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Dyslipidemia and its concept in Unani medicine: A review

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Abstract
Dyslipidemia is a condition characterised by an excess of potentially atherogenic lipids and lipoproteins. Dyslipidemia as a disease is not directly described in Unani texts. Clinical manifestations of dyslipidemia, on the other hand, are closely associated with signs and symptoms of cold temperament derangement (*Su-e-Mizaj Barid Maddi*) caused by a disturbance in the *kamiyat* (quantity) and *kafiyat* (quality-composition) of *Ratubat al-tajawif* or *Ratubat-ul-uruq* (internal environment of the body) or a disturbance in the homeostatic condition of the internal. This comes under the heading of *Huzoom-e-Kabidi* abnormalities as the primary root cause of dyslipidemia. Derangements in the cold temperament (*Su-e-Mizaj Barid Maddi*) and *Huzoom-e-Kabidi*, which have been thoroughly explained in famous books by eminent Unani scholars such as *Zakaria Rhazi*, *Ibn-e-Sina*, *Rabban Tabri*, *Ali Ibn-e-Abbas Majusi*, and *Hakim Akbar Arzani*. This review article identifies observations from Unani literature that describe cold temperament derangement due to *Huzoom-e-Kabidi* abnormality and relates them to the clinical presentation of dyslipidemia in conventional medicine. We have also explained about how all these indications are managed in Unani medicine.

Keywords: Dyslipidemia, Unani medicine, *Su-e-Mizaj Barid*, obesity

Introduction
Dyslipidemia is a lipid and lipoprotein metabolic disorder. Abnormal plasma lipoproteins and abnormal lipid metabolism are assumed risk factors for atherosclerosis, which is a major cause of morbidity and mortality in the cardiovascular system [1]. Dyslipidemia is a modifiable risk factor of cardiovascular disease, which is a leading cause of death worldwide [2]. It is presumed that by the year 2020 CVDs will be the leading cause of total disease burden globally. If it is left untreated, it can cause to various complications and mortality may increases [3, 4].

The age-standardized prevalence of dyslipidemia is 31.2% overall, with 4.3% for high total cholesterol (TC), 2.4% for low-density lipoprotein cholesterol (LDL-C), 14.7% for triglycerides (TG), and 17.4% for low high-density lipoprotein cholesterol (HDL-C) [5, 6, 7, 8]. It affects men more than women [5, 7, 8]. Statins, fibrates, niacin, and other anti-dyslipidemic medications are available in conventional medicine to treat dyslipidemia [9].

Traditional medical systems, which have their own names and classifications, have treated many well-known diseases. The Unani medical system is a comprehensive medical system that deals diligently with various states of health and disease. It provides healthcare that is promotional, preventive, curative, and rehabilitative. The system's fundamentals, diagnosis, and treatment modalities are founded on scientific principles and holistic health and healing concepts. The patient's temperament (*Mizaj*) is very important in the diagnosis and treatment of diseases with herbal, mineral, and animal origin drugs. Temperament is also considered when determining the ideal diet and lifestyle for promoting a specific individual's health.

Unani system of Medicine does not describe the disorder known as dyslipidemia; even so, signs and symptoms associated with a deranged cold temperament due to impaired *Huzoom-e-arba* are mentioned in Unani literature (*Su-e-Mizaj Barid Maddi*). This bears some resemblance to the clinical conditions currently associated with dyslipidemia diagnosis. The implications of this comparison, as well as Unani medicine management approaches, were discussed in this manuscript.

Concept of *Shaham* and *Dyslipidemia* in Unani medicine
The term dyslipidaemia is not mentioned specifically in classical Unani literature. We can understand from the literature that the great physician, *Ibn-e-Sina* (Avicenna 980-1037 AD), was familiar with the *Dasumat-e Dam* [10, 11].

Hippocrates (460 BC), *Jalinus* (Galen 119-200 AD), *Rabban Tabri* (780-850 AD), *Zakaria Rhazi* (865-925 AD), and *Ali Ibn-e-Abbas Majoosi* (930-994 AD) all identified pathological conditions related to *Shaham*. They have classified it as *Dasumat-e-Dam* with *Huzoom-e-Kabidi* abnormalities as the primary root cause of dyslipidemia. The concept of *Shaham* and *Dasumat-e-Dam* can be found in classical Unani literature written by various Unani scholars. According to Unani physicians, *dusumat* or *duh'niyat* of the blood are lipid substances. The pathologic feature of dyslipidaemia is associated with an excess accumulation of fatty deposition in blood circulation, which can be traced back to the writings of great Unani physicians. Ibn-e-Sina, who explains the presence of *Dasumat-e-Dam*, which stands for fat in blood, the oily or fatty part of blood, has now been transformed into lipid, so the diseased condition is known as dyslipidemia. It represented the previous concept of lipid in blood. Since the Greco-Arab period, Unani scholars have defined *Shaham* (fat) as an end product of food (*Nuz-j-e-Fazila*) that is produced after digestion, and this *Shaham* afterward goes to different organs of the body and provides nutrition [12, 13]. According to *Ali Ibn-e-Abbas Majoosi*, author of *Kamil Us Sanat*, there are two types of *Shaham*: [14] (a) *Sameen*, and (b) *Widak*.

They covers the blood vessels and nerves. When this type of *Shaham* is found in the bloodstream, it is deposited in organs that have Barid *Mizaj* due to their temperamental similarity; the majority of the fatty deposition occurs at Surb [15]. Sameen is a thin fat that is constrained to the *Azlat* (muscles). Widak can be found between the muscles. It is favourable to those organs that have *Har Yabis Mizaj*, resulting in proper function of that organ of the body [14].

