



# A Comprehensive Review on Plethora: Etiopathogenesis, Signs, Symptoms, and Complications from the perspective of the Unani Medicine

S. M. Ahmer<sup>1\*</sup>, Ataulah Fahad<sup>1</sup> and S. Javed Ali<sup>2</sup>

<sup>1</sup>Department of Ilmu-Amraz, Faculty of Unani Medicine, Aligarh Muslim University, Aligarh – 202001, Uttar Pradesh, India; smahmer@myamu.ac.in

<sup>2</sup>Department of Moalejat, Faculty of Unani Medicine, Aligarh Muslim University, Aligarh - 202001, Uttar Pradesh, India

## Abstract

The concept of *Imtila* (plethora) is defined vividly and scientifically in Unani classical literature. *Imtila* (plethora) is the most common humoral disease and has multiple etiology and clinical manifestations. The signs and symptoms associated with *Imtila* (plethora) are headaches, clogged eyes, pulsatile conduits, flushing of the face, puffiness of the face, inability to speak, heavy head and dark and dense urine, etc. Long-lasting effects of untreated *Imtila* (plethora) can lead to various co-morbidities, such as *Jarayan al-Dam* (Haemorrhage), *Tashannuj* (Convulsion), *Sakta* (Apoplexy), *Falij* (Paralysis), *Junun* (Insanity) *Hidhayan* (Delirium), *Ghashi Imtila'i* (Syncope), *Ufunat-e-dam* (infection in the blood), *Dasoomat e Dum* (dyslipidemia), etc. Therefore, it is essential to identify the symptoms of *Imtila* (plethora). Early detection will aid in obtaining urgent medical attention and treatment, which can reduce complications. Unani physicians used various methods to eliminate surplus, harmful, and undigested humour that might have further tainted the humour. Unani physicians prescribed various exercises and regimens in combination with food and drugs to restore the humoral balance of the body. The present review paper systematically emphasizes the proper understanding of *Imtila* (plethora) to understand its etiopathogenesis, signs, & symptoms, and complications. We have also discussed the course of treatment suggested by Unani physicians considering the physiopathology and clinical characteristics.

**Keywords:** *Imtila*, Plethora, Stroke, Unani Medicine

## 1. Introduction

As per the concept of Unani Medicine, *Mizaj* (temperament), age, sex, height, weight, and surroundings, all have an impact on the humoral composition of an individual. Every person is supposed to have a unique humoral constitution that creates an equilibrium status representing the temperament of the body, including their physical characteristic, and physiological, psychological as well as emotional states. Any alteration in their humoral constitution in terms of *Kaifiyat* (Quality) and *kamiyat* (quantity) leads to the body's deranged

physiological functions. This condition is known as *Imtila* (plethora). *Jarayan al-Dam* (Haemorrhage), *Tashannuj* (Convulsion), *Sakta* (Apoplexy), *Falij* (Paralysis), *Junun* (Insanity) *Hidhayan* (Delirium), *Ghashi Imtila'i* (Syncope), *Ufunat-e-dam* (infection in the blood), etc are the common complication associated with *Imtila* (plethora).

Determination of a patient's humour in terms of *kaifiyat* (Quality) and *kamiyat* (quantity) status is an essential and sometimes challenging area of Unani medicine.

According to humoral theory, defined by *Buqrat* (Hippocrates), the body remains in a state of health

\*Author for correspondence

when the blood's four components- *khilte Ahmer* (red composition), *khilte Abbiyaz* (white composition), *khilte Asfar* (yellow composition), and *khilte Aswad* (dark composition), are properly mixed. If dyscrasia occurs in its compositions, disease arises<sup>1</sup>.

Unani physicians consider health to be a condition of the body in which the humour and function of the body are in balance. *Tabi'at* (medicatrix naturae) regulates the equilibrium in the humour. When this power weakens, the equilibrium of the humour is disturbed in terms of both *kamiyat* (Quantity) and *kaifiyat* (Quality), which leads to deranged physiological functions of the body, and pathogenesis occurs in the body<sup>2</sup>.

