IJAYUSH
International Journal of AYUSH
AYURVEDA, YOGA, UNANI, SIDDHA AND HOMEOPATHY
http://internationaljournal.org.in/journal/index.php/ijayush/
International Journal Panacea Research library
ISSN: 2349 7025

Review Article | Volume 14 Issue 12 | December 2025

EXPLORING HYPOTHYROIDISM *(QILLAT-E-DARQIYYAT)*: A COMPARATIVE FRAMEWORK BETWEEN UNANI AND CONVENTIONAL MEDICAL SYSTEM

Dr. Asra Sadique[1], Salman Ahmad[2], *Syed Aqib Feroz[3], Nabeela Khatoon[4]

[1,4]PG Scholar, Department of Moalejat, Faculty of Unani Medicine, Aligarh Muslim University, Aligarh, UP,202002, India. Email: asrasadique25@gmail.com.

[2]PG Scholar, Department of Kuliyat, Faculty of Unani Medicine, Aligarh Muslim University, Aligarh, UP,202002, India. Email:gi8783@myamu.ac.in

[3]PG Scholar, Department of Saidla, Faculty of Unani Medicine, Aligarh Muslim University, Aligarh, UP,202002, India, ORCID Id:0009-0000-2618-7078, Email:gn9675@myamu.ac.in

*Corresponding Author's Email ID: gn9675@myamu.ac.in

ABSTRACT

Hypothyroidism (*Qillat-e-Darqiyyat*) is a common endocrine disorder resulting from inadequate secretion or action of thyroid hormones, leading to metabolic and functional impairment across multiple organ systems. It affects approximately 42 million people in India, with a higher prevalence among females. Conventional medicine identifies primary thyroid gland dysfunction, autoimmune pathology, iodine deficiency, and iatrogenic causes as major etiological factors, with levothyroxine being the standard treatment. However, long-term hormone replacement therapy may lead to complications, prompting interest in safer, holistic alternatives. Although classical Unani literature does not explicitly define hypothyroidism as a separate disease entity, its clinical features closely resemble *Su'-i-Mizāj Bārid Balghamī* (cold and phlegmatic dystemperament). This paper presents a comparative analysis of hypothyroidism in Unani and conventional medical systems with regard to etiology, clinical features, diagnostic criteria, and management. Diagnostic tools such as the Billewicz Index and Zulewski's Score are discussed, along with the correlation of *Su'-i-Mizāj Bārid* symptoms with hypothyroid manifestations. Unani management emphasizes *Ilāj-bil-Ghizā, Ilāj-bit-Tadbīr*, and *Ilāj-bid-Dawā*, supported by herbal drugs with thyroid-stimulating

potential. Integrating both systems may offer a more holistic approach in managing hypothyroidism.

Keywords:

Hypothyroidism, *Qillat-e-Darqiyyat*, *Su'-i-Mizāj Bārid*, Unani Medicine, Thyroid Disorders, Levothyroxine, Billewicz Index, Zulewski's Score, Herbal Drugs, Integrative Approach.

INTRODUCTION

The thyroid gland, located anterior to the trachea, secretes thyroxine (T4) and triiodothyronine (T3), hormones essential for growth, development, and metabolic regulation. The word "hypothyroidism" originates from the Greek terms "hypo" (under/below normal) and "thyreos" (shield), later adapted to refer to the thyroid gland. Hence, hypothyroidism literally implies "underactivity of the thyroid gland" [(1).] Hypothyroidism (*Qillat-e-Darqiyyat*) is a clinicopathological syndrome which results due to chronic deficiency of action of T3 and T4. It most frequently reflects a disease of the gland itself (primary hypothyroidism) but can also be caused by pituitary disease (secondary hypothyroidism) or hypothalamic disease (tertiary hypothyroidism). India has an estimated 42 million people suffering from thyroid disorders, with hypothyroidism being the most common, affecting nearly one in ten adults [(2)]. It shows higher prevalence among females compared to males. Studies indicate that women are 2–3 times more likely to develop hypothyroidism than men [(3)]. It presents with fatigue, weight gain despite poor appetite, cold intolerance, menstrual irregularities, and cognitive impairment, and if untreated, may result in infertility, myxoedema coma, or cardiac failure Levothyroxine remains the conventional therapy, though long-term use may cause adverse effects such as osteoporosis and atrial fibrillation, prompting interest in safer alternatives.