Shaham is essential for the maintenance of Hararat in the body. It is derived from mature blood, which is responsible for *Aza*'s nutrition. Naturally, a normal proportion of *Shaham* is a sign of good health; but even so, when it is not present in their body, it indicates blood immaturity (*Adam pukhtagi dam*), so the normal *Shaham* resulting from this immature blood hasn't been used as energy by the body and organs do not get enough nutrition process, as a result it gets deposited in the body. It is assured that the excessive deposition of such type of *Shaham* in any person is not a good sign for a healthy life, that condition; *Shaham* is derived from more than usual "*Khilt Dam*," which results in Burudat of *Aza* and, eventually, death of the individual [16].

Clinical Correlation of between derangement in the *Huzum Kabidi* and Dyslipidemia

Clinical manifestations of dyslipidemia are correlated to signs and symptoms of cold temperament derangement (*Su-e-Mizaj Barid Maddi*) caused by a disturbance in the *kamiyat* (quantity) and *kafiyat* (quality-composition) of *Ratubat al-tajawif* or *Ratubat-ul-uruq* (internal environment of the body) or a disturbance in the homeostatic condition of the internal environment of the body. This comes under the heading of *Huzoom-e-Kabidi* abnormalities as the primary root cause of dyslipidemia. Derangements in the cold temperament (*Su-e-Mizaj Barid Maddi*) and *Huzoom-e-Kabidi*, which have been thoroughly explained by eminent Unani scholars such as *Zakaria Rhazi Ibn-e- Sina, Rabban Tabri, Ali Ibn-e-Abbas Majusi* and *Hakim Akbar Arzani*, in their famous books [11, 14, 17]. *Fuzlat* [11] was produced during the four sequential stages of digestion and must be expelled from the body. If these wastes are accumulate in the organs/body, they can cause serious illness due to one of the following causes: (1) Accumulated wastes may become *muta'affin* and potentially trigger infectious disease, (2) Accumulated wastes in the organ may produce *Su-e-Mizaj* and (3) Accumulated wastes may suffocate the *Hararat Ghareezia*, eventually resulting in its extinction [16].

When the *Huzoom-e-arba* process is disrupted, the effective digestion of nutrients is impeded. This digestion does not take place properly in the stomach (*Huzoom ula*), the liver (*Huzoom-e-Sani*), or the vessels and organs (*Huzoom Urooqi* and *Huzoom Uzwi*, respectively) [17]. As a result, it can result in dyslipidemia. *Hararat-e Ghareezia* is severely hampered by increased *Baroodat* as a result of increased *Shaham* and abnormal *Balgham* accumulation, which causes vessel narrowing and obstructed *Ruh* proliferation in the body. Furthermore, blood vessel rupture can occur anywhere in the body, though vessels in the heart and brain are more vulnerable to it [14, 19].

Dyslipidemia has gradually come to be recognised as a major risk factor for cardiovascular disease. The majority of CVDs are caused by atherosclerosis in some form or another. Atherosclerosis is a *Marz-e-Majari* (vessel disease) in which the *sharain* gets (arteries) narrowed and become obstructed. Either *akhlate ghaleeza*/viscid humours or *akhlate luzuja*/sticky humours cause the obstruction [19]. *Salabat-e-shrayin* is the literal name for atherosclerosis. *Tangi urooq* is widely discussed by Unani Scholars, including *Ibn-e-Sina, Ibn-e-Zuhr, Ibn-e-Nafees, Majoosi*, and *Ibn-e-Rushd*, among others. The hyperstimulation of *Quwate Masika* in the vessel results in the retention of *Ghaleez Laisdar khilt* (viscous morbid matter) within the vessel lumen, which causes primary hardening of the blood vessels [19]. The above disease pathogenesis is mentioned for *Salabat-e-sharayin*. According to Nafeesi, excess morbid matter diminishes matter absorption, resulting in vessel hardening. This morbid matter could be *Laham wa Shaham*, a substance that disrupts the flow of Ruh and allows it to enter the organs [19, 14]. When Ruh is insufficient to meet tissue demands, arterial tissue hardens. It has the potential to be fatal if it develops in the *Sharayin of Aaza Raisa*, particularly *Qalb* and *Dimagh*. According to Unani Medicine, the most likely cause of dyslipidemia is a disruption in the *Huzoom Arba'* pathway, which leads to the formation of morbid humours, since the basis of health is the appropriate proportion and particular equilibrium of *akhlat* (humours). As a result, the body remains healthy as long as the internal environment, which is regulated by *Ratubat tajawif* and *Ratubat uruq* [20], maintains homeostasis. Sue-*Mizaj* of the entire body is caused by any disruption in the homeostatic state of the internal environment of the body, or any disturbance in the *kamiyat* (quantity) and *kafiyat* (quality-composition) of *Ratubat al-tajawif* or *Ratubat-ul-uruq* (internal environment of the body) [20]. Excessive consumption of cold and moist foods, as well as insufficient quantities and timing of food consumption after digestion, causes an increase in cold and moist humours, as well as coldness and moisture in the liver and stomach. Balgham is abundant in this state's blood supply. Coldness forms Ghaleez and Luzuj Akhlat, and a rise in coldness causes the serous humour known as *Shaham* to congeal [14].