*Tabi'at* (medicatrix naturae) of the body, which is associated with numerous organ systems, controls the quality and volume of humour. Maintaining humour in terms of *kaifiyat* (Quality) and *kamiyat* (quantity) is crucial to normal body functions. Changes in *kaifiyat* (Quality) and *kamiyat* (quantity) of humour can result in various clinical manifestations such as headache, clogged eyes, pulsatile conduits, flushing of the face, inability to speak, heavy head and dark and dense urine, etc<sup>3</sup>.

In this review work, we have endeavoured to clarify several aspects of *Imtila* (plethora) concerning *Asbab-o-Alamat* (etiopathogenesis and signs and symptoms). We also explain the line of management through this investigation.

## 2. Methods

This review study on *Imtila* (Plethora) is searched in ancient Unani textbooks, such as *Kitabul Murshid*, *Kamilus Sanah*, *Al Qanun fil tibb*, and *Firdausul Hikmat* etc.

The recent research on the management of a plethora like dieto-therapy, regimenal therapy and pharmacotherapy, was organized from Scopus, PubMed, Google Scholar, AYUSH portal, and ResearchGate. The textbooks of Unani Medicine do not use such modern terminology; hence, approximate equivalent terms were obtained from Standard Unani Medical terminology, Central Council of Research in Unani Medicine. The sources of data on *Imtila* were obtained from A.K. Tibbiya College Library, the seminar library of the department of Ilmul Amraz, the seminar library of the department of Moalejat, Moulana Azad Library, Aligarh Muslim University, Aligarh, Regional Research Institute of Unani Medicine library, Ibne Sina Academy, Aligarh. This review

paper discusses and presents the information obtained through this search and after comparing the relevant texts, the etiopathogenesis and signs and symptoms of *Imtila* (plethora) were discussed.

### 2.1 Historical Perspective

A famous Persian physician Abu Bakr Mohammad Ibn Zakariya Razi, (865-925 AD), stated that accumulation of normal or abnormal fluids in the vessels causes *Imtila bi hasbul auyiya*, which increases blood volume resulting in *urooqi tamaddud* (vascular tension) and causes vascular pressure<sup>4</sup>.

According to the renowned Persian physician, Ali Ibne Abbas Majusi (930-994 AD), the quality and quantity of *Akhlat* (humour) must be balanced for a basis for health. The body stays in good health as long as this equilibrium is preserved<sup>5</sup>.

Majoosi claims that *Imtila-bi-hasbil quwa* is a result of the weakness of *tabi'at* (medicatrix naturae) due to which food is not properly digested and leads to the formation of morbid matters, which makes one feel heavy and exhausted<sup>6</sup>.

According to the eminent Persian physician, Abu Sahl 'Isa ibn Yahya al-Masihi al-Jurjani (960–1010 AD), normal blood is defined as the composition of *Akhlate arba* in a normal ratio in terms of *kamiyat* (quality) and *kaifiyat* (quantity)<sup>7</sup>.

According to Ibn Rushd (1126–1198 AD), the temperament of organs remains normal while the blood that nourishes them is in equilibrium in terms of *kamiyat* (quality) and *kaifiyat* (quantity). According to Ibn Rushd, increased intracellular fluid volume can cause *Imtila*; if an aberrant temperament accompanies this condition, it is known as *Imtila' bi Hasbil Quwa*<sup>8</sup>.

Jalinus (129-200 AD) was advised *Fasd* (Venesection) for the patients who displayed symptoms like anxiousness, excessive sleeping, and dreaming of red objects<sup>9</sup>.

### 2.2 Etiology of *Imtila* (Plethora)

Unani scholars had mentioned different causes and risk factors responsible for *Imtila* (Plethora). Like cold weather, *Barid Mizaj* (cold temperament), lack of exercise, excessive consumption of food and drinks like meat, and alcohol, and excessive sleep<sup>8</sup>.

Ibn Rushd stated that the *Imtila* (plethora) disease might also arise from a reduction in the blood vessel lumen. According to his description, *kaimoos* (callose)

accumulate excessively in circulation, increasing pressure and requiring the body to replenish its supply of blood.

This type of *Imtila* (plethora) is known to induce *suda* (headache), *imtela-e-chashm* (eye congestion), puffiness of the face, pulsatile arteries, dark-coloured, turbid urine, heaviness in the head, restlessness, yawning, *ruaaf* (epistaxis), flushing of the face, and warmth throughout the body.

