

Management of Dyslipidaemia with Special Reference to Unani Medicine

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ABSTRACT

Dyslipidaemia is a major health problem in today's society because of the inappropriate style of living which leads to many health problems out of which cardiovascular diseases are the most serious complication of dyslipidaemia. As dyslipidaemia has been closely linked to the pathophysiology of cardiovascular diseases and it is due to abnormally elevated levels of lipoproteins in the blood. The prevalence of dyslipidaemia in India is very high. Many disorders, including cardiovascular disease, metabolic syndrome, and hypertension, have been related to it. It can cause a variety of life-threatening consequences if left untreated. It is a major independently modifiable risk factor for cardiovascular disease. This paper is an attempt to understand the concept of dyslipidaemia in light of the Unani System of Medicine and its proper management which focuses on the recommendations of Unani medicine like diet therapy, regimenal therapy, and pharmacotherapy which play a significant interventional role in the management of dyslipidaemia.

Key words: Unani, Dyslipidaemia, Siman Mufrit, Obesity.

I INTRODUCTION

Dyslipidaemia is characterised by high levels of total cholesterol, low-density lipoprotein, and triglycerides, as well as low amounts of high-density lipoprotein, whereas lipoprotein elevations alone are referred to as hyperlipidaemia. Dyslipidaemia is quite common in India, necessitating immediate lifestyle changes to prevent and control this serious cardiovascular risk factor. Dyslipidaemia affects about 25-30% of urban Indians and 15-20% of rural Indians "ICMR". [1] It affects both men and women, albeit it is more prevalent in men. The age group of 30 to 40 years has a significant incidence, but the prevalence rises dramatically beyond 60 years "NHPOI".[2] Today, it's a serious lifestyle disorder. Atherosclerosis, which leads to the development of vascular disorders, is caused by abnormal lipid profile levels. It can cause a variety of life-threatening consequences if left untreated. Many disorders, including cardiovascular disease, metabolic syndrome, and hypertension, have been linked to it. Deranged lipid levels are a pathological disorder. In this review study, we annotated dyslipidaemia to better understand the aetiology and management of dyslipidaemia in order to provide better treatment.

II MATERIALS AND METHODS

This review study of dyslipidaemia was carried out through the Unani classical textbooks, mainly *Al Qanun fil tibb* (Canon of Medicine). The research update on the dyslipidaemia, dieto-therapy, pharmacotherapy and regimenal therapy were organized from PubMed, Google scholar, AYUSH portal and Research Gate. The textbooks of Unani Medicine do not use such modern terminology; hence, approximate equivalent terms will be obtained from Standard Unani Medical terminology, CCRUM. The information obtained through this search is discussed and presented in this review paper.

III DISCUSSION

There is no precise term for dyslipidaemia in the ancient Unani literature. But the description of *Siman Mufrit* (Obesity) and *Dasumat-e- Dam* (Greasy blood) does exist since ancient times. Pathogenesis of *Simane mufrit* (obesity) mentioned in the Unani are the same as pathogenesis of dyslipidaemia "*S Urooj et al*".[3]

According to Buqrat (Hippocrates), theory of humour, when *khilte Ahmer* (Red composition), *Khilte Abbiyaz* (White composition), *Khilte Asfar* (yellow composition), and *Khilte Aswad* (dark composition) of blood are properly mingled, the body remains in a state of health and when there is dyscrasia in the compositions of blood, disease arises.

So, the emphasis is given to *Istifragh* (evacuate) the deranged humors from the body or *Imala* (divert) them to a route from which they can be eliminated easily to restore health "*Al-Rais*".[4]

(a) Classification of Fat/lipid

Classification of lipid as shown in figure-1

Ibn-al Qaf and Masih classified fat on the basis of their places; for example, fat situated on muscles is referred to as "*Sameen*," whereas it is found elsewhere is referred to as *Sarb* "*Ibn-eQaf*".[5]

Majoosi says "*Sarb* is the name of fascia on which fat is found and the type of fat through which human body gets nourishment is referred to as *Wadak* "*Majoosi*".[7]

According to Allama Nafis "fat that is found in a liquefied form in the body is called "*Sameen*," whereas fat that is viscous and hard is called *Shaham*".

According to the humoral theory, lipids have come under the phlegmatic tissue, *Shaham* and *Sameen*.