Pathophysiology

There is no such explanation for the term dyslipidaemia in

classical Unani texts, but various Unani scholars have given the thought of *Dasumat-e-Dam* (*Shaham* of blood fatty substance). The pathologic component of dyslipidaemia is associated with an excess accumulation of fatty deposition in the blood circulation, which can be traced back to the writings of great Unani physicians. Ibn-e-Sina explained the presence of *Dasumat-e-Dam*, which stands for fat in blood. Because the oily or fatty part of blood has now been converted into lipid, the diseased condition is known as dyslipidaemia. *Balgham* has Barid Ratab temperament (cold and wet) [16], and it applies to all matters that do have the temperament of Barid Ratab *Mizaj* or even have functions similar to *Balgham*, such as *Shaham*. Pathologically, individuals with Barid *Mizaj* (generally obese people) who have an excess of Barid Ratab Madda (*Balgham* & *Shaham*) are more likely to develop Dyslipidemia [21]. Dyslipidemia may be a *Balghami* disease [21] characterised by *Shaham* deposition in different organs or throughout the body [22]. Furthermore, once mixed with blood, *Balgham* maintains blood viscosity. In contrast, an increase in the level of abnormal *Balgham* in blood circulation causes the blood to become viscous and thick, resulting in the disastrous consequences of *Siman Mufrit* (Obesity). Obesity (*Siman mufrit*), which is anticipated to be a driving factor in the development of Dyslipidemia, severely impairs the *Hararat-e Ghareezia* due to increased Baroodat due to increased rates of *Shaham* and abnormal *Balgham* accumulation, which in turn induces vessel narrowing and leads to obstructed Ruh proliferation in the body. Moreover, blood vessel rupture can occur anywhere in the body, though vessels in the heart and brain are more vulnerable. As a result, the patient is experiencing severe shortness of breath and palpitation. According to *Ibn-e-Nafis*, morbific matters impede *Akhlat* absorption, resulting in narrow and hard blood vessels, which may be *Laham* or *Shaham*; these matters cause disturbance in flow and *Ruh* penetration into the organs. When *Ruh* fails to meet the body's requirements, tissues harden and blood flow to the heart and brain is inadequate, resulting in syncope, stroke, and, in some cases, sudden death [20].

Causative factors

The causes of deranged hepatic digestion and sue-*Mizaj barid maddi* mentioned in unani medicine are due to changes in *Asbab-e-sitta Zarooriyah* (six prerequisites for existence), which include *Ghair tabai Balgham*, Alcohol [17, 23], *Martoob Ghiza* (fatty diet such as meat, sweet dishes, etc [24, 25], *Martoob Roghinyat* (fatty oils) [24], oily & fatty diets [17, 25, 26], excessive eating habit [26], sedentary lifestyle, lack of exercise [25, 26], excess sleep, excess rest, decreased body movements.

Risk Factors

Su-e-Mizaj Barid Maddi (deranged cold temperament), excessive use of cold and moist food, inappropriate amounts and insufficient timing of food consumption after digestion, Barid *Mashroobat* (cooling drinks), *Qillat-e-Harkat* (sedentary life), and modification in *Asbab-e-Sitta Zarooriayh* (six prerequisites for existence) are among the risk factors mentioned in Unani literature [16, 27].

Diagnosis based on *Ajnas-e-Ashra* (ten categories of signs)

Ibn-e-Sina pioneered the idea of *Ajnas-e-Ashra* for temperament assessment. Every organ and every person has a unique temperament, which can change in response to abnormal humours or disease [16, 27, 28]. [Table 02]

***Usool-e-Ilaj* (principle of treatment)**

The main emphasis of *Usool-e-Ilaj* (principle of treatment) in the Unani system of medicine is to correct the *Sue Mizaj Barid maddi* (abnormal temperament), correct the altered *Huzoom-e-Kabidi*, and modify *Asbab-e-Sitta Zarooriya* (six prerequisites for existence) to restore normal health [29].

A. In case of *Sue Mizaj Barid Maddi* (a). *Istefrage maddah* (Remove the morbid matter) from the Body, and (b) normalized the abnormal condition of that organ or body.
B. In case of altered *Huzoom-e-Kabidi:* It leads to weakness of liver causing *Baroodat-e-Jigar*; (a) *Sue Mizaj Barid Sada*: Only modulation in temperament will be needed, and (b) *Sue Mizaj Barid Maddi*: Elimination of *Madda* will be needed with purgation and diuresis.
   If the cause of weakness of liver is obstruction then deobstruent drugs (*Mufattehe Sudad*) should be used [30]. The *Mufattahe Sudad* drugs are include; *Afsanteen, Aneesoon, kasni, Biranjasif, Kibr, Ustokhuddus* and *Ajwain* etc.
   If the cause of weakness is involvement of other organ, e.g. *Baroodate Kuliya* causes *Baroodate Jigar*, so treatment of liver should be considered with the treatment of kidney [30].
C. Modification in *Asbab-e-Sitta Zarooriya* (six prerequisites for existence)
   It reduces the accumulation of toxins, especially when they are caused by an individual's poor, inadequate diet, which can delay the onset of the disorder [31].

Ilaj (treatment)

The treatment principle in the Unani system of medicine is *Usool Bil Zid* (principle of contradiction). There are four treatment methods, or modalities: *Ilaj Bil Ghiza* (diet therapy), *Ilaj Bil Tadabeer* (regimental therapy), *Ilaj Bil Dawa* (pharmacotherapy), and *Ilaj bil Yad* (manual therapy/surgery) [31, 32].

Ilaj Bil Ghiza (diet therapy)

Dyslipidemia is a cold-temperament disease caused by a derangement in hepatic digestion; therefore, a therapeutic diet should be hot in temperament and include other refrains, such as *Jaiyyad ul Kaimus* (normal chyme), Lateef (tense diet), and *Saree ul Huzoom*.

In his famous book Zakhirah Khwarzam Shahi, Ismail Jurjani described the various ways to manage farbahi (obesity), which is a driving factor for dyslipidemia, that all those ghiza (food) which promote the formation of Dam (blood) should be reduced and hot spices should be added in ghiza (food e.g. Darchini (*Cinnamomum zeylanicum*), Jaiphal (*Myristica fragrance*), Darchini (*Cinnamomum zeylanicum*), Jaiphal (*Myristica fragrance*), Filfil Daraz (*Piper longum*), Zeera (*Cuminum cyminum*), Lehsun (*Allium sativum*), Rai (*Brassica nigra*) with Sirka, as they have multifunctional properties, ingest ghiza once a day during the winter season, use hot water on a daily basis, and avoid drinking too cold drinks [33].