Ibn Sina has described this type of *Imtila* can develop from either due to strong *quwwat-e-masika* (retentive faculty) or weak *quwwat-e-dafia* (expulsive faculty).

Ali Ibne Abbas Majoosi and Ibn Sina claim that excessive dietary intake, alcohol consumption, a sedentary lifestyle, and a lack of exercise cause waste products to build up in our bodies and cause the development of *Imtila*<sup>5</sup>. Obese individuals frequently experience it.

Ibne Sina mentioned that old and Middle-aged people older than fifty years are affected with paralysis due to *Imtila ur Raas*. A stroke occurs mainly in extremely cold and sometimes in the spring due to *Imtila*. Similarly, if the impaired sensory function is present with *Imtila* (Plethora), it may lead to paralysis.

### 2.2.1 Extrinsic (Primitive) Causes

An example of an extrinsic cause is the use of substances that produce moisture in excess. The body is no longer in need of the moisture produced by foods and drinks. When both factors combine, the body has an excess of moisture.

- A diet that produces excessive amounts of moisture in the body causes matter to build up inside the body and impairs the function of the emunctories.
- Frequent baths, especially following meals, prevent the resolution of material in the body<sup>10,11</sup>.
- Eating and drinking improperly and depraved regimen.

### 2.2.2 Intrinsic Causes

- Lacking the ability to properly digest food, resulting in incomplete use of the food,
- Weakness in the *Quwate Dafiya* (ejective faculty), and excessive vigour of the *Quwate Masika* (retentive faculty), cause humour to stay in the body.
- Gastric digestive faculty dysfunction.
- Hepatic digestive faculty dysfunction.
- Diminution of the channel lumen size.

### 2.2.3 Other causes

- *Zofe* -Kabid (hepatic insufficiency).
- Su' Mizaj-i-Kabid (hepatic dyscrasia).
- Waram al-Kabid (hepatitis).
- Yaraqan Asfar.
- Su' Mizaj-i-Tihal, Du'f al-Tihal.
- Du'f al-Kulya.
- Waram al-Kulya.
- Diabetes Mellitus.

## 2.3 Unani Pathogenesis of *Imtila* (Plethora)

The pathogenesis of *Imtila* (plethora) is associated with *Quwate Hazma* (the faculty of digestion and transformation). Overeating reduces the *Hararat-e-Ghareezi* (Innate heat), which results in the formation of *Dam-e-Murattib* (moist blood). Additionally, excessively moist blood is produced when the *Hararat-e-Badan* (body's temperature) is *Qawi* (strong). This contributes to the body's increased wetness<sup>12</sup>.

when *Hararat-e-ghareeziya* is diminished due to overeating, it leads to disturbed *Huzoom-e-Arba* i.e., *Hazm Mi'di* (alimentary digestion), *hazm Kabidi* (hepatic digestion), *hazm 'Uruqi* (vascular digestion), and *hadm 'Uzwi* (organic digestion) and may develop *Fasad al-Hazm* which is responsible for the production of excessive and abnormal humour that directly alter the *Mizaj* (temperament) of the body<sup>13</sup>.

Excessive consumption of food may produce an extra amount of *fuzlat* (Undigested molecules) and *balgham mutaghayyir* (abnormal phlegm). These abnormal and excess accretions of *fuzlat* (Undigested molecules) in the body result in the suppression of *hararate ghariziyah* (innate heat). When *hararate ghariziyah* (innate heat) is reduced, it will lead to develop various metabolic disorders and produce *barudat* (coldness) in the body. Due to this condition, the body is unable to utilize this *fuzlat* hence it accumulates in spaces and vessels of organs shown in Figure 1. The *quwat ghazia* (nutritive faculty) tries to expel it but due to the impaired temperament of the liver, the chyme does not go through further processing which may lead to increases immature humour in the blood<sup>14</sup>.

The *Quwate Hazma* (digestive faculty) is the faculty that absorbs the material drawn by the *Quwate Jaziba* (attractive faculty) and retained by the *Quwate Masika* (retentive faculty), transforms it into a consistency ready for the action of the *Quwate Mughayyara* (alternative

faculty) and also change it into a temperament which is capable to becoming an actual nutriment. This action upon the beneficial material is known as digestion. All the body's organs and cells include these subordinative faculties, which take in food and convert it into various compounds to repair wear and tear and provide energy for the proper operation of multiple faculties. Any changes in *quwate hazma* (digestive faculty) and its related faculty may cause *Imtila*.