Sameen (Liquefied fat): This type of fat is soft and semisolid, and generally found in the muscles and vessels. An important function of *Sameen* (Liquefied fat) is to stabilize and produce energy. *Shaham* (semi-solid fat) this type of fat is found in cold organs and membranes and is similar to adipose tissue "*Buqrat*".[8]

Sheham (semi-solid fat) and *Sameen* (Liquefied fat) are more likely to collect in cooler regions of the body, such as cold-tempered organs "*Tabri*".[9] Ancient physicians probably combined obesity, dyslipidaemia and hypercholesterolemia under the umbrella term *Simane Mufrit* due to the uniformity in etiology, clinical features and complications.

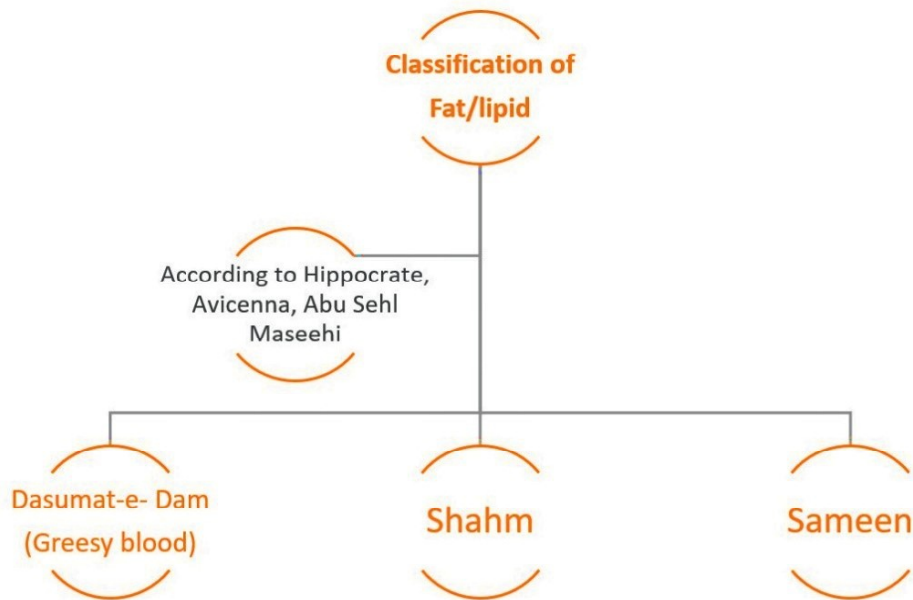


Fig. 1 Classification of Lipid as per Unani

(b) Etio-pathogenesis of dyslipidaemia

In the Unani literature, there is no clear name for Dyslipidaemia. However, the terms *Siman Mufrit* (obesity) and *Dasumat-e- Dam* (Greasy blood) have been used since antiquity. The pathological alterations described under the topic "*Simane mufrit*" are the same as those described under the heading dyslipidaemia.³ Pathophysiology of dyslipidaemia in Unani described through the schematic diagram see in figure-2.

The Unani physicians were already known about dyslipidaemia and its causes or risk factors like excess joy, unnecessary rest and lack of exercise "*AMBZ*" [10], richness, a fatty diet like meat "*Khan*"[11], cold

temperament "*Jurjani*"[12], excessive eating⁸ see in figure-3.

Simane mufrit (obesity) is associated to *fasade hazme kabidee* (Irregular liver digestion), *kasrate buroodate kapid* (excessive coldness of liver), which causes *ghalba-e- balgham* (excessive quantity of phlegm) in the blood resulting disturbed metabolism "*Al-Rais*".[4] Therefore, it is described under *Quwate Tabaiya* (physical or somatic powers). *Quwte Tabaiyah* is that which serves the functions of nutrition, growth and reproduction, and expels waste products from the body. The source of origin of *Quwate tabiyah* and the seat of digestion of chyme is the liver "*Razi*".[13]