UNANI CONCEPT OF DISEASE

Unani Physicians have described a common disorder of the thyroid gland in their literature as enlargement of the thyroid gland and its treatment. *Buqrāt* mentioned in the context of the glands that "when glands of the neck become diseased, they become tubercular and produce struma" [(4)].The term "struma" is still used in some European countries asthe medical designation of goitre.

Ismāʻil Jurjānī's 'Treasure of Medicine' first associated exophthalmos (protrusion of the eyes), which is now linked to Grave's disease (goitre). ʻ*Alī ibn ʻAbbās Majūsī* stated that the *waram*, which occurs due to *Balgham-e Ghalīz,* results in *Ghayngha* (goitre), which is similar to the glands [4, 5].

Great surgeon of his times *Abul Qasim Zuhrawi* (936-1036 A.D.) who is considerd the father of surgery has successfully operated a swelling of throat which was in fact a goiter [6,7].

Although classical Unani texts do not explicitly define hypothyroidism, many of its symptoms correspond to Su'-i-Mizāj Bārid (abnormal cold temperament) or phlegmatic imbalance (Balghmaī). These manifestations include dry and coarse skin, pallor, thick tongue, excessive sleep, lethargy, low-volume pulse, facial puffiness, slowed intellect, constipation, reduced libido, and decreased appetite—closely reflecting clinical features of hypothyroidism (*Qillat-e-Darqiyyat*).

Thus, while Unani scholars thoroughly described goiter and its management, hypothyroidism as a distinct entity (*Qillat-e-Darqiyyat*) was not explicitly recognized.

CAUSES OF HYPOTHYROIDISM [8]

1. Primary hypothyroidism with goitre	Acquired: Hashimoto's thyroiditis, iodine deficiency, goitrogen intake, antithyroid drugs Congenital: Defects in iodide transport/utilization or thyroid hormone synthesis.
2. Primary hypothyroidism with atrophic gland	Acquired: Atrophic thyroiditis, post-ablative therapy (radioiodine, surgery). Congenital: Thyroid agenesis or dysplasia
3. Transient hypothyroidism	Seen after silent, subacute, or postpartum thyroiditis.
4. Central hypothyroidism	Acquired: Pituitary or hypothalamic disorders (tumour, haemorrhage, inflammation). Congenital: TSH deficiency or receptor defects
5. Resistance to thyroid hormone	Generalized resistance to hormone action

ETIOLOGY ACCORDING TO UNANI SYSTEM

In Unani medicine, hypothyroidism (*Qillat-e-Darqiyyat*) results from a combination of lifestyle disturbances and humoral imbalance. Alteration in the *Asbāb Sitta Ḍarūriyya* (six essential factors of health) is a primary predisposing factor, along with sedentary habits (*Qillat-e-Harkat*), excessive intake of viscid (*Ghidhāʾ Kathīf*) or cold and moist foods (*Ghidhāʾ Bārid wa Raṭb*), and frequent consumption of cold drinks (*Bārid Mashrūbāt*). The disease arises due to derangement of the phlegmatic temperament (*Su-e-Mizaj Barid Balghami*) and abnormal phlegm (*Balgham Ghair Tabīʿī*), coupled with functional weakness of vital organs including the brain (*Ḍuʿf al-Dimāgh*), liver (*Ḍuʿf al-Kabid*), spleen (*Ḍuʿf al-Ṭiḥāl*), and kidneys (*Ḍuʿf al-Gurdah*) and anemia with hypoproteinaemia (*Sūʾ al-Qinya*). [9,10]

CLINICAL MANIFESTATION OF DISEASE

Hypothyroidism ranges from subclinical (asymptomatic with elevated TSH) to mild and overt symptomatic disease.

1)GOITRE i.e. enlargement of thyroid gland may occur across euthyroid, hyperthyroid, or hypothyroid states, presenting as either painful (infective) or painless (autoimmune, e.g., Hashimoto).