The centre of *Quwate Tabiya* is the liver, and it is called *Matbakh* (a great chemical factory). Many metabolic processes occur in the liver, which are aimed at benefitting the liver cells themselves as well as the entire body. When *Hazme Mevi* is over, then *Ghiza* is absorbed, it reaches the liver and is transformed into most of the constituents of *Akhlat* (Humours).

Sometimes the liver's companion organs interfere with its operation; for example, the stomach may not be able to provide the liver with the proper amount of chyle, and the spleen may become weak, leading to hepatic dysfunctions leads to *Baroodate Kabid* (Cold temperament of the liver). The food extract does not undergo metabolized in the liver or retracted vessels after entering the liver from the intestine; instead, it remains white. This may be because the liver has a cold temperament<sup>15</sup>.

According to Ali Ibne Abbas Majoosi, *Imtila* (plethora) is brought on by consuming too much food and drink, skipping workouts, and taking showers. It may also result from excessive rest, relaxation, and inactivity because

these circumstances cause to generate and accumulation of *Fazool* (metabolic products) in the body. Majoosi also said that an inappropriate build-up of morbid substances (both active and stagnant) in the blood vessels may increase pressure and tension<sup>16</sup>. *Imtila* is more common in those with lean or attractive builds because *Fazool* absorbs at a faster rate than they can resolve it.

Majoosi documented that *Muhtariq Sawda'* (melancholic melanchole) leads to *yubusat* (dryness and stiffness) in the vessels inhibiting the contraction and relaxation of the blood vessels. The narrowing is generally mediated by the dominance of *Yabis* temperament, which may harden the body vessels equally<sup>17</sup>. The narrowing of blood vessels is also responsible for the *Imtila*.

Abu Bakr Mohammad Ibn Zakariya Razi, (865-925 AD) claims that the ingestion of less nutrient-dense meals causes the body to produce morbid humours, which is the etiology of *Imtila* (Plethora)<sup>18</sup>.

The key etiological component in *Imtila' bi Hasbil Quwa* is the weakness of *tabi'at* (medicatrix naturae), since vicious substances are not entirely expelled from the body and their retention results in accumulations of morbid humour.

According to Ibn Sina, poor digestion, and absorption along with the presence of morbid material, ultimately result in the weakness of *Quwwate-Dafiya*. Besides these factors, weakness of blood vessels also serves as the cause of the stagnation of abnormal humour in the blood vessels<sup>19</sup>.

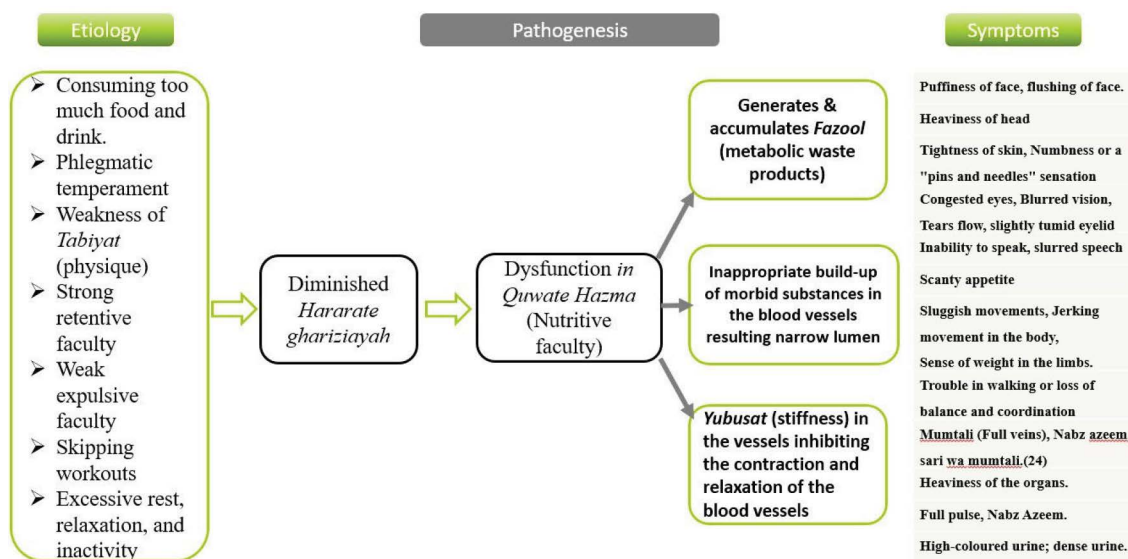


Figure 1. Etiopathogenesis of *Imtila* (Plethora).



