicken, and oily, spicy, or fried foods. A diet conforming to Unani principles of hot and light foods (Harr Lateef Ghidha') was recommended.

Intervention
The patient was treated with JawarishJalinoose at a dose of 2 g twice daily on an empty stomach. Follow-up was scheduled at two-monthly intervals. The composition of JawarishJalinoose, along with the pharmacological functions (Af'al) of its individual constituents, is detailed in Table 5.

Table 5: Composition and Pharmacological Functions of JawarishJalinoose [28,29,30,31,32,33]

S.No	Unani Name	Botanical Name	Part Used	Quantity	Af'al (Functions)[13,15]
1.	*Sumbul-Teeb*	*Nardostachysjatamansi*	Rhizome	2 Tola	Nerve tonic, nervine stimulant, deobstruent, aphrodisiac, detergent, cardiotonic, neurotonic, diuretic, carminative, sedative
2.	*Qaranfal*	*Syzygiumaromaticum*	Flower bud	2 Tola	Stomachic, liver tonic, expectorant, antiseptic, exhilarant, analgesic, antispasmodic, anti-inflammatory
3.	*Heel Khurd*	*Elettaria cardamomum*	Fruit	10 g	Stomachic, mouth freshener, carminative, cardiotonic, sedative, diuretic, digestive
4.	*Saleekha*	*Cinnamomum cassia*	Stem bark	2 Tola	Stomachic, liver tonic, carminative, digestive, cardiotonic, diuretic, emmenagogue, expectorant
5.	*Darchini*	*Cinnamomum zeylanicum*	Inner stem bark	2 Tola	Demulcent, carminative, expectorant, stomachic, astringent, diuretic, cardiotonic, analgesic
6.	*Khulanjan*	*Alpinia galangal*	Rhizome	2 Tola	Nerve tonic, aphrodisiac, exhilarant, expectorant, mouth freshener, analgesic
7.	*Sad Kufi*	*Cyperus rotundus*	Rhizome	2 Tola	Neurotonic, nerve tonic, carminative, diuretic, emmenagogue, cardiotonic, stomachic
8.	*Zanjabeel*	*Zingiber officinale*	Rhizome	2 Tola	Neurotonic, nerve tonic, carminative, diuretic, emmenagogue, cardiotonic, stomachic
9.	*Filfil Siyah*	*Piper nigrum*	Fruit	2 Tola	Stomachic, carminative, aphrodisiac, resolvent, thermogenic (Musakhkhin)
10.	*Dar-e-Filfil*	*Piper nigrum*	Fruit	2 Tola	Detergent (ext.), sedative (ext.); stimulant, stomachic, liver tonic, nerve tonic, diuretic, emmenagogue (int.)
11.	*Khusta-e-Bahri*	*Saussurealappa*	Root	2 Tola	Detergent, siccative, nerve tonic, expectorant, analgesic, carminative, anthelmintic, anti-inflammatory
12.	*Oode Balsan*	*Commiphora opobalsamum*	Wood	2 Tola	Brain tonic, expectorant, stomachic
13.	*Asaroon*	*Asarum europaeum*	Rhizome	2 Tola	Nerve tonic, diuretic, emmenagogue, brain tonic, resolvent, sedative
14.	*HabbulAas*	*Myrtus communis*	Fruit	2 Tola	Astringent, haemostatic, stomachic, cardiotonic, siccative, hair tonic
15.	*Chiraita Shirin*	*Swertia chirayita*	Whole plant	2 Tola	Blood purifier, diuretic, demulcent, stomachic, carminative, emmenagogue, anti-inflammatory
16.	*Mastagi*	*Pistacia lentiscus*	Resin	1 Tola	Stomachic, liver tonic, carminative, antiseptic, detergent, expectorant, astringent
17.	*Zafran*	*Crocus sativus*	Style & stigma	2 Tola	Detergent, antiseptic, cardiotonic, anti-inflammatory, nervine tonic, diuretic, emmenagogue
18.	*Sugar/Honey*	—	—	40 palams	Base/vehicle