2) METABOLIC DYSFUNCTION- Thyroid hormone deficiency leads to metabolic slowing due to reduced mitochondrial activity and inhibition of the Na^+/K^+-ATPase pump, resulting in decreased oxygen consumption, reduced thermogenesis, and weight gain.

3) NEUROMUSCULAR- manifestation include slowed physical and mental functions, lethargy, somnolence, agitation ('myxoedema madness') or depression, deafness, and 'hung-up' reflexes may also be present.[8]

4) CARDIOVASCULAR-involvement includes decreased cardiac output, narrowing of pulse pressure and increased systemic vascular resistance causing diastolic hypertension and decrease in exercise tolerance. Pericardial effusion may occur in severe primary hypothyroidism, while a small heart size is common in central hypothyroidism. ECG changes include sinus bradycardia and low voltage complexes with ST-T wave abnormalities. Cold intolerance occurs due to diminished blood supply and vasoconstriction. Pleural effusion and obstructive sleep apnoea may occur as well.[8]

5) SKIN AND ITS APPENDAGES-

The skin is dry, and there is decreased sweating, thinning of the epidermis, and hyperkeratosis of the stratum corneum. Increased dermal glycosaminoglycan content traps water, giving rise to skin thickening without pitting (myxedema). Typical features include a puffy face with edematous eyelids and nonpitting pretibial edema . There is pallor, often with a yellow tinge to the skin due to carotene accumulation. Nail growth is retarded, and hair is dry, brittle, difficult to manage, and falls out easily. In addition to diffuse alopecia, there is thinning of the outer third of the eyebrows, although this is not a specific sign of hypothyroidism [11.]

6) **REPRODUCTIVE DYSFUNCTION**

In adult women, hypothyroidism may be associated with diminished libido, failure of ovulation, polymenorrhoea, menorrhagia, and reduced fertility. In men, hypothyroidism may cause reduced libido, impotence and oligospermia. These disturbances in the reproductive system are often associated with hyperprolactinaemia (since prolactin is also under the control of TRH) and rarely can also be associated with pituitary enlargement due to thyrotroph hyperplasia [8]

7) **GASTROINTESTINAL**

The sluggish and slow intestinal motility is the hallmark of the symptom-complex that is seen in hypothyroid patient. It may manifest as mild constipation, obstipatio n with impacted faecolith or even paralytic ileus [12]

ALAMAAT OF SŪ'I MIZĀJ BĀRID [9,29-35]

Common diseases associated with sue mizaj barid are as follows:

Hummae balghamiah and Mukhṭalita ,Ṣawt Abaḥḥ (hoarseness of voice) ,Waj‘ al Mafāṣil (arthritis), Waj‘ al uzn (pain in ear), Buṭlāne sham (anosmia), Su‘āl wa nazla (cough and common cold), Dama (asthma), Waja ul sadar (chest pain), Jū‘ al kalb, Nafkhe shikam (flatulence) ,Istisqa (ascites) Siman mufriṭ (obesity), ‘Uqr (infertility), Sudā‘ bārid sāda (khibta), Du‘f-i-badan (weakness of the body).

Umoomi alamaat of Sū'i Mizāj Bārid

- Dry and cold skin,
- thin, soft, and scanty hair
- Imtilā (congestion)
- Kundzahni (diminished intellectual functions)
- Foolishness,
- slow activity
- Excessive salivation,
- diminished thirst,
- decreased appetite
- Fatigability,
- drowsiness,
- excessive sleep
- Nabḍ Baṭī and Mutafāwit (slow and delayed pulse)
- Looseness of the body

Sū'i Mizāj Bārid Dimāg

- Dimāghī fuṭūr
- Kundzahni (diminished intellectual functions)
- Buzdilī (cowardice)
- Kathrat-i-nawm (excessive sleep)
- Nisyān (forgetfulness)
- Kasal mandī (lethargy)
- Nazla wa zukām (common cold)

