

Review Article

Diagnostic Manifestations (*Istedlal Wa Alâmat*) of Anaemia (*Faqr Al-Dam*) in Ancient Unani Literature - A Review

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A B S T R A C T

Anaemia is a condition with a long historical background, with evidence of advanced disease identified in skeletal remains dating back approximately 4,000 years in Thailand. The significance of iron in maintaining health and treating disease has been recognized since ancient times, with Egyptian, Indian, Greek, and Roman physicians among the earliest practitioners to use iron therapeutically. During the 17th century, iron preparations were also employed in the treatment of chlorosis ("green disease"), a condition commonly associated with iron deficiency. Iron is an essential component of haemoglobin and plays a fundamental role in oxygen transport. Consequently, iron supplementation has remained one of the principal therapeutic approaches for anaemia associated with iron deficiency for many centuries.

Classical Unani medical literature contains detailed descriptions of the aetiological factors (*Asbāb*), classifications (*Aqsaam*), pathophysiological mechanisms, and diagnostic manifestations (*Istedlal wa Alâmat*) associated with *Faqr al-Dam* (anaemia). These classical descriptions may provide useful insights into the recognition and early diagnosis of anaemia. For the present review, relevant information was collected from classical Unani medical texts, manuscripts, and other available literary sources. The review identified several clinical manifestations (*Istedlal wa Alâmat*) of *Faqr al-Dam* described in classical Unani literature that may contribute to the identification, diagnosis, and management of anaemia. A systematic examination of these traditional descriptions may therefore provide valuable information for the early recognition and management of anaemia within the Unani system of medicine, while also offering a basis for further comparative research with contemporary medical knowledge.

Keywords: Anaemia, *Faqr al-Dam*, Aetiological factors, *Asbāb*, Clinical manifestation, *Istedlal wa Alâmat*, Types, *Aqsaam*, Pathophysiology of anaemia, Prevention

Introduction

Classical Unani physicians attributed the development of anaemia to disturbances in hepatic function. According to their understanding, hepatic derangement, *Sū'-i-Mizāj* (abnormal temperament), and *Ḍu'f al-Kabid* (weakness of hepatic faculties), either independently or in association with other diseases, could interfere with the normal formation and quality of blood, thereby resulting in anaemia.¹⁻³

The term *Sū'al-Qinya* was introduced by Ismail Jurjani during the 12th century AD. The term is derived from *Sū*, meaning "defect" or "abnormality," and *Qinya*, meaning "treasure," and has historically been used in relation to disorders associated with deficient blood formation.⁴ Various terms have been used to describe anaemia in Unani literature, including *Faqr al-Dam*, *Sū'al-Qinya*, *Qillat-i-Dam*, *Khoon-ki-Kami*, *Khoon ki Mohtaji* (Ghareebi/Nadari), and *Fasād al-Dam*.⁵

The term *Faqr al-Dam*, which became more widely used during the 20th century, literally denotes a "deficiency or shortage of blood." In contrast, the Arabic term *Sū'al-Qinya* has been associated with a deficiency or alteration in iron and related factors involved in blood formation. Within the Unani framework, *Sū'al-Qinya* may arise from *Ḍu'f al-Jigar* (weakness of the liver) or *Sū'-i-Mizāj*, referring to an alteration in the normal temperament of the individual or the liver. Another term used in Unani medicine is *Ridhayat-e-Dam*, which refers to abnormalities in the quality and characteristics of blood, including alterations in its concentration, odour, viscosity, temperature, and colour.⁶

Pathophysiology of Anaemia

According to the Unani system of medicine, anaemia, referred to as *Sū'al-Qinya*, may develop as a consequence of an alteration in the body's *Mizāj* (temperament) or an imbalance in the humours (*Akhlāt*).^{7,8} The normal formation and maintenance of blood are believed to depend on adequate vital energy and the proper functioning of organs involved in digestion, metabolism, and elimination, particularly the stomach, liver, kidneys, and spleen. When hepatic function becomes disturbed because of an alteration in temperament, the production, composition, and quantity of humours may also be affected.⁹ Such dysfunction may further impair the *Tabī'at Mudabbira-i-Badan* (Medicatrix Naturae), the body's natural regulatory and healing capacity, and may consequently contribute to reduced resistance to disease.¹⁰

Classification of disease according to Unani medicine Within the Unani system, diseases are broadly classified into *Amrāḍ Mufrada* and *Amrāḍ Murakkaba*.