Fig. 2 Causes of Dyslipidaemia

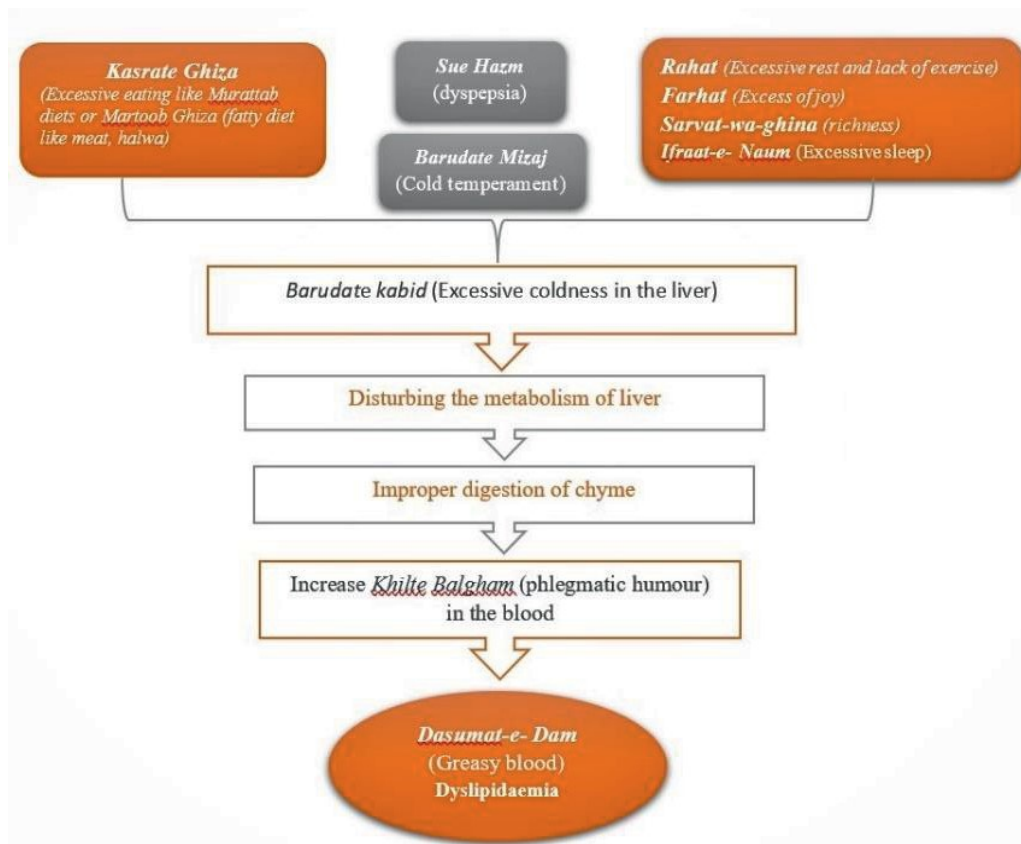


Fig. 3 Unani pathogenesis of Dyslipidaemia

(c) **Usoole Illaj (Mode of Management)** - Unani medicine deals with the disease through several

therapeutic regimens, which are depending on the aetiology and nature of the disease see in figure-4.



Fig. 4 Management of Dyslipidaemia

According to Zakkaria Razi “Razi”[13] and Ibn-e- Sina “Al-Rais”[4], the management of dyslipidaemia is based on the following principles:

- (i) *Taqleel Ghiza* (decrease in food consumption).
- (ii) Rectification of the *Sue Mizaj* (Maltemperament)
- (iii) Use of *Mudir* (diuretics) and use purgative of *Khilte Balgham*.

Zakariya Razi guidelines for the management of dyslipidaemia;

- (i) *Taqleele Ghiza* (reduction in food consumption)
- (ii) *Riyazate Kaseera* (excessive exercise)
- (iii) *Ishaal wa Idraar* (diarrhea and diuretic)
- (iv) *Fasd* (venesection) and *Istifraag* (evacuation).

(d) Ilaj bi'l Ghiza (Dieto-therapy)

Ilaj bi'l Ghiza is the hallmark of management methodology in the Indian systems of medicine (AYUSH). Unani physicians often suggest *Ilaj bi'l Ghiza* as the first line of management of disease.