Sū'i Mizāj Bārid Qalb

- Nabḍ-i-sagheer, bati and mutafavit
- Zofe tanaffus
- Decreased quwa
- Khafqan (palpitation)
- Khauf wa wahshat (fear)
- Buzdilī (cowardice)
- Pallor of the skin
- Diminished facial expression
- Bawl abyaḍ
- Kathrat-i-nawm (excessive sleep)

Sū'i Mizāj Bārid Kabid

- Qabḍ (constipation)
- Tarahulle badan (looseness of the body)
- Tahabbuj (swelling on the face)
- Whiteness of lips and tongue
- Qillate atsh (decreased thirst)
- Nabḍ-i-bati (delayed pulse)
- Bawl-i-abyaḍ

Sū'i Mizāj Bārid Ṭiḥāl

- Zofe ishtihā (loss of appetite)
- Nafkhe shikam (flatulence)
- Kasrate luabe dahan (excessive salivation)
- Heaviness on the site of Ṭiḥāl

Sū'i Mizāj Bārid Mi'da

- Ḍu'f-i-haḍm (dyspepsia)
- Dakarey (excessive belching)
- Du'f-i-Ishtihā (anorexia)
- Nafkhe shikam (flatulence)
- Ghathyān wa Qay' (nausea and vomiting)
- Atashe kādhib (pseudo thirst)
- Tarahull-i-Badan (looseness of body)
- Bayāḍ-i-badan (whiteness of body)

Sū'i Mizāj Bārid Kuliya

- Safaid Qārūrah (passage of white urine)
- Paleness of the body Ḍu'f-i-shahwat (loss of libido)
- Ḍu'f-i-'Ām (general weakness)

CORRELATION OF ALAMAAT SUE MIZAJ BARID WITH SYMPTOMS OF HYPOTHYROIDISM

ABNORMAL COLD TEMPERAMENT	**HYPOTHYROIDISM**
Farbahi	Weight gain
Intithār al-Shaʿr	Loss of hair
Adm Taḥammul al-Bard	Cold intolerance
Kāhilī	Lethargy
Qabḍ	Constipation
Tahabbuj	Oedema
Ḍuʿf al-Ishtihā	Loss of appetite
Istisqā	Ascites
Ḍuʿf al-Shahwat	Loss of libido
Khafaqān	Paipitation
Kathra al-Nawm	Excessive Sleeping
Nisyān	Dementia
Yubs al-Jild	Dry and Coarse skin
Kund Dhehni	Diminished intellectual function
Nabḍ Baṭīʾ wa Mutafāwit	Low volume pulse
Kathra al-Luʿāb	Excessive Salivation
Ḍuʿf-i-Aam	General Weakness
Buḥḥa al-Ṣawt	Hoarseness of voice
Wajaʿ al-Mafāṣil	Joint pain
Khasham	Anosmia
Nafkh al-Miʿda	Flatulence

DIAGNOSIS

For the clinical diagnosis of hypothyroidism, Zulewski's Clinical Score and the Billewicz Diagnostic Index may be used. The Billewicz score utilizes 8 symptoms and 6 signs to assess the thyroid status, and diagnose hypothyroidism. The score may range from + 67 to – 47, with the highest weightage being given to a sluggish ankle jerk and slow movements. [13]

BILLEWICZ DIAGNOSTIC INDEX		
Clinical features	Present	Absent
Symptoms		
Diminished sweating	+6	-2
Dry skin	+3	-6
Cold intolerance	+4	-5
Weight gain	+1	-1
Constipation	+2	-1
Hoarseness	+5	-4
Deafness	+2	0
Signs		
Slow movements	+11	-3
Coarse skin	+7	-7
Cold skin	+3	-2
Periorbital puffiness	+4	-6
Pulse rate	+4	-4
Ankle jerk	+15	-6

A total Zulewski's score of >5 points defines hypothyroidism, while a score of 0–2 points defines euthyroidism.[14]

