



**DASŪMAT-FID-DAM (HYPERLIPIDEMIA): A UNANI PERSPECTIVE ON
PATHOPHYSIOLOGY AND CONCEPTUAL UNDERSTANDING**

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ABSTRACT

Hyperlipidemia is a significant metabolic disorder that is closely linked with cardiovascular diseases in contemporary medicine. Although classical Unani literature does not identify hyperlipidemia as an independent disease entity, Unani scholars acknowledged the presence of fat within the bloodstream, referred to as *Dasūmat fid-Dam*. They described abnormal fat accumulation in conditions such as *Siman Mufriṭ* (obesity). The present review examines the Unani understanding of hyperlipidemia in classical texts, with particular focus on the roles of Balgham and Shaḥm, as well as etiological factors, pathophysiological mechanisms, clinical features, and associated complications. The findings indicate that *Kasrat-e-Dasūmat fid-Dam* shows a strong conceptual similarity to modern hyperlipidemia in terms of causation, disease progression, and complications. Exploring these traditional concepts may offer valuable perspectives for integrative approaches in the management of metabolic disorders.

KEYWORDS: Hyperlipidemia, Unani Medicine, Balgham, Shāham, *Siman Mufriṭ*, *Kasrat-e-Dasūmat fid-Dam*.

INTRODUCTION

Unani scholars acknowledged the presence of fat within the bloodstream, which they termed *Dasūmat fid-Dam*. In his well-known work *Kitāb al-Mi'a fi'l Ṭibb*, Abū Sahl Masīhī described the occurrence of fat in blood and emphasized that fatty blood contributes to the deposition of fat in different parts of the body (Maseehi, 1963). Likewise, *Mualijat-e-Nafeesi* discussed the nutritive function of circulating fat, explaining that lighter fractions of fat are transported through the bloodstream to various organs to provide nourishment (Nafees, 1910).

Although classical Unani literature does not specifically identify a disease termed hyperlipidemia, scholars clearly recognized both the presence and pathological importance of fat in blood. Therefore, in Unani terminology, hyperlipidemia may be interpreted as *Kasrat-e-Dasūmat fid-Dam*, meaning an excessive quantity of fat in the bloodstream.

The concept of hyperlipidemia as a defined medical condition emerged during the twentieth century with the development of biochemical diagnostic methods, which were not available in earlier times. Nevertheless, Unani physicians extensively described *Siman Mufriṭ* (obesity), a condition that shares close similarities with hyperlipidemia in terms of causative factors, clinical manifestations, complications, and therapeutic principles. Consequently, important insights into hyperlipidemia can be obtained from classical descriptions of *Siman Mufriṭ*.

METHODOLOGY

This literature review was conducted using classical Unani medical texts and contemporary scientific literature related to hyperlipidemia and obesity. Primary Unani sources included *Firdaus al-Ḥikmat*, *Kāmil al-Ṣanā*, *Kitāb al-Ḥawī fi'l Ṭibb*, *Kitāb al-Mi'a fi'l Ṭibb*, *Al-Qānūn fi'l Ṭibb*, *Dhakhīra Khwarizm Shāhī*. Secondary data were obtained from published research articles, books, and review papers correlating Unani concepts

with modern biomedical understanding of hyperlipidemia. Relevant literature was identified through manual searching of textbooks, academic databases, and reference lists. The collected information was analyzed and synthesized to describe the conceptual framework, etiological factors, pathophysiology, and clinical aspects of hyperlipidemia in Unani medicine.

Historical Perspectives of Hyperlipidemia in Unani Literature

In *Kitāb al-Fuṣūl*, Hippocrates (460 BC) provided a detailed description of *Siman Mufrīṭ* (obesity) and regarded it as a pathological condition associated with a shortened lifespan. Galen later quoted Hippocrates, noting that obese individuals tend to have a lower life expectancy compared with lean persons (Jalinus, 1903). Early physicians also documented several complications of obesity, including epilepsy, syncope, paralysis, and febrile conditions (Nasir et al., 2013.)

Hunayn ibn Ishāq (769–873 AD) discussed the management of obesity and the potential complications of medications in *Ghinā Munā*. Similarly, Rofas (98–117 AD), in *Kitāb Tahzeel-ul-Saman*, described the clinical features, complications, and therapeutic approaches for obesity, while cautioning against the use of strong purgatives in obese patients (Al-Qamari, 2010). Galen further emphasized that severe obesity may result in sudden death due to rupture of major blood vessels and highlighted the therapeutic importance of *Istifrāgh* (evacuation) in its management (Kantoori, 1903).