Amrāḍ Mufrada

These include individual or uncomplicated pathological conditions such as *Sū'-i-Mizāj* (disorder of temperament), particularly involving the liver and characterized by an alteration toward a cold and moist temperament; *Sū'-i-Tarkeeb* (abnormality or disturbance in structure and formation); and *Tafarruq-e-Ittisāl* (disruption of continuity, attachment, or anatomical connections), which may involve organs such as the stomach, intestines, kidneys, and gallbladder.

Amrāḍ Murakkaba

Amrāḍ Murakkaba refers to conditions in which two or more pathological disturbances occur simultaneously, producing a more complex disease state.

Sū'-i-Mizāj is further classified into *Sū'-i-Mizāj Sādā* and *Sū'-i-Mizāj Māddī*. When the normal physiological temperament of an organ or the body becomes altered, the resulting disturbance may be categorized into either of these forms.¹¹⁻¹⁴ In Unani medicine, the liver is considered to possess a hot and moist temperament and is regarded as an important organ for the transformation and processing of nutrients. Food is believed to undergo metabolic transformation in the liver and subsequently contribute to the formation of blood, which nourishes the tissues of the body.^{15,16} Therefore, any disturbance in hepatic temperament may influence the quality and quantity of the *Akhlāt*, particularly blood (*Dam*). This pathological alteration is described as *Sū'al-Qinya*. While some Unani scholars attributed *Sū'al-Qinya* primarily to *Ḍu'f al-Kabid* (hepatic weakness), others considered *Sū'-i-Mizāj* to be an important underlying cause.¹⁷

Kabiruddin (1950 AD) further described *Khizra* (chlorosis) as a form of *Sū'al-Qinya* that predominantly affects women. He explained its pathogenesis in terms of alterations in the constituents and quality of blood. According to his description, the red blood cells may become smaller in size (microcytic) with reduced haemoglobin content (hypochromia) and an increased proportion of fibrous material within the blood.⁵

Types of Anaemia in the Unani System of Medicine

- *Sawīul kurriyatee* (Normocytic anaemia)
- *Kurria kibriya* (Macrocytic anaemia)
- *Fauladi* (Hypochromic anaemia)¹⁸

Aetiological Factors (*asbāb*)

The following causes of anaemia have been described in the Unani ancient literature:

Amrāḍ-i-kabid (Liver disorders)

- *Sū'-i-Mizāj-i-Kabid*: Anaemia is caused by the weakness of the *quwate muallide khoon*, which is caused by the

sū' mizāj bāriḍ of liver, which inhibits haemopoiesis; resulting in slow or impure blood formation and leads to anaemia.¹⁹

- **Ḍu'f al-Kabid:** weakness of liver, leading to defective haemopoiesis, which in turn, results in defective cellular nutrition in liver, and leads to anaemia.^{20,6}

Amrāḍ-i-ṭihāl (Splenic disorders)

- **Ḍu'f al-ṭihāl ba sabab baroodat:** It is the weakness of the spleen due to coldness. It leads to its enlargement, congestion (warm) profuse discharge of black bile from spleen and impaired absorption of black bile produced in the liver which may lead to anaemia.^{13,21}

Amrāḍ-i-mi'da-o-am'ā (Gastrointestinal disorders)

- *Faṣad e medi* (distemperament of stomach): Impaired function of the stomach may lead to anaemia.
- *Ḍu'f al-mi'da* (weakness of stomach): Anaemia may be caused due to weakness in the stomach.^{22,6}
- *Ḍarab-o-khilfa* (frequent motions/ diarrhoea)¹⁹
- *Ḍidan al-am'ā* (intestinal worms)²³
- *Mi'da ka amal-i-jarraḥī* (GIT surgery)
- *Qay'al-dam* (blood in vomiting)
- *Purana Qabz* (old constipation)⁵
- *Sū'-i-Mizāj* (cold type)¹⁴

Amrāḍ-e-gurda (Kidney diseases)

- *Bawle-damvi* (blood in urine)
- *Warm-i-gurda muzmin* (chronic inflammation of nephrons) also leads to anaemia.⁵

Acute communicable diseases

- *Diqq-e-riwi wa digar sil* (pulmonary coach and extrapulmonary tuberculosis)
- Acute haemolysis occurred in malaria⁵

Amrāḍ-i-'aḍā'-tanāsul (Genital disorders)

- *Kasrat al-ṭamth* (menorrhagia)^{19,23}
- *Ihtibās al-ṭamth* (amenorrhoea)^{24,6,22}
- *Kasrat al-Jimā* (excessive coitus)
- *Jalaq* (masturbation)²³
- *Uṣr al-ṭamth* (dysmenorrhoea)
- *Haml* (pregnancy)⁵