ZULEWSKI'S CLINICAL SCORE			
CLINICAL FEATURES		SCORE	
		PRESENT	ABSENT
SYMPTOMS			
1. Diminished sweating	Sweating in the warm room or a hot summer day	1	0
2. Hoarse voice	Speaking voice, singing voice	1	0
3. Paraesthesia	Subjective sensation	1	0
4. Dry skin	Dryness of skin noticed spontaneously, requiring treatment	1	0
5.Constipation	Bowel habit, use of laxative	1	0
6.impaired hearing	Progressive impairement of hearing	1	0
7. Weight gain	Recorded weight increase, tightness of clothes	1	0
PHYSICAL SIGNS			
1. Slow movements		1	0
2. Delayed ankle reflex		1	0
3. Coarse skin		1	0
4. Periorbital puffiness		1	0
5. Cold skin		1	0
Sum of all symptoms and signs		12	0

Serum TSH is the best initial diagnostic test to assess Primary Hypothyroidism, and a normal or reduced TSH value exclude Primary Hypothyroidism. Low serum T4 with elevated serum TSH confirms the diagnosis of Primary Hypothyroidism, while normal serum T4 with isolated elevation of serum TSH leads to the diagnosis of subclinical hypothyroidism [8.]

In patients with autoimmune thyroiditis, titers of antibodies against thyroperoxidase (anti-TPO) and thyroglobulin (anti-TG) are elevated. Basal body temperature (BBT), which is the

body temperature at rest, is the most sensitive functional test of thyroid function. Delayed ankle reflex is also an important indicator of thyroid dysfunction.[15]

MANAGEMENT

Hypothyroidism cannot be cured but it can be treated. In conventional system of medicine preferred treatment is swallowing a single tablet of levothyroxine on an empty stomach. The person then must not eat anything for the next hour because eating any food may hinder the absorption of the levothyroxine present in the tablet. The first sign of hypothyroidism is the presence of clinical symptoms along with laboratory evidence of overt hypothyroidism. People suffering from overt hypothyroidism have to take daily medication starting at a dose of 1.5 to 1.8 mcg/kg, ideally [16-19] Pregnant women can take a full replacement thyroxine dose of 2.0 to 2.4 mcg/kg. People suffering from coronary artery disease are advised to start taking the medications at a dosage of 12.5 to 25 mcg/day, and the dosage must be regulated based on symptoms and levels of TSH in the blood .[17] This plan of treatment is recommended for old patients, particularly those who have many comorbidities[17,18]. Patients of young age who do not have any comorbidities can often receive a sufficient or full dosage of the medication immediately, but by carefully monitoring them to prevent any case of overtreatment. Measurement of TSH levels is performed four to 12 weeks after the beginning of the therapy, then every six months until they reach a consistent phase, and subsequently annually. Adjustments in the dosage should be made according to the results of the lab tests, keeping in mind that even small dose changes might have a significant impact on serum TSH concentrations in patients with low body weight and elderly patients.

In Unani system of medicine, the principles of treatment (*Uṣūl-i-ʿIlāj*) are:

ILAJ BIL GHIZA wa TADBEER - Goitrogenic foods, such as turnips, cabbage, mustard greens, radish, broccoli, soybean, peanuts, peanuts, millet, etc. and excessive consumption of Ghidhā' Kathīf (viscid diet), Ghidhā' Bārid wa Raṭb (cold and moist diet), and Bārid Mashrūbāt (cold drinks) should be avoided. As per the principle of contradiction, the therapeutic diet should be hot in temperament, along with Jaiyyad ul Kaimus (normal chyme), Lateef (tense food), and Saree ul Hazm (fast appetizer). Moderation in Asbāb Sitta Ḍarūriyya (the six essential factors of health) is also important for the management of Qillat-i Darqiyyat (Hypothyroidism). Risk factors such as Namaṭ-i Ḥayāt Mustaqirr (sedentary lifestyle) should be managed [20,21]

ILAJ BIL DAWA- In the Unani system of medicine, the principles of treatment of any disease are based on the Tadeel Mizāj, Istifrāgh wa Tanqiya madde fasida. Owing to the resemblance in the symptoms of Qillat-i-Ifrāz-i-Daraqiyyah and with symptoms of Sū'ī Mizāj Bārid, this disease may also be treated on the same line of treatment. For example, to restore normal Mizāj, Advia Harrah may be used. For the evacuation of morbid matter, particularly Madde Balghamiah, Munzajā-i-Balgham (phlegmatic concoctives) and Mus'hilāt-i-Balgham (Phlegmatic Purgatives) should be used.[22]