***Ilaj Bil Tadabeer* (Regimenal therapy)**

To restore health, Unani scholars used somatic methods.

Special techniques are prescribed for some specific and complicated diseases; such techniques can be used as an adjuvant along with diet therapy or/and pharmacotherapy. Furthermore, these techniques are various types of rejuvenators and detoxifiers, with the majority of them being drug-free regimens. They are not only curative, but they are also widely used in disease prevention. *Riyazat Saria* (rapid exercise), *Dalk Khashin* or *Sakht Maalish* with *Roghan Qust* (*Saussarea lappa*), Rough massage-oil with-*Roghan Shibbat* (*Anethum graveolens*), *Taareeq* (Diaphoretic), *Hammame Yabis* (Dry bath), *Dalk m'a Muhallil Roghaniyat* (Massage with dissolvent oil), *Fasd* (*Venesection*), *Hijama Bish Shart* (*Wet cupping*), *Qai* (Emesis), *Jama drusht poshidan* (wearing of firm cloth), *Khwabidan dar Sakht Bister* (Sleep in hard bed).

Ilaj Bil Dawa (pharmacotherapy)

Ilaj bil dawa (pharmacotherapy) in the Unani system of medicine includes both *Mufrad advia* (single drugs) and *Murakkab advia* (compound formulations) [34]. While treating, the emphasis is on the patients' temperamental contradictory state and the drug *Ilaj bil Zid* (principle of contradiction). Unani Medicine employs a large number of medicinal plants; single drugs or their combinations are preferred over compound formulations. Drugs are prescribed as single treatments or as combinations of multiple drugs in the form of *Joshandah* (decoction), *Kheshandah* (infusion), *Safoof* (powder), or *Nuskha* (prescription) [35, 36].

Unani physicians have described various drugs (*Mufrad wa Murakkab*) and their composition that have *Har Yabis Mizaj* (hot and dry temperament). They can act as *Islah-e-Jigar* (Hepatoprotective), *Muhallil-e-Auram* (Anti-inflammatory), *Mudirr-e-Baul* (Diuretic) and Antioxidant. They can also balance the *Akhlat* (Humors), such as *Badyan (Foeniculm vulgare)* [37], *Bikh Ajmod* (*Apium graveolens*) [38], *Gudmar Booti* (*Gymnema sylvestre*) [39], *Halela (Terminalia chebula)* [40, 41], *Lehsun* (*Allium sativum*) [42, 43], *Kaloonji* (*Nigella Sativa*) [42], *Luk Maghsul* (*Laccifer lacca*) [43], *Methi (Trigonella foenum-graecum)* [44], *Sandrus (Trachelobium hornemanianum), Saad kofi (Cyperus rotundus), Soya (Anethum sowa)* [45], *Sumbuluttib* (*Valeriana officinalis*), *Tukhme Karafs* (*Apium graveolens*) [46] and *Tukhme Suddab* (*Ruta graveolens*) [47] Kasni (*Cichorium intybus*) [47], Maku (*Solanum nigrum*) [48], *Afsanteen* (*Artemisia absinthium*) [49], *Muquil* (*Commiphora mukul*) [50], *Chhal Arjun* (*Terminalia arjuna*) [51], *Badranjboya* (*Mellisa officinalis*) [52], *Abresham* (*Bombyx mori*) [53], which have been reported as having antihyperlipidemic activity.

Various Unani formulation have been used by physicians, based on their clinical experiences, to manage dyslipidemia and *Farbahi* such as *Safoof Kalonji* [54], *Habbe Sundarus* [35], *Qurs Luk* [55], *Itriphal Sagheer* [56], *Majoon Sheer Alvi Khan* [57] and *Safoof Muhazzil* [58, 59].

Discussion

Dyslipidemia, though not defined in Unani medicine, is similar to *Sue Mizaj Barid Maddi* (abnormal temperament), as discussed above. *Mizaj* variations are indicators of various metabolic problems in Unani medicine, such as weight gain or loss, excessive or insufficient body movements. As a result, the source of the diseases is identified as *Sue Mizaj* (Derangement in temperament). If there are indicators of excessive heat, it could be Har (heat); otherwise, it could be *Mizaj Barid* (cold temperament). For *Su-e-Mizaj Barid Maddi*, the features stated in Harrison's Principles of Internal Medicine [60] are the same as those stated by Sina [11], Rushd [11], and Nafis [16] (deranged cold temperament). The treatment in conventional medicine is based on anti-dyslipidemic medication, whereas the treatment in unani medicine requires the correction of *Huzoom-e-Kabidi* and humoral imbalance [20]. Modification in *Asbabe Satta Zarooriya* for correction of *Huzoom-e-arba* and *Sue Mizaj Barid Maddi* is an important approach. Har nutrition (hot diets), *Har* regimens (hot regimes), and Unani crude single drugs or compound formulations (pharmacotherapy) [Standard Unani] are used to treat this deranged *Huzoom-e-Kabidi* and *Sue Mizaj Barid Maddi*. Unani medicine uses folkloric medicine to provide a comprehensive array of treatments for this disease. Several single drugs have been shown to have anti-dyslipidemic properties, like *Muquil* (*Commiphora mukul*) [50], *Chhal Arjun* (*Terminalia arjuna*) [51], *Badranjboya* (*Mellisa officinalis*) [52], *Abresham* (*Bombyx mori*) [53], *Tukhm Methi* (*Trigonella foenum-graecum*) [44] *Garlic* (*Allium sativum*) [44, 45], *Halela Zard* (*Terminalia chebula*) [40, 41], *Balela* (*Terminalia bellerica*) [61], *Amla* (*Emblica officinalis*) [62], *Chaube Zard* (*Curcuma longa*) [63], *Tukhm Kalonji* (*Nigella sativa*) [42], *Gurmar Booti* (*Gymnemma sylvestere*) [39], *Post Anar* (*Punica granatum*) [64], *Zeera* (*Carum carvi*) [65], *Badiyan* (*Foeniculm vulgare*) [37], *Ajwain* (*Trachyspermum ammi*) [66] etc. It is important to note that *Su-e-Mizaj Barid Maddi* encompasses several clusters of disease categories recognised in current medical practise; however, all of the signs referred to in Unani medicine for *Su-e-Mizaj Barid Maddi* are also present in Dyslipidemia.