## 2.4 The Classification and Clinical Description of *Imtila* (Plethora)

Unani Medicine has mentioned the diagnostic process through *Alamat*, which is concerned with various subjective and objective characteristics. Thousands of years ago, Unani Physicians had also noticed different subjective and objective characteristics of *Dam*(blood) in healthy and diseased states.

## 2.5 The Classification of *Imtila* (Plethora)

There are two aspects of plethora.

### 2.5.1 *Imtila'bi Hasbil Auiya* (Repletion Regarding Vessels)

In the plethora of channels, the body consists of an undue amount of humour<sup>20</sup>. The channels may be overextended and overfilled due to these, which may be of healthy quality but simply superabundant in quantity<sup>21</sup>.

In my opinion, *Imtila'bi Hasbil Auiya* is due to the increase in the volume of blood and the narrowing of blood vessels.

Hypervolemia is a disorder marked by an increase in total blood volume and, most frequently, a disturbance in the ratio of corpuscular components to plasma<sup>22</sup>.

The clinical presentation of *Imtila* (Plethora) shows in Table 1<sup>23,24</sup>. In such a situation, movement becomes perilous, and the vascular channels run the risk of rupturing. This is followed by a flux towards the regions where it is back-pressure, and choking of these portions may happen, with apoplexy or epilepsy occurring afterwards. To relieve such, the local plethora must be rapidly cleared by venesection.

A few conditions that might increase blood volume include congestive heart failure, excessive sodium consumption, kidney diseases such as nephrotic syndrome and kidney failure, liver failure, etc<sup>25</sup>.

A severe *Imtila' bi hasbil auiya* may result in blood vessel rupture and deadly consequences such as diphtheria, hemoptysis, bleeding, epistaxis, and persistent fever. In this condition, *Fasd* (venesection) is indicated to lower the high blood pressure brought on by the increased blood volume and to reduce the risk of bleeding, which can occasionally cause unexpected death. A modest diet and rest should be suggested as preventative measures.

### 2.5.2 *Imtila' bi Hasbil Quwa* (Repletion Regarding Vitality)

In this *Imtila*, the mistake is not in the number of humour, but in the unhealthiest quality<sup>26</sup>. Putrefactive disorders are a possibility for someone in this condition. A person who is in this state is in danger of putrefactive disorders. Infectious diseases are more likely to affect those with the *Imtila' bi Hasbil Quwa*<sup>27</sup>. Dyslipidemia, uraemia, bacteraemia, hyperalbumenia, Hyperuricemia<sup>28</sup> etc., are an example of *Imtila' bi Hasbil Quwa* (Repletion regarding vitality) that may affect blood quality.

Plethora is diagnosed in Unani medicine using changes to the skin colour, examination of urine, stool, pulse, and other sign and symptoms mentioned in Table 1. In other words, when any of the functions- such as appetite, defecation, urination, sexual desire, sleep, the action of the skin, itching, mental faculties, violent temper, and unusual tastes- become abnormal in some way, whether the abnormality is an increase or a decrease in function, one may be warned that some disease is about to manifest.

The colour of someone's skin indicates how blood flows through his body. Lethargy, lassitude, dyspepsia, etc., are all brought on by a little shift in blood volume, which also changes a person's colour.

If *Akhlat* (humour) is substantially enhanced in terms of *kamiyat* (quantity), it either deviates from *tabi'at* (medicatrix naturae) or continues to be expected. In the first scenario, the person may feel sleepy, have an unusually sweet taste on their tongue, or have psychological difficulties, among other things.

If it deviates from regular *tabi'at* (medicatrix naturae), it causes a person with unusually high blood volume to feel exhausted, exerted, heavy, and uncomfortable, among other things.