Ibne Sina (980–1037 AD) focuses on the *Taqleel Ghiza* (Food reduction) as the important tool for obesity treatment. He has prescribed the *Advia Mulattifa* and has described detailed pharmacological action of these drugs about how they decrease the fat from the body “*S Urooj et al*”.[3]

Foods in more quantity having the least nutritional values should be served so, that mesenteric vessels will get least time to absorb the nutrients and patient also feels fullness in the stomach. A nutritious food stuffs like meat, sweets, and oily street or Chinese food should be restricted. Food should be given only after being hungry. Vegetables and pulses are recommended due to their low calorific value “*Perwej*”.[14]

(e) Ilaj bi'l Tadbir (Regimenal Therapy)

Unani Physicians described certain regimens along with the diet and drugs such as *Kasrat Riyazat* (excessive exercise), *Ta'ri'q* (perspiration), *Taqleel-e-Nawm* (reduce sleeping), *Hammam-e-Yabis* (dry bath) on empty stomach, *Ishaal* (purgation), and *Dalak Khashm* (rough massage) for reducing the fat in the body “*Nafees*”.[7]

Riyazat (exercise) is one of the most important therapies for reducing the lipid from the body by the expenditure of extra energy. Exercise aids in the maintenance of *Akhlata-e-Arba* (humour) equilibrium, which means it keeps the body in a state of homeostasis. It enhances the *Hararat-e-ghareeziya* (Innate heat), which is responsible for metabolic function “*Majoosi*”.[6]

Hijama (Cupping therapy) is one of the oldest documented medical techniques. It is an ancient method for treatment and cure of a broad range of diseases of *Imtila* such as hemochromatosis, Hyperlipidaemia, polycythaemia, hypertension, liver diseases, mental and physical relaxation, and other diseases. Cupping therapy helps in *Istifragh-e-dam* from the small vessels of the skin & muscles and reduces the *Imtila* (congestion). It is effective and efficient without the usage of drugs, simple and safe, inexpensive, and has no serious side effects "*Niasari*"[15], "*Layla*"[16], "*Mohammad*".[17]

(f) Ilaj bi'l Dawa (Pharmacotherapy)

Use of *Mujaffife ratubat* (Demulscent), remove extra fluids.

This is especially important because ancient physicians have considered lipid is a type of *fluids* "*Ahmad*".[18]

Mufrid Advia (Single drugs) that are effective in the treatment of dyslipidaemia mentioned as a antihyperlipidemic in the Unani literature are: *Luk Magsool* (*Coccus lacca*), *Zeera* (*Carum carvi*), *Muqil* (*Commiphora mukul*), *Asaarun* (*Asarum europium*), *Aneesun* (*Pimpinella anisum*), *Filfil siyah* (*Piper nigrum*), *Kishneez* (*Coriandrum sativum*), *Karafs* (*Apium graveolens*), *Khutmi* (*Althaea officinalis*), *Lehesun* (*Allium sativum*), *Merzanjosh* (*Origanum vulgare*), *Murmakki* (*Commiphora myrrha*), *Naankhwah* (*Ptychotis ajowan*), *Sounf* (*Foeniculum vulgare*), *Suddab* (*Ruta graveolens*), *Boora armani* (*Armenian bole*) "*S Urooj et al*"[3], "*Hifzul*".[19]

Murakkabat (Compound drugs)

See table-1

Table 1
Action of Unani compound drugs

<i>Murakkab Advia</i>	Form	Doses	Action
<i>Safufe Muhazzil</i>	Powder	5gm with <i>Arqe Zeera</i> or water	It acts as Anti- hyperlipidaemia.
<i>Jawarish Bisbasa</i>	Type of Confection	5-10 gm	<i>Buroodate Meda</i> (coldness of gastric), <i>Sue Hazm</i> (<i>Dyspepsia</i>) " <i>Hifzul</i> "[20].
<i>Majun Dabeedulvard</i>	Confection	5-7 gm	<i>Amraze Kabid</i> (<i>Liver disease</i>), <i>Zofe kabid</i> (<i>Hepatosi</i>), <i>Zofe Meda</i> (<i>Weakness of Stomach</i>), <i>Waram kabid</i> (<i>Hepatitis</i>) " <i>Hakim</i> ".[21]
<i>Habbe Muqil</i>	Tablet	2-4 pills at bed time with water	<i>Qabz</i> (<i>Constipation</i>)

Safufe Muhazzil is an Unani compound preparation famous for its anti-obesity property see table-2. The dose: Take 5 gm of *Safufe Muhazzil* twice daily orally with 20 ml *Arqe Zeera* (*Carum carvi* distillate) "*Hifzul*"[20], "*Hifzul*"[21], "*Kabiruddin*".[22]