For centuries, Unani physicians have treated the disease in this manner. The Unani drugs, foods, and therapies used in this treatment are still being validated in the context of current dyslipidemia diagnosis and treatment in conventional medicine. The current work could be used as a foundation for future research in this area.

Table 1: Symptomatic correlation of associated with derangement in the *Huzoom Kabidi*

Symptoms of Dyslipidemia	Symptoms of derangement in cold temperament (*Sue Mizaj Barid maddi*)
Weight gain	*Farbahi*
Joint pain	*Waja-ul-Mafasil*
Diarrheoa	*Ishaal*
Palpitation	*Khafqan*
Breathlessness	*Usre Tanaffus*
Loss of libido	*Zoaf-e-Shahwat*
Edema	*Tahabbuj*
Loss of appetite	*Zoaf-e-Ishteha*
Low pulse volume	*Nabz Bati Wa Mutfavit*
Flabby	*Tarhal*

General weakness	*Zoaf-e-Aam*
Flatulence	*Nafakh-e-Shikam*

Table 2: Diagnosis of dyslipidemia based on the Unani parameter *Ajnas-e-Ashra*.

***Ajnas-e-Ashra* (ten categories of signs)**	***Alamat* (Symptoms/signs)**	**Features of Dyslipidemia**
Complexion	*Jassi*	Bluish white
Build	*Farbahi*	Fatty and Broad
Touch	*Barid wa Narm*	Cold and soft
Hair	*Qillat-e-Sh'ar*	-
Movement	*Sust*	Dull
Diet	*Haar Yabis*	Hot and Dry
Weather	*Mausam-e-saif*	Summer
Sleep	*Kasrat-e Naum*	Somnolence
Pulse	*Bati*	Slow
Emotions	*Kahili wa Susti ki Zayadati*	Calm and Quiet

Conclusion

The purpose of this article was to look for parallels for dyslipidemia in Unani literature. *Su-e-Mizaj Barid Maddi*'s diagnosis appears to be similar to that of dyslipidemia in conventional medicine. Details of treatment guidelines and various Unani medicine therapeutic interventions have also been mentioned.

Declaration of Competing Interest

The authors declare that they have no competing interests.

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References

1. Padró T, Vilahur G, Badimon L. Dyslipidemias and Microcirculation. Curr Pharm Des. 2018;24(25):2921-2926. Doi: 10.2174/1381612824666180702154129. PMID: 29968532.
2. Rygiel K. Hypertriglyceridemia - Common Causes, Prevention and Treatment Strategies. Curr Cardiol Rev. 2018 Mar 14;14(1):67-76. Doi: 10.2174/1573403X14666180123165542. PMID: 29366425; PMCID: PMC5872265.
3. Karr S. Epidemiology and management of hyperlipidemia. Am J Manag Care. 2017 Jun;23(9 Suppl):S139-S148. PMID: 28978219.
4. Iqbal J, Al Qarni A, Hawwari A, Alghanem AF, Ahmed G. Metabolic Syndrome, Dyslipidemia and Regulation of Lipoprotein Metabolism. Curr Diabetes Rev. 2018;14(5):427-433. Doi: 10.2174/1573399813666170705161039. PMID: 28677496.
5. Engin A. The Definition and Prevalence of Obesity and Metabolic Syndrome. Adv Exp Med Biol. 2017;960:1-17. Doi: 10.1007/978-3-319-48382-5_1. PMID: 28585193.
6. Güngör NK. Overweight and obesity in children and adolescents. J Clin Res Pediatr Endocrinol. 2014 Sep;6(3):129-43. Doi: 10.4274/Jcrpe.1471. PMID: 25241606; PMCID: PMC4293641.
7. Pan L, Yang Z, Wu Y, Yin RX, Liao Y, Wang J, *et al*. China National Survey of Chronic Kidney Disease Working Group. The prevalence, awareness, treatment and control of dyslipidemia among adults in China. Atherosclerosis. 2016 May;248:2-9. Doi: 10.1016/j.atherosclerosis.2016.02.006. Epub 2016 Feb 27. PMID: 26978581.
8. Kit BK, Kuklina E, Carroll MD, Ostchega Y, Freedman DS, Ogden CL. Prevalence of and trends in dyslipidemia and blood pressure among US children and adolescents, 1999-2012. JAMA Pediatr. 2015 Mar;169(3):272-9. Doi: 10.1001/jamapediatrics.2014.3216. PMID: 25599372; PMCID: PMC7423159.
9. Kopin L, Lowenstein C. Dyslipidemia. Ann Intern Med. 2017 Dec 5;167(11):ITC81-ITC96. Doi: 10.7326/AITC201712050. PMID: 29204622.
10. Emtiazy M, Keshavarz M, Khodadoost M, Kamalinejad M, Gooshahgir SA, Shahrad Bajestani H, *et al*. Relation between Body Humors and Hypercholesterolemia: An Iranian Traditional Medicine Perspective Based on the Teaching of Avicenna. Iran Red Crescent Med J. 2012 Mar;14(3):133-8. Epub 2012 Mar 1. PMID: 22737569; PMCID: PMC3372029.
11. Sina SI. Al-Qanoon Fil-Tib. Vol-I & IV. New Delhi: Idara Kitab-us-Shifa, 2010, 33-34, 1444-47 [Urdu].
12. Rushd I. KitabAl-Kulliyat. New Delhi: CCRUM, 1987. 30-46, 87-90,157. [Urdu].
13. Kabeeruddin M. Afaada-e-Kabeer Mufsil, Qomi Council Barae Farogh Urdu Zabaan, New Delhi, 2001, 24-75.
14. Majoosi AIA. Kamil Al-San't. Lucknow: Matba Munshi Nawal Kishore; 2010. 25-31, 42, 46, 49, 23,102-104,550 [Urdu].
15. Ibn-e-Qaf M. Kitab al Umdah-fil-Jarahat. Vol-I. New Delhi: CCRUM, 1982, 96.
16. Nafis IB. Kulliyat-e-Nafisi. Part-I. New Delhi: Idara Kitab-us-Shifa, 1954, 13-77. [Urdu].
17. Rhazi Al-Hawi Z. Fit Tib. New Delhi: Central Council for Research in Unani Medicine, Ministry of Health & Family Welfare, Government of India; 2002;1&10:1-120, 181-7 [Urdu].
18. Basavaraj V Savadi, Gaurang K Anandpara, BM Rashmi, Bhagyajyoti Nalwarkar. Association of lipoprotein (a) and high-sensitive C-reactive protein in preeclampsia. Int. J Adv. Biochem. Res. 2021;5(1):30-34. DOI: 10.33545/26174693.2021.v5.i1a.62
19. Nafees I. Moalajate Nafeesi. Lucknow: Munshi Naval Kishore; 1324, 537-38.
20. Ahmed SI. Introduction to Al-Umur-Al-Tabi'Yah. New Delhi: Central Council for Research in Unani Medicine, Ministry of Health & Family Welfare, Government of India, 2009, 5-136, 75-142 [Urdu].
21. Krauss RM, Eckel RH, Howard B, Appel LJ, Daniels