The following symptoms of a plethora of faculties are present: heaviness, sluggishness, loss of appetite, disinclination to exert oneself, and a feeling of burdensomeness. The dreams consist of sensations of itching, stinging, burning, and fetid odours. The skin is not as tense, the pulse is not as large and full, and the urine is not as gross (dense) or crimson if the abundance of faculty is not accompanied by the abundance of humour. Except after excessive movement, exercise, and activity, there is no lassitude<sup>25</sup>.

**Table 1.** Premonitory symptoms of diseases

Objectives	Symptoms
Body Color	As per the humoral preponderance, Red in <i>Ghalbae dam</i> , yellow in <i>Ghalbae safra</i> , whitish in <i>Ghalbae balgham</i> and dark in <i>Ghalbae sauda</i> <sup>29</sup> .
Skin	Tightness of skin, Numbness, or a "pins and needles" sensation
Head	Heaviness of the head, Pain in the temporal and frontal region
Face	Puffiness of face, flushing of the face <sup>30</sup> .
Eye	Congested eyes, Blurred vision, Tears flow, slightly tumid eyelid
Tongue	Inability to speak, slurred speech
Digestion	Scanty appetite
Movement	Sluggish movements, Jerking movement in the body, Sense of weight in the limbs.
Gait	Trouble in walking or loss of balance and coordination
Veins	<i>Mumtali</i> (Full veins), <i>Nabz azeem</i> , <i>sari wa mumtali</i> <sup>31</sup> .
Organs	The heaviness of the organs <sup>10</sup> .
Dream	Dreams in which there is a sense of weight, such as when one dreams of being immobile, carrying a heavy burden, or having trouble speaking a nightmare
Pulse	Full pulse, <i>Nabz Azeem</i> <sup>11</sup> .
Urine	High-coloured urine; dense urine <sup>10</sup> .

Urine may have a bloody tint in acute haemorrhagic illnesses even though there are no obvious blood vessel ruptures. This would indicate an excessive plethora. The gradual passing of blood via the urine and the presence of an unpleasant odour are alarming symptoms because they indicate that bleeding is occurring from engorged areas. If the urine is thinner and smellier, the outlook worsens like raw meat washings (i.e., blood-stained water). This refers to hepatic insufficiency brought on by an abundance of blood or by any type of dyspepsia, which impairs the ability to digest food and distribute energy.

If rusty or scarlet *Rasub* (sediment) are found in a fasting urine sample, this indicates the dominance of sanguineous humour (sanguineous plethora), and if they are present for an extended period, this indicates incomplete digestion<sup>27</sup>.

## 2.6 Complication

According to Aristotle, when blood becomes *fasid* (deranged blood), it flows into the rectum and nose<sup>8</sup>. Haemorrhage, apoplexy, and sudden death could be caused by severe *imtila*<sup>32</sup>.

*Imtila-ba-hasbul auyia* signifies the *Akhlat wa Arwah* (vital forces) are normal in quality, but the amounts of humours are raised to the point that the blood vessels are enlarged and distended. There is always a risk in these

situations that exertion could rupture blood vessels, release humours toward the orifices susceptible to constriction, and cause *sara* (epilepsy), and *sakta* (apoplexy)<sup>19</sup>.

Following are the complications of *Imtila* (plethora)<sup>4,33</sup>;

- *Jarayan al-Dam* (Haemorrhage).
- *Tashannuj* (Convulsion).
- *Sakta* (Apoplexy).
- *Falij* (Paralysis).
- Trismus.
- *Junun* (Insanity) *Hadhayan* (Delirium).
- *Ghashi Imtila'i* (Syncope).
- *Ufunat-e-dam* (infection in blood).
- *Khurajaat*.
- *Dubayla*.
- *Humma al-Yawm Imtila'iyya* (repletive ephemeral fever).
- Sudden death.

## 2.7 Management

In humoral pathology, the main idea of disease treatment is to restore equilibrium by using opposites. Therefore, a repletion-related imbalance is treated by depletion, a depletion-related imbalance is treated by repletion, and opposites often treat disorders<sup>34</sup>.

The principle of management according to Unani's thought is to decrease *Imtila* (plethora) by reducing the blood volume. This principle can be achieved by giving non-pharmacological regimens as well as pharmacological interventions.