Use of Munzijāt-i-Balgham

Beekhe badiyan 7 g, Beekhe kasni 7 g, Beekhe krafṣ 7 g, Beekhe izkhar 7 g, Barge gauzuban 7 g, Anjeer zard 5 No., Maweez munaqqa 8 No., Gulqand 'aslī 15 g. Patients are advised to take decoction (40 mL) on an empty stomach twice a day for a period of 2–3 weeks till the symptoms of Nudj appear.[23]

Use of Mus'hilāt-i-Balgham

Barge sana 6 g, Turbud 6 g, Turanjabeen 4 g, Ghāriqūn 4 g, Maghz-i-Amaltās 7 g, Shīr-i-Khisht 7 g, Roghan Bayd Injīr 25 mL. Appropriate doses of Mus'hilāt-i-Balgham are added to the decoction of Munzij-i-Balgham for a period of 3–5 days to induce purgation.

Tabrīd-i-Badan

This is the last step of Mundij wa Mushil therapy usually done with the help of Mubarridāt to neutralize the side effects of Mushilāt and Mundijāt. Commonly used drugs are Lā'ūb-i-behīdān, Lā'ūb-i-bādiyān, Sharbat-i-ānār, Sharbat-i-unzāb, Shīr-i-bādiyān, 'Arq shāhtra, etc. These are used for a period of 2–3 days.

Use of Musakkhināt

After the completion of Istifrāghi-i-balgham, patients are advised to take Hār Mizāj Advia both single as well as compound formulation. The commonly used Musakkhin advia of herbomineral origin are Filfil siyah, Kholanjan, Darchini, Kababchini, Salikha, Zeera, Karafs Nauṣhader, Saji, Suhaga, Zanjabeel, Dār-i-filfil, Zaranbād, Peepal, Abhal, Kabab Cheeni, Qarafal, Podina, Gandana, etc., compound formulations used are Har Moajeen wa Jawarishat, etc., such as Majoon Chobchini, Mojoon Zanjabeel, Majoon Khader, Majoon Talkh, Jawarish Jalinoos, Jawarish Kamooni, Jawarish Falafalī, Jawarish Bisbasa, and Jawarish Podina.[4,22,24]

SINGLE UNANI DRUGS WITH ANTI-HYPOTHYROIDISM ACTIVITY [25, 26,27,28]

Several preclinical in-vitro and in-vivo studies have been carried out to observe anti hypothyroidism effect of so many single Unani herbal drugs, which have been proven for their thyroid-stimulating activities. The phytochemicals present in these drugs may have the potential to act as preventative or therapeutic agents against hypothyroidism. Some of these single herbal drugs are listed below:

Sr. No.	Botanical name/ family	Common names	Part used	Actions
1.	*Bacopa monnieri* Scrophulariaceae	Brahmi	Whole plant	It raises both T3 and T4, reduce oxidative stress, improve memory and concentration
2.	*Withania somnifera* Solanaceae	Ashwagandha	Root	It lowered cortisol, raise thyroid hormone levels, lowers oxidative stress
3.	*Commiphora mukul* Burseraceae	Guggulu	Oleo- resin, gum	It improves thyroid histology raised T3, T4 ratio
4.	*Moringa oliefera* Moringaceae	Shigru	Roots, seeds, leaves	It raised thyroid hormone levels
5.	*Achyranthes aspera* Amaranthaceae	Apamarga	Whole plant	It raises thyroid hormones, glucose, reduce oxidative stress
6.	*Bauhinia variegate* Fabaceae	Kanchanara	Bark	It reduces swelling of neck, increased serum thyroid hormone concentrations, decrease cholesterol and improved thyroid histology
7.	*Eichhornia crassipes* Pontederiaceae	Water hyacinth	Whole plant	It stimulated thyroid function