SR, Deckelbaum RJ, *et al*. AHA Dietary Guidelines: revision 2000: A statement for healthcare professionals from the Nutrition Committee of the American Heart Association. Circulation. 2000 Oct 31;102(18):2284-99. Doi: 10.1161/01.cir.102.18.2284. PMID: 11056107.
22. Saklayen MG. The Global Epidemic of the Metabolic Syndrome. Curr Hypertens Rep. 2018 Feb 26;20(2):12. Doi: 10.1007/s11906-018-0812-z. PMID: 29480368; PMCID: PMC5866840.
23. Qamri AMH. Ghana Mana (Urdu Translation by CCRUM). New Delhi: CCRUM; c2008.
24. Alam S, Alam A, Eqbal K, Quamri MA, Sofi G. Approach of understanding dyslipidemia in Unani medicine. Pharma Innovation J. 2018;7:235-7.
25. Tabari AR. Firdaus ul Hikmat New Delhi: Idara Kitabush Shifa; c2010.
26. Jilani HG. Makhzan-ul-Ilaj. Part 1&2. New Delhi: Idara Kitab-us-Shifa, 2005, 823.
27. Kabeeruddin M. Kulliyat-e-Qanoon. Part-I. New Delhi: Eijaz Publishing House, 2006, 26-57 [Urdu].
28. Siddiqui A. Taskhees-e-Marz (diagnosis of disease). New Delhi: Maktaba Faizan, 2005, 20-25 [Urdu].
29. Fatima S, Haider N, Alam A, Quamri A, Unnisa L, Zaman M. Preventive, promotive and curative aspects of dementia in complementary medicine (Unani): through-black box design. Int J Herb Med. 2017;5(1):1-5.
30. Khan Aazam M, Akseere Aazam. New Delhi: Idara Kitabul Shifa, 2011, 485, 88-89, 494 [Urdu].
31. Alam MA, Quamri MA, Sofi G, Ansari S. Update of hypothyroidism and its management in Unani medicine. J Basic Clin Physiol Pharmacol. 2020. 10:/j/jbcpp.ahead-of-print/jbcpp-2020-0121/jbcpp-2020-0121.xml. Doi: 10.1515/jbcpp-2020-0121. Epub ahead of print. PMID: 32776903.
32. Alam MA, Quamri MA, Sofi G, Tarique BM. Understanding hypothyroidism in Unani medicine. J Integr Med. 2019 Nov;17(6):387-391. Doi: 10.1016/j.joim.2019.05.006. Epub 2019 May 23. PMID: 31164280.
33. Jurjani I, Zakheera Khwarzm Shahi. Vol. 1-Part 1, 2-Part 6. New Delhi: Idara Kitab-us-Shifa, 2010, 113-114. 372 [Urdu].
34. Ghani N, Khazainul Advia. New Delhi: Idara Kitab-us-Shifa, 2011, 245-246,325,361-362,580-581, 997, 1254-1255. [Urdu].
35. Tarique M, Siddiqui MA, Shahid M, Aafreen. Clinical Evaluation of Antidyslipidemic Effect of Unani Polyherbal Formulation (*Habb-e-Sundrus*) -A Randomized Single Blind Standard Controlled Study. International Journal of Innovative Research in Science, Engineering and Technology. 2017;6(7):12883-12890.
36. Qarabadine Majeedi. New Delhi: All India Unani Tibbi Conference; 1986, 370-5. [Urdu].
37. Al-Okbi SY, Hussein AMS, Elbakry HFH, Fouda KA, Mahmoud KF, Hassan ME. Health Benefits of Fennel, Rosemary Volatile Oils and their Nano-Forms in Dyslipidemic Rat Model. Pak J Biol Sci. 2018 Jan;21(7):348-358. Doi: 10.3923/pjbs.2018.348.358. PMID: 30417995.
38. Iyer D, Patil UK. Effect of chloroform and aqueous basic fraction of ethanolic extract from *Apium graveolens* L. in experimentally-induced hyperlipidemia in rats. J Complement Integr Med. 2011 Sep 27;8:/j/jcim.2011.8.issue-1/1553-3840.1529/1553-3840.1529.xml. Doi: 10.2202/1553-3840.1529. PMID: 22718672.