Table 5: Timeline

S.NO	Duration	TSH Level of % of Reduction
1	Baseline	20.02mIU/ml
2	After 1MONTH	7.78 mIU/ml
3	After 2MONTH	4.22 mIU/ml

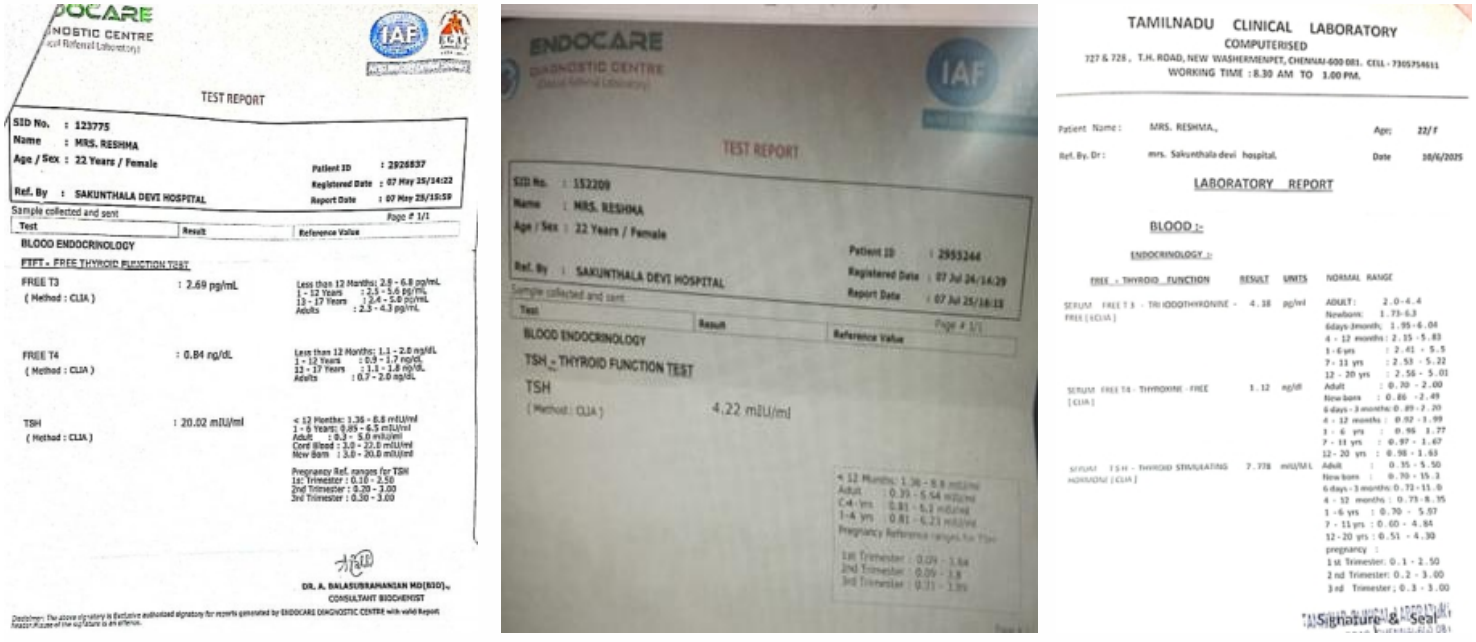

Figure 1: Clinical photograph of reports from baseline to post test

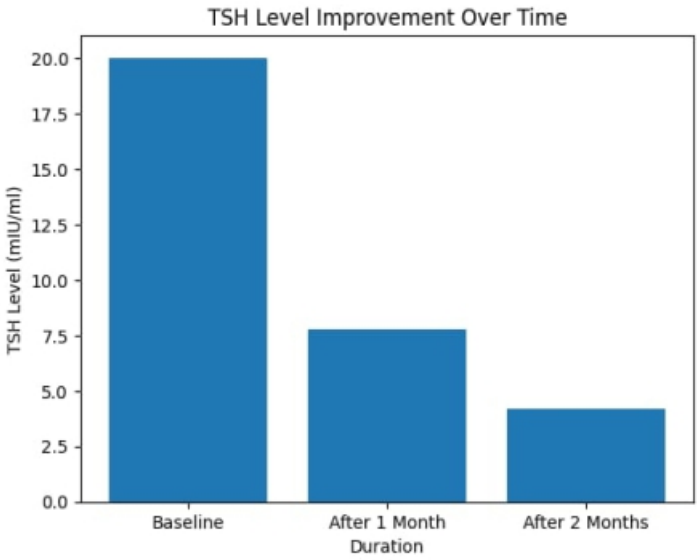

Figure 2: Graphical representation of TSH reduction over the treatment period

FOLLOW-UP AND OUTCOME

The patient was reviewed with laboratory reports after 60 days of treatment. Clinical improvement was first observed within the initial three weeks, with notable reduction in facial puffiness and fatigue. By the end of the second month, symptoms of constipation and hair loss had also resolved. The TSH level showed a progressive and significant decline over the two-month treatment period, as summarised in Table 6.

Table 6: Timeline of TSH Reduction During Treatment with JawarishJalinoose

S.No	Duration	TSH Level
1.	Baseline	20.02 mIU/ml
2.	After 1 Month	7.78 mIU/ml
3.	After 2 Months	4.22 mIU/ml

The TSH level declined from 20.02 mIU/ml at baseline to 7.78 mIU/ml at one month, and further to 4.22 mIU/ml at the end of two months, representing a reduction of approximately 79% from the baseline value. These results demonstrate both biochemical and clinical efficacy of the Unani formulation.

DISCUSSION

The findings of the present case report indicate that the Unani formulation JawarishJalinoose is beneficial in the management of Subclinical Hypothyroidism. After 60 days of treatment, the patient demonstrated a significant reduction in TSH levels accompanied by substantial clinical improvement. Symptoms including facial puffiness, fatigue, constipation, and hair loss resolved progressively during the treatment period.

From the perspective of Unani medicine, subclinical hypothyroidism is conceptualised as a Balghamai disorder (AmradhBalghamiyya) characterised by Su'-i-Mizaj Barid (cold temperamental derangement). The therapeutic rationale for JawarishJalinoose is its predominantly Harr Yabis (hot and dry) temperament, enabling it to correct the cold imbalance, eliminate excess phlegm through Tanqiya-i-Balgham, and restore normal metabolic function.