Raban Ṭabarī (810 AD), in *Firdaws al-Ḥikmat fi'l Ṭibb*, identified risk factors such as excessive food intake, prolonged sleep, and lack of physical activity, and described complications including facial paralysis, paraplegia, and sudden death (Tabri, 2010; Danish et al., 2024). Rāzī (865–925 AD) classified *Siman Mufrīṭ* into *Muqāmī* (localized) and *Umūmī* (generalized) forms, associating obesity with increased *Balgham* and vascular constriction, and recommended dietotherapy, exercise, massage, and purgation as treatment modalities (Rāzī, 1999). Majūsī explained the different types of fat (*Shaḥm* and *Samīn*) and their formation in *Kāmil al-Ṣanā* (Majoosi, 2010).

Ibn Sīnā presented a comprehensive account in *Al-Qānūn fi'l Ṭibb*, describing vascular narrowing caused by fat accumulation and advocating dietary regulation along with physical activity as key therapeutic measures (Sīnā, 2010). Jurjānī, in *Dhakhīra Khwarizm Shāhī*, highlighted the risk of vascular rupture and symptoms such as dyspnoea and palpitations (Jurjani, 2010). Other notable physicians, including *Ibn Rushd*, *Ibn Hubal*, *Qarshī*, *Arzānī*, *Sharīf Khān*, *Dā'ūd Antākī* and *Azam Khān*, also contributed to the understanding of obesity by discussing its complications and management strategies.

Asbāb (Etiology)

1. Asbāb Sābiqa (Predisposing Causes)

Asbāb-e-Sābiqa are factors that predispose an individual to the development of disease by altering temperament or humoral balance.

- *Maurusi* (Hereditary predisposition) observed in certain families, making individuals more prone to disorders of fat metabolism (Jeelani, 2010; Kashif et al., 2016).
- *Khilqī* (Congenital factors) that influence body constitution and metabolic efficiency from birth (Al-Qamari, 1255; Kashif et al., 2016).
- Post-menopausal state in females, where hormonal and metabolic changes predispose women to lipid disorders (Jeelani, 2010).

2. Asbāb Wāṣila (Immediate Causes)

Asbāb Wāṣila are internal causes that directly participate in disease causation.

- Conversion of blood into fat, leading to abnormal accumulation of *Shaham* and an increase in *Dasūmat fid-Dam*, due to deranged metabolism (Rushd, 1987).
- Predominance of *Balgham* and weakness of metabolic faculties, resulting in excessive fat formation and storage (Jeelani, 2010).

3. Asbāb Bādiya (External Causes)

Asbāb-e-Bādiya are external lifestyle and dietary factors that trigger or aggravate the disease process.

- Excessive dietary intake, especially intake of fatty, oily foods and substances rich in sugar and starch, leading to *Balghami* dominance (Tabri, 2010; Jeelani, 2010).
- Excessive use of butter and milk, particularly buffalo milk, which is heavy and rich in fats (Jeelani, 2010).
- Use of alcohol, which impairs digestion and metabolism and promotes fat accumulation (Al-Qamari, 1255; Jeelani, 2010).
- Sedentary lifestyle, characterized by excessive comfort, joy, rest, and lack of physical exercise, leading to reduced *Harārat-e-Gharīziyya* (Tabri, 2010).
- Excessive sleeping, which further weakens metabolic activity and promotes fat accumulation (Tabri, 2010).

Role of *Balgham* and *Shahm* in *Kasrat-e-Dasūmat-fid-Dam*

Kasrat-e-Dasūmat fid-Dam (hyperlipidemia) in Unani medicine is primarily explained by the imbalance of *Balgham* (phlegm) and the excessive accumulation of *Shaḥm* (body fat). According to the humoral theory, Hippocrates emphasized that health is maintained through the equilibrium of the four *Akhilāt* (humours) *Dam* (blood), *Ṣafrā* (yellow bile), *Balgham* (phlegm), and *Sawdā* (black bile) and that any qualitative or quantitative disturbance among them leads to disease (Kabeeruddin, 2014). Since blood is formed from the

admixture of these humours, any imbalance directly affects its composition and overall physiological functioning. *Balgham* is considered a normal humour with a *Barid Ratab Mizāj* (cold and moist temperament), playing an essential role in lubrication, nourishment, and storage processes in the body. However, when produced excessively due to weakness of digestive and metabolic faculties, it becomes pathological (Sīnā, 2010; Kabeeruddin, 2014). Factors such as excessive intake of fatty and cold foods, sedentary habits, and lack of physical activity lead to *fasād-e-Balgham*, resulting in impaired metabolism and accumulation of abnormal phlegm within the body (Jurjani, 2010). This pathological state contributes to *Siman Mufriṭ* (obesity) and increases *Dasūmat fid-Dam*, which is comparable to hyperlipidemia in modern medicine (Khan A., 2011).