39. Singh DK, Kumar N, Sachan A, Lakhani P, Tutu S, Nath R, *et al*. Hypolipidaemic Effects of *Gymnema sylvestre* on High Fat Diet Induced Dyslipidaemia in Wistar Rats. J Clin Diagn Res. 2017 May;11(5):FF01-FF05. Doi: 10.7860/JCDR/2017/27430.9859. Epub 2017 May 1. PMID: 28658801; PMCID: PMC5483703.
40. Reddy MM, Dhas Devavaram J, Dhas J, Adeghate E, Starling Emerald B. Anti-hyperlipidemic effect of methanol bark extract of Terminalia chebula in male albino Wistar rats. Pharm Biol. 2015 Aug;53(8):1133-40. Doi: 10.3109/13880209.2014.962058. Epub 2015 Jan 27. PMID: 25625850.
41. Maruthappan V, Shree KS. Hypolipidemic activity of haritaki (terminalia chebula) in atherogenic diet induced hyperlipidemic rats. J Adv Pharm Technol Res. 2010 Apr;1(2):229-35. PMID: 22247850; PMCID: PMC3255428.
42. Ahmad Alobaidi AH. Effect of Nigella sativa and *Allium sativum* coadminstered with simvastatin in dyslipidemia patients: a prospective, randomized, double-blind trial. Antiinflamm Antiallergy Agents Med Chem. 2014 Mar;13(1):68-74. Doi: 10.2174/18715230113129990013. PMID: 23848231.
43. Poorassar A, Shams Ardekani MR, Hajhashemi V, Rahimi R, Mirabzadeh Ardakani M, Aghayeghazvini M. Antiobesity effects of seedlac and shellac in rats fed with a high-fat diet. Res Pharm Sci. 2020 Feb 20;15(1):57-65. Doi: 10.4103/1735-5362.278715. PMID: 32180817; PMCID: PMC7053287.
44. Kumar P, Bhandari U. Protective effect of *Trigonella foenum-graecum* Linn. On monosodium glutamate-induced dyslipidemia and oxidative stress in rats. Indian J Pharmacol. 2013 Mar-Apr;45(2):136-40. Doi: 10.4103/0253-7613.108288. PMID: 23716888; PMCID: PMC3660924.
45. Kojuri J, Vosoughi AR, Akrami M. Effects of anethum graveolens and garlic on lipid profile in hyperlipidemic patients. Lipids Health Dis. 2007 Mar 1;6:5. Doi: 10.1186/1476-511X-6-5. PMID: 17328819; PMCID: PMC1821028.
46. Rouhi-Boroujeni H, Rouhi-Boroujeni H, Heidarian E, Mohammadizadeh F, Rafieian-Kopaei M. Herbs with anti-lipid effects and their interactions with statins as a chemical anti-hyperlipidemia group drug: A systematic review. ARYA Atheroscler. 2015 Jul;11(4):244-51. PMID: 26478732; PMCID: PMC4593660.
47. Nishimura M, Ohkawara T, Kanayama T, Kitagawa K, Nishimura H, Nishihira J. Effects of the extract from roasted chicory (*Cichorium intybus* L.) root containing inulin-type fructans on blood glucose, lipid metabolism, and fecal properties. J Tradit Complement Med. 2015 Jan 20;5(3):161-7. Doi: 10.1016/j.jtcme.2014.11.016. PMID: 26151029; PMCID: PMC4488567.
48. Arulmozhi V, Krishnaveni M, Karthishwaran K, Dhamodharan G, Mirunalini S. Antioxidant and antihyperlipidemic effect of *Solanum nigrum* fruit extract on the experimental model against chronic ethanol toxicity. Pharmacogn Mag. 2010 Jan;6(21):42-50. Doi: 10.4103/0973-1296.59965. Epub 2010 Feb 13. PMID: 20548935; PMCID: PMC2881655.
49. Batiha GE, Olatunde A, El-Mleeh A, Hetta HF, Al-