The individual constituents of JawarishJalinoose encompass a broad range of pharmacological properties including thermogenic (Musakhkhin), expectorant (Munaffidh-e-Balgham), nervine tonic (Muqawwi-e-A'sab), hepatoprotective (Muqawwi-e-Jigar), cardiotonic (Muqawwi-e-Qalb), and diuretic (Mudirr-i-Bawl) activities. These properties collectively address the multisystemic manifestations of the condition.

Several constituents such as Zanjabeel (Zingiber officinale), Darchini (Cinnamomum zeylanicum), and Za'fran (Crocus sativus) are well documented in classical texts for their anti-phlegmatic and thermogenic effects, which are directly relevant to the pathophysiology of Balghamai disorders.

This case report provides preliminary clinical evidence supporting the traditional use of JawarishJalinoose in subclinical hypothyroidism. However, given the inherent limitations of a single case report, the findings warrant further validation through controlled clinical trials with larger sample sizes, longer follow-up durations, and standardised outcome measures.

CONCLUSION

This case report demonstrates the potential efficacy of the Unani compound formulation JawarishJalinoose in reducing TSH levels and improving clinical symptoms in a patient with subclinical hypothyroidism. The formulation, conceptualised within the framework of Su'-i-Mizaj Barid Balghamai, addresses both the humoral imbalance and symptomatic manifestations of the condition. Further large-scale clinical studies are recommended to establish its therapeutic efficacy, optimal dosing, and long-term safety.

DECLARATIONS:

Patient Consent: Written informed consent was obtained from the patient for publication of this case report.

Conflict of Interest: The authors declare no conflict of interest.

Funding: No external funding was received for this case report.

Ethics: The study was conducted in accordance with the ethical principles of the Declaration of Helsinki.

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