Physiologically, *Shaḥm* serves as an important source of *Harārat* (energy) and plays a significant role in maintaining the softness and moisture of organs (*a'dā*). Due to its ability to absorb and retain heat, it supports digestive activity and helps sustain metabolic warmth over longer periods. Its inherent *lazūjat* (viscosity) and *dahniyat* (oily nature) provide protection against extreme temperatures and mechanical injury, while also ensuring lubrication and flexibility of tissues. However, when *Shaḥm* exceeds its normal physiological limits, it loses its protective function and instead contributes to pathological conditions such as obesity, vascular obstruction, and disorders of lipid metabolism (Nasir et al., 2013).

According to Unani scholars, *Shaḥm* formed from excess nutritive material increases pathologically when *Balgham* predominates and *Harārat-e-Gharīziyya* (innate heat) declines. Excess *Balgham* is gradually transformed into *Shaḥm*, which accumulates within tissues and blood vessels, resulting in *Kasāfat-e-Dam* (thickening of blood) and *Sudda* (vascular obstruction) (Rāzī, 2008; Sīnā, 2010). This concept closely parallels the modern understanding of lipid accumulation, elevated cholesterol and triglycerides, and the development of atherosclerosis. Therefore, maintaining the qualitative and quantitative balance of *Balgham* and its derivative *Shaḥm* or *Dasūmat* is essential for normal physiological functioning (Sīnā, 2010). Contemporary research has also correlated these traditional concepts with hyperlipidemia, highlighting impaired lipid metabolism and excessive fat storage as key mechanisms in disease pathogenesis (Ahmad, 2017; Lad et al., 2023).

Thus, *Kasrat-e-Dasūmat fid-Dam* is categorized as a *Balghami* disorder in Unani medicine. In obese individuals, the predominance of *Khilt-e-Balgham* acts as a major predisposing factor for increased lipid content in the blood. Unani scholars attributed excessive fat deposition mainly to overeating and frequent consumption of fatty and oily foods. Rāzī advised obese individuals to avoid oily diets and foods prepared with excessive fat, emphasizing dietary moderation as a

primary preventive measure (Rāzī, 1999). Similarly, Ibn Sīnā and other physicians cautioned that excessive intake of fatty foods is particularly harmful in obese individuals and may lead to serious complications involving vital organs (Sīnā, 2010).

Pathophysiology

In Unani medicine, *Kasrat-e-Dasūmat fid-Dam* (hyperlipidemia) is considered a *Balghami* disorder that develops due to a disturbance in humoral equilibrium, particularly the excess and abnormal quality of *Balgham* (phlegm) along with the pathological accumulation of *Shaḥm* (body fat). The pathophysiological process is believed to originate from weakness of *Quwwat-e-Hazīma* (digestive faculty), which results in incomplete digestion and the formation of *Balgham Ghayr Ṭabī'ī* (immature or abnormal phlegm) (Sina, 2010; Kabeeruddin, 2007). This condition is further aggravated by excessive consumption of fatty, cold, and moist foods, sedentary habits, and insufficient physical activity, ultimately leading to *fasād-e-Balgham* (derangement of phlegm) (Jurjani, 2010).

As digestive and metabolic efficiency declines, *Harārat-e-Gharīziyya* (innate heat) also diminishes, impairing the body's capacity to properly metabolize and assimilate nutrients. The reduction in metabolic heat facilitates the transformation of excess *Balgham* into *Shaḥm*, resulting in abnormal deposition of fat within tissues and blood vessels (Sina, 2010). The excessive production of *Shaḥm* consequently increases *Dasūmat fid-Dam*, leading to *Kasāfat-e-Dam* (thickening of blood), which interferes with normal circulation (Rāzī, 2008).

With progressive accumulation of *Shaḥm* in the vascular system, *Sudda* (vascular obstruction) develops. Unani scholars described *Sudda* as the blockage of vessels by thick and viscid humours, which compromises circulation and impairs nourishment of organs (Rāzī, 2008; Jurjani, 2010). This concept closely resembles the modern understanding of atherosclerotic plaque formation associated with elevated cholesterol and triglyceride levels. Persistent vascular obstruction eventually reduces tissue perfusion and predisposes individuals to cardiovascular and metabolic complications (Ahmad, 2017).