Amrāḍ-i-Sadr (Cardio-pulmonary diseases)

- *Ḍu'f al-qalb* (cardiac weakness)^{25,26}
- *Naft al-dam* (Haemoptysis)⁵

Improper uses of Unani drugs of draja-e-charraum (4th-grade drugs of toxicological importance and animal poisons)

- *Murakkab-e-Simab* (compounds formulation with mercury)
- *Safeda* (Pb)

- *Kasrat-e-sharab Noshi* (alcohol abuse)
- Poisons from insect⁵

Badhazmi (Indigestions)

- *Mi'dī* (gastric)
- *Kabidī* (hepatic)
- *Urūqī* (vascular)
- *Uḍwi* (cellular)^{13,26}

Mutafarrebat (Miscellaneous)

- *Nazf-al-dam* (severe haemorrhage): As a result of *Nazf-al-dam*, the liver becomes cold and depleted of blood, which can lead to anaemia.¹⁹
- *Ghayr siḥḥat Bakhsh rehaish* (unhygienic living conditions)
- *Faqr-o-faqa* (poverty and starvation)
- *Mitti khane ki aadat* (calcium deficiency), especially in children
- *Ghayr munazzam ghidhā* (improper diet)²³
- *Naqs-i-taghdhiya* (malnutrition)²⁷
- *Ghayr mamooli mehnat-o-riyāḍat* (extreme exertion and exercise)
- *Tafaqqurāt* (anxiety)
- Malabsorption of *faulad* (iron)
- *Lahmeen ka naqse Taghdhiya* (PEM)
- *Ghayr ṭabā'ī ṭihālī mīkāniyat* (impaired metabolism of spleen)
- *Zulkhasa* (unknown aetiology)
- *Nuqs e ḥayātīn A, B12, and C*
- *Zauf-e-muallif dam* (impaired haematopoietic weakness)
- *Bad haḍmī* (dyspepsia)
- *Ghayr mamooli harkat* (over-activity)
- *Nafsiyātī awaamil* (psychogenic disorders)⁵

Clinical and Diagnostic Manifestations (Istidal wa Alāmāt)

In the Unani system of medicine, several clinical manifestations have been described for anaemia (*Faqr al-Dam/Sū'al-Qinya*). These include pallor or whitish discoloration of the skin, swelling involving the face, eyelids, extremities, or generalized body oedema, including pitting oedema of the feet. Gastrointestinal manifestations may include intermittent diarrhoea and constipation, a sensation of abdominal fullness or excessive air in the stomach, indigestion, and altered appetite, which may present as either loss or, occasionally, increased appetite. Patients may also experience sleep disturbances, excessive sweating, heaviness, and fatigue. Other reported manifestations include oliguria, delayed healing of wounds or ulcers, itching and ulceration of the gums, stomatitis, and respiratory symptoms such as dyspnoea on exertion. Neurological and circulatory manifestations may include vertigo, giddiness, muscle spasms, tremors, prominent peripheral veins, cold

extremities, and occasional syncope. Palpitations have also been described as a clinical feature. In addition, classical Unani literature mentions systemic and organ-related findings such as splenomegaly, hepatomegaly, jaundice, and ascites as possible manifestations associated with anaemia.^{5, 6, 13, 18, 19, 22, 28, 29}

Source of Data Collection: The data were collected from 21 ancient Unani books as well as other published research papers.

Discussion

Anaemia, referred to in classical Unani literature by terms such as *Faqr al-Dam* and *Sū'al-Qinya*, has been described as a disorder associated with abnormalities in the quantity and quality of blood. The present review highlights that classical Unani physicians described a broad range of aetiological factors, pathological mechanisms, and clinical manifestations that may be relevant to the recognition of anaemia. Although the terminology and explanatory framework differ from contemporary biomedical concepts, several of the clinical features described in Unani literature overlap with manifestations recognized in modern clinical practice.

According to the Unani concept, the liver (*Kabid*) has a central role in the formation and maintenance of blood. Disturbances such as *Du'f al-Kabid* (weakness of hepatic faculties) and *Sū'i-i-Mizāj* (alteration of temperament) were considered capable of affecting the production and quality of the humours (*Akhlāṭ*), ultimately resulting in *Sū'al-Qinya*. This concept reflects the importance attributed to digestion, metabolism, and blood formation in the Unani system. In contemporary medicine, the liver is also recognized as an important organ in iron metabolism, storage, and regulation, although modern haematology explains anaemia through more specific mechanisms such as blood loss, impaired erythropoiesis, nutritional deficiency, chronic disease, and increased destruction of red blood cells. Therefore, the traditional explanation may be considered a historical pathophysiological framework rather than a direct equivalent of modern mechanisms.