Rejaie S, Alghamdi S, *et al*. Bioactive Compounds, Pharmacological Actions, and Pharmacokinetics of Wormwood (*Artemisia absinthium*). Antibiotics (Basel). 2020 Jun 23;9(6):353. Doi: 10.3390/antibiotics9060353. PMID: 32585887; PMCID: PMC7345338.
50. Das S, Datta A, Bagchi C, Chakraborty S, Mitra A, Tripathi SK. A Comparative Study of Lipid-Lowering Effects of Guggul and Atorvastatin Monotherapy in Comparison to Their Combination in High Cholesterol Diet-Induced Hyperlipidemia in Rabbits. J Diet Suppl. 2016;13(5):495-504. Doi: 10.3109/19390211.2015.1118654. Epub 2016 Jan 6. PMID: 26735695.
51. Rather RA, Malik VS, Trikha D, Bhat O, Dhawan V. Aqueous *Terminalia arjuna* extract modulates expression of key atherosclerosis-related proteins in a hypercholesterolemic rabbit: A proteomic-based study. Proteomics Clin Appl. 2016 Jul;10(7):750-9. Doi: 10.1002/prca.201500114. Epub 2016 May 30. PMID: 26934842.
52. Asadi A, Shidfar F, Safari M, Malek M, Hosseini AF, Rezazadeh S, *et al*. Safety and efficacy of Melissa officinalis (lemon balm) on ApoA-I, Apo B, lipid ratio and ICAM-1 in type 2 diabetes patients: A randomized, double-blinded clinical trial. Complement Ther Med. 2018 Oct;40:83-88. Doi: 10.1016/j.ctim.2018.07.015. Epub 2018 Aug 3. PMID: 30219475.
53. Nepal S, Malik S, Sharma AK, Bharti S, Kumar N, Siddiqui KM, *et al*. Abresham ameliorates dyslipidemia, hepatic steatosis and hypertension in high-fat diet fed rats by repressing oxidative stress, TNF-α and normalizing NO production. Exp Toxicol Pathol. 2012 Nov;64(7-8):705-12. Doi: 10.1016/j.etp.2011.01.003. Epub 2011 Feb 1. PMID: 21282049.
54. Rasheed A, Siddiqui MA, Khan JA. Therapeutic evaluation of Kalonji (Nigella sativa) in dyslipidemia-A randomized control trial. Medical Journal of Islamic World Academy of Sciences. 2014;22(3):111-116.
55. Mand D, Ahmed T, Khalid M, Jafar M, Fatima S. Therapeutic evaluation of Unani Formulation in Dyslipidemia-A randomized Controlled Study. Journal of Biological & scientific opinion. 2015;3(6):253-258.
56. Kamali SH, Khalaj AR, Hasani-Ranjbar S, Esfehani MM, Kamalinejad M, Soheil O, *et al*. Efficacy of 'Itrifal Saghir', a combination of three medicinal plants in the treatment of obesity; A randomized controlled trial. Daru. 2012 Sep 10;20(1):33. Doi: 10.1186/2008-2231-20-33. PMID: 23351558; PMCID: PMC3559014.
57. Quamri MA, Wahab A, Alam MA, Ali BF. Efficacy of Majoon-e-Seer Alvi Khan in dyslipidemia: a single blind randomized standard controlled clinical trial. Drug metabolism and personalized therapy, 2021 Jul 8.
58. Jahangir U, Khan AA, Kapoor P, Jalees F, Urooj S. Evaluation of a classical unani pharmacopeial formulation safoof-e-muhazzil in hyperlipidemia: A randomized, standard controlled clinical study. Journal of pharmacy & bioallied sciences. 2014;6(3):167-179. https://doi.org/10.4103/0975-7406.130975
59. Gupta P, Mehla J, Gupta YK. Antiobesity effect of Safoof Mohazzil, a polyherbal formulation, in cafeteria diet induced obesity in rats. Indian Journal of Experimental Biology. November. 2012;50:776-784.
60. Braunwald E, Fauci AS, Kasper DL, Hauser SL, Longo DL, Jameson JL. Harrison's principles of internal medicine. 18th ed. New York: McGrow-Hill Medical Publishing Devision, 2012, 3146-3156.
61. Makihara H, Shimada T, Machida E, Oota M, Nagamine R, Tsubata M, *et al*. Preventive effect of Terminalia bellirica on obesity and metabolic disorders in spontaneously obese type 2 diabetic model mice. J Nat Med. 2012 Jul;66(3):459-67. Doi: 10.1007/s11418-011-0606-y. Epub 2011 Nov 22. PMID: 22105160.
62. Upadya H, Prabhu S, Prasad A, Subramanian D, Gupta S, Goel A. A randomized, double blind, placebo controlled, multicenter clinical trial to assess the efficacy and safety of *Emblica officinalis* extract in patients with dyslipidemia. BMC Complement Altern Med. 2019 Jan 22;19(1):27. Doi: 10.1186/s12906-019-2430-y. PMID: 30670010; PMCID: PMC6341673.
63. Qin S, Huang L, Gong J, Shen S, Huang J, Ren H, *et al*. Efficacy and safety of turmeric and curcumin in lowering blood lipid levels in patients with cardiovascular risk factors: a meta-analysis of randomized controlled trials. Nutr J. 2017 Oct 11;16(1):68. Doi: 10.1186/s12937-017-0293-y. PMID: 29020971; PMCID: PMC5637251.
64. Sadeghipour A, Eidi M, Ilchizadeh Kavgani A, Ghahramani R, Shahabzadeh S, Anissian A. Lipid Lowering Effect of *Punica granatum* L. Peel in High Lipid Diet Fed Male Rats. Evid Based Complement Alternat Med. 2014, 432650. Doi: 10.1155/2014/432650. Epub 2014 Sep 10. PMID: 25295067; PMCID: PMC4176639.
65. Saghir MR, Sadiq S, Nayak S, Tahir MU. Hypolipidemic effect of aqueous extract of Carum carvi (black Zeera) seeds in diet induced hyperlipidemic rats. Pak J Pharm Sci. 2012 Apr;25(2):333-7. PMID: 22459457.
66. Saleem U, Riaz S, Ahmad B, Saleem M. Pharmacological Screening of *Trachyspermum ammi* for Antihyperlipidemic Activity in Triton X-100 Induced Hyperlipidemia Rat Model. Pharmacognosy Res. 2017 Dec;9(Suppl 1):S34-S40. Doi: 10.4103/pr.pr_37_17. PMID: 29333040; PMCID: PMC5757323.
67. Masihi ASIBYBL, Kitab-ul-Mia. New Delhi: CCRUM; 2008, Vol 1. [Urdu].