Moreover, excessive *Balgham* and *Shaḥm* contribute to *Siman Mufriṭ* (obesity), which acts both as an outcome and a reinforcing factor in the development of hyperlipidemia. Obesity further weakens metabolic faculties, creating a vicious cycle of fat accumulation and impaired lipid clearance (Khan A., 2011). Contemporary scientific evidence supports this traditional perspective by identifying defective lipid metabolism and excessive fat storage as central mechanisms in hyperlipidemia (Lad et al., 2023).

Thus, the pathophysiology of hyperlipidemia in Unani medicine follows a sequential process beginning with

impaired digestion and metabolism, leading to excessive formation of *Balgham*, its pathological conversion into *Shaḥm*, increased *Dasūmat fid-Dam*, vascular obstruction

(*Sudda*), and ultimately the development of chronic metabolic and cardiovascular disorders.

Clinical features of *Dasūmat-fid-Dam* (Hyperlipidemia)

Table 1: System-wise classification and its contemporary clinical interpretation based on classical texts.

System	Clinical Feature	Interpretation	Classical References
General	Taqleel-e-Harkat	Reduced physical activity/lethargy	Jurjani (2010); Nafees (1984)
	Increased susceptibility to diseases	Weak immunity, delayed recovery	Jurjani (2010); Nafees (2010)
	Sudden death	Acute fatal outcomes	Tabri (2010); Jurjani (2010); Nafees (2010)
	Fasād-e-Rūḥ	Deterioration of vital spirit	Sina (2007); Jurjani (1903); Rāzī (1999)
	Poor drug response	Reduced efficacy due to impaired delivery	Sina (2007); Jurjani (1903); Rāzī (1999)
Cardiovascular System (CVS)	Khafaqān	Palpitations	Sina (2010); Jurjani (2010)
	Hemorrhages	Bleeding tendencies	Jurjani (2010)
Respiratory System	Ḍiq al-Nafas	Dyspnea/breathlessness	Sina (2010); Jurjani (2010)
Gastrointestinal System	Vomiting & loose motions	Increased GI disturbances	Tabri (2010); Sina (2010)
Neurological System	Sakta	Stroke-like condition	Sina (2010); Jurjani (2010); Nafees (2010)
	Ghashi	Syncope / fainting	Al-Qamari (1255 H); Sina (2010); Jurjani(2010); Nafees (2010)
	Fālij wa Laqwa	Paralysis and facial palsy	Al-Qamari (1255 H); Sina (2010); Jurjani (2010); Nafees (2010)
	Ṣar' (Epilepsy)	Seizure disorder	Al-Qamari (1255 H)
Reproductive System (Male)	Impotence & sterility	Sexual dysfunction	Sina (2010); Jurjani (2010); Nafees (2010)
	Lack of libido	Reduced sexual desire	Tabri (2010); Sina (2010); Jurjani (2010)
Reproductive System (Female)	Sterility & abortions	Infertility and pregnancy loss	Al-Qamari (1255 H); Sina (2010); Jurjani (2010); Nafees (2010)
Systemic / Infectious	Ḥummayāt	Recurrent fevers	Al-Qamari (1255 H); Sina (2010); Jeelani (2010)

CONCLUSION

Although hyperlipidemia is not described as a distinct nosological entity in classical Unani literature, the concepts of *Dasūmat fid-Dam* (fat in the blood) and *Siman Mufriṭ* (obesity) clearly indicate that Unani scholars possessed a sophisticated understanding of abnormal fat accumulation and its systemic consequences. Their descriptions of excessive *Balgham*, pathological formation of *Shaḥm*, vascular obstruction (*Sudda*), and thickening of blood (*Kasāfat-e-Dam*) demonstrate a conceptual framework that closely corresponds to the modern biomedical understanding of lipid metabolism disorders. The parallels between *Kasrat-e-Dasūmat fid-Dam* and contemporary hyperlipidemia are evident not only in etiological factors such as dietary excess, sedentary lifestyle, and hereditary predisposition but also in pathogenesis and complications, including cardiovascular and metabolic disturbances. This alignment highlights the scientific

relevance of classical Unani principles in explaining chronic metabolic conditions. Therefore, integrating traditional Unani insights with modern biomedical research may offer a more holistic perspective, potentially contributing to improved preventive strategies, lifestyle interventions, and complementary therapeutic approaches for the management of hyperlipidemia and related metabolic disorders.

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