The review identified numerous clinical manifestations of *Faqr al-Dam* in classical Unani texts. Pallor, fatigue, heaviness, dizziness, dyspnoea on exertion, palpitations, cold extremities, and syncope are particularly noteworthy because they correspond broadly to symptoms commonly observed in patients with clinically significant anaemia. Reduced oxygen-carrying capacity in modern medicine can produce tissue hypoxia, resulting in fatigue, exertional breathlessness, dizziness, and compensatory cardiovascular responses such as tachycardia and palpitations. The presence of these overlapping clinical descriptions suggests that ancient physicians made careful observations of the

outward manifestations of illness despite the absence of modern laboratory investigations.

Several other manifestations described in Unani literature, including loss of appetite, indigestion, gastrointestinal disturbances, sleep disturbances, excessive sweating, and delayed wound healing, may occur in patients with anaemia but are not specific to the condition. Such findings may also be influenced by the underlying cause, severity, nutritional status, comorbid conditions, or associated disease. Consequently, these manifestations should not be regarded as diagnostic of anaemia in isolation. Rather, they may be useful as part of a broader clinical assessment.

The classical descriptions of oedema involving the face, eyelids, and lower extremities and the mention of hepatomegaly, splenomegaly, jaundice, and ascites are particularly important. These findings may occur in certain systemic disorders associated with anaemia, but they are not characteristic of uncomplicated iron-deficiency anaemia. Their presence may indicate an underlying hepatic, renal, cardiac, nutritional, or haematological disorder. From a contemporary clinical perspective, therefore, such findings should prompt further investigation rather than being attributed solely to *Faqr al-Dam*.

The description of *Khizra* (chlorosis) by Kabiruddin is of particular historical interest. The association of this condition with women and the description of smaller red blood cells with reduced red coloration correspond conceptually with microcytic and hypochromic red blood cells, which are recognized laboratory features of iron-deficiency anaemia. Although the terminology used in classical Unani literature differs from modern haematological classification, these observations demonstrate an attempt to characterize anaemia according to changes in blood constituents and physical features.

Modern diagnosis of anaemia generally relies on haemoglobin concentration and additional laboratory parameters, including MCV, MCH, peripheral blood examination, serum ferritin, and other investigations depending on the suspected cause. These tests are essential for confirming anaemia, determining its severity, identifying its morphological type, and investigating the underlying aetiology. Clinical manifestations described in classical Unani literature cannot replace laboratory confirmation. However, they may have potential value as clinical screening indicators, particularly in settings where access to laboratory investigations is limited.

The relevance of this issue is considerable in resource-constrained communities, where individuals may experience barriers to laboratory testing because of cost, availability, or limited healthcare access. Nevertheless, the absence of laboratory facilities should not lead to a definitive diagnosis

based solely on traditional signs and symptoms. Instead, classical clinical observations may be used to support early recognition and referral for appropriate diagnostic evaluation. This approach could be particularly relevant for community-based healthcare and integrative research.

Another important finding of this review is the breadth of clinical observation in classical Unani literature. The descriptions extend beyond a single symptom and include changes in skin colour, gastrointestinal function, urinary output, respiratory symptoms, cardiovascular manifestations, neurological symptoms, and physical signs. Such multidimensional descriptions are consistent with the holistic orientation of Unani medicine, in which disease is considered in relation to the overall balance and functioning of the body.

However, the evidence identified in this review should be interpreted cautiously. Most of the information originates from classical textual sources rather than contemporary clinical studies, and the historical descriptions were developed within a theoretical framework that differs substantially from modern biomedical pathology. In addition, terminology may vary among different Unani scholars and texts, and some manifestations attributed to *Sū'al-Qinya* may represent complications, associated diseases, or different types of anaemia rather than a single clinical entity. Therefore, direct equivalence between classical Unani terminology and modern diagnostic categories should be avoided unless supported by appropriate comparative research.