In a study conducted by Rauf et al on "The combined effect of *Safufe Muhazzil*, Lifestyle modifications, and Yoga practices was studied in clinical research on hyperlipidaemia". In this 5 gm *Safufe Muhazzil* was given orally twice a day along with the recommendations of low-fat diet and low carbohydrate diet and also recommended Yoga *Asanas* (*Tadasana, Katichakrasana, Vakrasana, Vajrasana.*), *Sukshmayayama* and *Pranayama* for 12 weeks. Overall, the BMI reduced by 4.29 % ($p < 0.05$), Serum Cholesterol levels reduced by 11.77 % ($p < 0.01$) and Triglycerides levels reduced by 19.31% ($p < 0.01\%$), Very Low-density Lipoprotein

reduced by 6.38% ($p < 0.05$) and Low-density Lipoprotein by 19.80% ($p < 0.01$) "*Rauf et al*".[23]

A randomized controlled trial on 90 patients was conducted by Jahangir et al. to assess the efficacy and tolerability of *Safufe Muhazzil* in the treatment of hyperlipidaemia. Patients having a total cholesterol level of more than 220 mg/dl were randomly assigned to one of three treatment groups "*Jahangir et al*".[24]

Group 'A' was given 5 g of *Safufe Muhazzil* twice a day orally, Group 'B' was given 5 crushed tablets of *Safufe Muhazzil* in the same dosage, and Group 'C' was given tablet atorvastatin 10 mg for six weeks. Follow-ups were carried out on the second, fourth and sixth weeks. Total cholesterol decreased considerably in all of the groups ($p < 0.001$), while the percentage drops in group A was 7.35 percent, in group B was 9.11 percent, and in group C was 26.3 percent. The test medicine lowers cholesterol levels in a safe and effective manner, according to the findings.

Table 2
Action of Safufe Muhazzil

Unani Name	Batanical name	Part used	Action	Weight
<i>Tukhme badiyaan</i>	Foeniculum vulgare Mill.	Seed	<i>Kasir Riyah</i> (Carminative), <i>Mudir boul</i> (Diuretic), <i>Muqavvi Meda wa Ama</i> (Gastric tonic), <i>Hazim</i> (Digestive), <i>Munzj Balghem</i> (Phlegm concoctive), <i>Munaffis</i> (Expectorant)	1 g
<i>Ajwain desi</i>	Carum capticum seed	Seed	<i>Mufatteh</i> (Deobstruent), <i>Hazim</i> (Digestive)	1 g
<i>Zeera Siyah</i>	Carum carvi L	Seed	<i>Hazim</i> (Digestive), <i>Muqawie Jigar</i> (Hepatoprotective), <i>Mujaffife Rutubat</i> (Desiccant)	1 g
<i>Suddab</i>	Ruta graveolens L	leaf	<i>Mufatteh</i> (Deobstruent), <i>Hazim</i> (Digestive), <i>Kasire Riyah</i> (Carminative)	1 g
<i>Luk-e-Maghsul</i>	Coccus lacca purified	Resin	<i>Mujaffife Rutubat</i> (Desiccant), <i>Muhazzil</i> (Antiobesity), <i>Munafis e Balgam</i> (Expectorant)	0.5 g
<i>Marzanjosh</i>	Origanum vulgare L	Herb	<i>Muhallile Warm</i> (Anti-inflammatory)	0.25 g
<i>Bura Armani</i>	Boric acid		<i>Kasire Riyah</i> (Carminative), <i>Qate Akhlat Galiza</i> (Expellent of viscid Humours)	0.25 g

IV CONCLUSION

This article has been written to notify the readers to adopt the recommendation of Unani medicine for the management of dyslipidaemia. Treatment for dyslipidaemia is mentioned in the Unani literature in detail under the lifestyle disease *Siman-e-Mufrit* (obesity). Indian Systems of medicine like Ayurveda, Unani and Yoga play a significant interventional role in the management of dyslipidaemia. Unani system of medicine has various guidelines in a section of *Ilaj bi'l Ghidha* (Dieto-therapy), *Ilaj bi'l Tadbir* (Regimenal therapy) and a wide range of anti-hyperlipidemic drugs mentioned in *Ilaj bi'l Dawa* (Pharmacotherapy) to control dyslipidaemia.

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