8.	*Bauhinia purpurea* Fabaceae	Khairwal	Bark	It raised thyroid hormone level and decreased lipid levels
9.	*Saussurea lappa* Compositae	Kuth	Root	It improved thyroid histology
10.	*Mangifera indica* Anacardiaceae	Mango	Fruit peel	It raised thyroid hormone levels and reduce oxidative stress
11.	*Citrullus vulgaris* Cucurbitaceae	Water melon	Fruit peel	It raised thyroid hormone levels and reduce oxidative stress
12.	*Cucumis melo* Cucurbitaceae	Musk melon	Fruit peel	It raised thyroid hormone
13.	*Inula racemosa* Compositae	Pushkarmool	Root	It stimulated thyroid histology
14.	*Crataeva nurvula* Capparidaceae	Varuna	Bark , root	It possess anti tumor activity for extragrowth of thyroid
15.	*Pistia startiotes* Araceae	Jalakumbhi	Whole plant	It reduced swelling of thyroid
16.	*Cassia fistula* Caeselpiniaceae	Aaragvadha	Root, leaves, flower, fruit pulp	It raised thyroid hormone levels, decrease cholesterol levels
17.	*Vitex negundo* Verbenaceae	Nirghundi	Root, leaves, seeds	It reduce swelling of thyroid
18.	*Linum usitassimum* Linaceae	Alsi / bijari	Seeds	It maintained thyroid health, boost production of thyroid hormones
19.	*Morus alba* Moraceae	Shahtoot	Leaf	It cured goitre
20.	*Zingiber officinale* Zingiberaceae	Adrak	Rhizome	It restored thyroid health in hypothyroidism

CONCLUSION

Hypothyroidism is a common endocrine disorder with significant metabolic and systemic consequences. Conventional medicine provides effective hormone replacement therapy with levothyroxine; however, long-term use may cause adverse effects, encouraging exploration of safer complementary approaches. Although Unani medicine does not describe hypothyroidism as a distinct disease, its clinical features closely correlate with Su'-i-Mizāj Bārid Balghamī. Unani management focuses on lifestyle regulation, dietary modification, correction of mizāj, and herbal interventions that show thyroid-stimulating potential. This comparative review highlights that integrating conventional and Unani principles may offer a more holistic, individualized, and safer approach to managing hypothyroidism. Further scientific validation of Unani therapies is recommended to strengthen their role in integrative healthcare.

REFERENCES

1. Chaker L, Bianco AC, Jonklaas J, Peeters RP. Hypothyroidism. *Lancet*. 2017;390(10101):1550–62.
2. Bagcchi S. Hypothyroidism in India: more to be done. *Lancet Diabetes Endocrinol*. 2014;2(10):778.
3. Unnikrishnan AG, Menon UV. Thyroid disorders in India: an epidemiological perspective. *Indian J Endocrinol Metab*. 2011;15(Suppl 2):S78–81.
4. Majusi A. *Kamil us Sana*. Vol 1. Urdu translation by Kantoori GH. Lucknow: Munshi Nawal Kishore; 1889.
5. Jurjani SI. *Zakhira Khawarizm Shahi*. Vol 7. Urdu translation by Khan HH. Lucknow: Munshi Nawal Kishore; 1996. p. 35–36.
6. Hannan. Laqanati rasilat aur attibae qadeem. *Jahane Tib*. 2001;7(2):56–60.
7. Ibn Zuhar. *Kitab al-Tayser*. Urdu translation. New Delhi: Central Council for Research in Unani Medicine (CCRUM); 1986. p. 234–35.
8. Munjal YP, Sharma SK, editors. *API Textbook of Medicine*. 9th ed. Mumbai: Association of Physicians of India; 2012.
9. Kabiruddin M. *Kulliyat-i-Qanun*. Part 1. New Delhi: I'jaz Publishing House; 2006. p. 26–57, 240, 356.

10. Nafis B. *Kulliyat-i-Nafisi*. Part 1. Urdu translation by Kabiruddin M. New Delhi: Idara Kitab al-Shifa; 1954. p. 13–77.