Future research should investigate the relationship between specific *Istedlal wa Alāmāt* described in Unani texts and modern haematological parameters, including haemoglobin, MCV, MCH, ferritin, transferrin saturation, and peripheral blood morphology. Prospective clinical studies could determine whether combinations of classical clinical manifestations have predictive value for anaemia and whether they can assist in identifying individuals who require laboratory investigation. Such studies may help distinguish historically described features from nonspecific symptoms and establish an evidence-based role for traditional clinical assessment.

Overall, the present review indicates that classical Unani literature contains extensive descriptions of the causes, mechanisms, and clinical manifestations of *Faqr al-Dam/Sū'al-Qinya*. Several of these manifestations correspond with symptoms recognized in contemporary anaemia, while others are nonspecific or may reflect associated systemic disorders. The classical descriptions therefore have historical and potentially clinical relevance, particularly for generating hypotheses and supporting early recognition, but they should be integrated with—not substituted for—

modern diagnostic methods. Further comparative and clinical research is needed to validate these observations and determine their potential contribution to contemporary and integrative approaches to anaemia.

Conclusion

Anaemia, described in classical Unani medicine primarily through the terms *Faqr al-Dam* and *Sū'al-Qinya*, has been discussed extensively in ancient Unani literature in relation to its aetiology, pathophysiology, classification, and clinical manifestations. The present review indicates that Unani physicians recognized anaemia as a systemic disorder associated with disturbances in the quality and quantity of blood and attributed an important role to abnormalities of hepatic function, particularly *Ḍu'f al-Kabid* and *Sū'i-Mizāj*. The classical descriptions also demonstrate an attempt to understand the disease through changes in digestion, metabolism, humoral balance, and the overall regulatory capacity of the body.

A wide range of clinical manifestations of *Faqr al-Dam* has been documented in classical Unani texts. These include pallor, fatigue, heaviness, dizziness, exertional dyspnoea, palpitations, cold extremities, sleep disturbances, gastrointestinal complaints, oedema, and occasional syncope, along with findings such as hepatomegaly, splenomegaly, jaundice, and ascites. Several of these manifestations have recognizable parallels in contemporary clinical descriptions of anaemia, particularly symptoms related to reduced oxygen-carrying capacity. The classical description of *Khizra* (chlorosis), including small and pale red blood cells, is also of particular historical interest because it corresponds conceptually with the modern description of microcytic and hypochromic changes.

The findings suggest that *Istedlal wa Alāmāt* (diagnostic manifestations) described in Unani literature may have value in the early clinical recognition of suspected anaemia, especially in communities where access to laboratory investigations is limited. However, these clinical manifestations are not sufficiently specific to establish a definitive diagnosis or determine the underlying cause of anaemia. Modern investigations, including haemoglobin estimation, red-cell indices, serum ferritin, peripheral blood examination, and other appropriate tests, remain essential for confirmation and classification of the disease.

The present review also highlights the potential value of integrating classical Unani clinical observations with contemporary diagnostic approaches. Rather than replacing modern laboratory investigations, the traditional descriptions may provide a complementary framework for clinical assessment and identification of individuals who require further evaluation. This may be particularly relevant for community-based healthcare and resource-limited

settings, where early recognition and appropriate referral are important for reducing the complications associated with untreated anaemia.

Nevertheless, the evidence presented in classical Unani literature is primarily based on historical descriptions and theoretical concepts, and these cannot automatically be equated with modern biomedical disease classifications. Differences in terminology, disease concepts, and diagnostic methods should therefore be considered when interpreting the findings. Some manifestations described as features of *Faqr al-Dam* may also occur in other systemic disorders and should not be considered specific diagnostic markers of anaemia.

Further clinical and comparative research is required to evaluate the relationship between *Istedlal wa Alāmāt* described in classical Unani texts and contemporary haematological parameters. Studies correlating individual clinical manifestations with haemoglobin concentration, MCV, MCH, serum ferritin, and other relevant laboratory findings could help determine the diagnostic relevance of these traditional observations. Such research may contribute to the scientific evaluation and preservation of the diagnostic knowledge contained within classical Unani medicine.

In conclusion, classical Unani literature provides a comprehensive historical account of anaemia (*Faqr al-Dam/Sū'al-Qinya*) and its clinical manifestations. The considerable overlap between several traditional descriptions and clinically recognized manifestations of anaemia suggests that these observations may have potential relevance for early clinical recognition. However, their diagnostic accuracy and clinical applicability require systematic scientific validation. A judicious combination of traditional clinical assessment, modern laboratory diagnosis, and evidence-based research may provide a more comprehensive approach to understanding and managing anaemia while preserving the valuable diagnostic heritage of the Unani system of medicine.

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