11. Jameson JL, Fauci AS, Kasper DL, Hauser SL, Longo DL, Loscalzo J, editors. *Harrison's Principles of Internal Medicine*. 21st ed. New York: McGraw-Hill; 2022.

12. Sachdev Y, editor. *Clinical Endocrinology & Diabetes Mellitus: A Comprehensive Text*. 1st ed. New Delhi: Jaypee Brothers Medical Publishers; 2008.

13. Billewicz WZ, Chapman RS, Crooks J, Day ME, Gossage J, Wayne E, et al. Statistical methods applied to the diagnosis of hypothyroidism. *Q J Med*. 1969;38:255–66.

14. Zulewski H, Muller B, Exer P, Miserez AR, Staub JJ. Estimation of tissue hypothyroidism by a new clinical score. *J Clin Endocrinol Metab*. 1997;82:771–6.

15. Pizzorno JE, Murray MT, Bey HJ. *The Clinician's Handbook of Natural Medicine*. 3rd ed. St. Louis (MO): Elsevier; 2016. p. 458–72.

16. Vadiveloo T, Donnan PT, Murphy MJ, Leese GP. Age- and gender-specific TSH reference intervals. *J Clin Endocrinol Metab*. 2013;98:1147–53.

17. Jonklaas J, Bianco AC, Bauer AJ, Burman KD, Cappola AR, Celi FS, et al. Guidelines for the treatment of hypothyroidism. *Thyroid*. 2014;24:1670–751.

18. 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;2:215–28.

19. Roos A, Linn-Rasker SP, van Domburg RT, Tijssen JP, Berghout A. The starting dose of levothyroxine in primary hypothyroidism. *Arch Intern Med*. 2005;165:1714–20.

20. Benvenga S, Feldt-Rasmussen U, Bonofiglio D, Asamoah E. Nutraceutical supplements in the thyroid setting. *Nutrients*. 2019;11(23):1–23.

21. Etheridge CJ, Derbyshire E. Herbal infusions and health. *Nutr Food Sci*. 2020;50(5):969–85.

22. Sina I. *Al-Qanoon Fil Tibb*. Vol 1. Lahore: Book Printers; 1992.

23. Kabiruddin M. *Moalijat Sharah Asbab*. New Delhi: Aijaz Publishing House; 2007.

24. Rushd I. *Kitab Al-Kulliyat*. 2nd ed. New Delhi: Central Council for Research in Unani Medicine; 1990.

25. Sharma T, Gupta M, Nathani S. Review of Ayurvedic drugs acting on hypothyroidism. *Int Ayurvedic Med J*. 2015;3(8):2572–9.

26. Verma P, Jameel K. Studies on traditional treatment of thyroid by tribals of Chitrakoot district. *Int J Sci Res*. 2014;3(10):1370–3.

27. Sinha MP, Tabassum W, Kullu AR. Effect of leaf extract of *Moringa oleifera* on hypothyroidism. *Bioscan*. 2013;8(2):665–9.

28. Parmar HS, Kar A. Protective role of *Mangifera indica*, *Cucumis melo*, *Citrullus vulgaris* peel extracts. *Chem Biol Interact*. 2009;177:254–8.

29. Khan MA. *Ikseer-E-Azam*. Vol 1. Uttar Pradesh: Matba Nizami; 1869.

30. Khan MA. *Ikseer-E-Azam*. Vol 2. Lucknow: Munshi Nawal Kishore; 1902.

31. Tabri R. *Firdaus Al-Hikmat Fi Al-Tib*. Lahore: Sheikh Mohammad Bashir and Sons; 1996.

32. Razi AMBZ. *Kitab al-Mansoori*. Urdu translation. 1st ed. New Delhi: Ministry of Health & Family Welfare, Govt of India; 1991. p. 63, 111–12, 141–42.

33. Ahmad SI. *Introduction to Al-Umur-Al-Tabi'yah*. New Delhi: Nuzhat Ishtiyaq; 1980.

34. Ahmad SI. *Kulliyat-E-Asri*. Vol 103. New Delhi: New Public Press; 1982.

35. Arzani MA. *Tibb-E-Akbar*. Lucknow: Munshi Nawal Kishore; 1870.