The non-pharmacological regimen includes blood-letting procedures like *Fasd* (venesection), *Hijama bil shurt* (wet cupping), *Ta'liq al-'Alaq* (leech therapy) and *Tareeq* (Diaphoresis).

Pharmacological interventions by the process of *Ishaal* (Purgation), and by the use of *Mudirr-i-Bawl* (Diuretics) and *Mufattihat* (deobstruent) drugs.

Ibne Sina (980–1037 AD) emphasizes *taqleel ghiza* (dietary restriction) as a key technique<sup>35</sup>. According to Zakaria Razi and Ibn-e-Sina, the management of *Imtila* (plethora) is based on the following principles:

- *Taqleel Ghiza* (reduce food consumption)<sup>13,36</sup>.
- *Rectification of the Sue Mizaj* (Maltemperament).
- Use of *Mudir* (diuretics) and use of *Munziji wa Mushille balgham* (concoctive and purgative phlegm)<sup>37</sup>.

According to Ibn Hubal Baghdadi (1121–1213 AD), *fasd* excretes completely all harmful matter lurking in the blood. That is why *Fasd* (venesection) is given extreme importance in the Unani medicine system for disease prevention and health restoration. *Fasd* (venesection) is a general method for body cleaning from abnormal humour<sup>38</sup>.

*Fasd* (venesection) has manifold benefits, including *istifragh* (excretion) of wastes, removal of *imtila* (plethora), and reduction of viscosity of blood<sup>39</sup>.

Patients with a tendency to haemorrhage are advised timely venesection to reduce blood volume and lower their risk of haemorrhage, which could cause an unexpected demise<sup>40</sup>. Such patients are also encouraged to eat light and get plenty of rest.

In Unani medicine, the use of *Hijama bil Shart* (cupping with scarification) is not only for treatment but also for prophylaxis against diseases. *Hijama bil Shart* (cupping with scarification) helps to remove morbid blood from the body which may be harmful and in turn, overcome the possible adverse effects, leading to physiological well-being.

*Hijama bil Shart* (cupping with scarification) is also useful in various conditions like dyslipidemia, gout and a wide range of other plethoric conditions<sup>41</sup>.

Al-Zahrawi has mentioned "*Hijama on Al Kahil* (applications of cups in between the shoulders) helps in *Khafqan* (Palpitation) due to *Imtela* (Plethora)<sup>42</sup>.

Cupping therapy help to adjust the haematological parameters by clearing toxic substances from the blood<sup>43</sup>. Various research found significant variations between venous blood and cupping blood in several biochemical, haematological, and immunological parameters<sup>43–45</sup>.

Fairouz K. Alshowafi (2010) study indicates that blood cupping could decrease blood pressure and may contribute to hypertension treatment<sup>46</sup>.

A randomized controlled trial study conducted by Niasari M, Kosari F, Ahmadi A (2007) showed that wet cupping significantly improved the TC, HDL-C, LDL-C and triglycerides by 8.2%, 13.7%, 16.4% and 20.8% respectively<sup>47</sup>.

*Riyazat* (Exercise) is one of the essential regimes of Unani medicine that stops these things from accumulating and stops overabundance and prevents a plethora. *Riyazat* (Exercise), contributes to the preservation of *Akhlata-e-Arba* (humour) in equilibrium and hence maintains homeostasis in the body<sup>48,49</sup>. It strengthens the innate heat known as *hararat-e-ghareeziya* (Innate heat) which is responsible for metabolic function<sup>5</sup>.

If purgation (with hellebore or other harsh medications) and bloodletting are both required, start with the bloodletting since Hippocrates' advice in his book on epidemics is sound. On the other hand, if the plethora consists of viscid and "cold" phlegmatic humour that have been mixed with sanguineous humour, one should start with purgation because bloodletting would just make the humour even coarser and more viscid.

*Mudirrat* (Diuretics) drugs like *Sharbat Bazoori Mautidil*, *Habb-e-Mudir*, *Tukhm-e-Kharpaza* (*Cucumis melo* Linn.), *Tukhm-e-Khayarien* (*Cucumis sativus* L.) are used for the plethoric conditions<sup>50</sup>.

*Mufattihat* (deobstruent) drugs are *Chaal Arjun* (*Terminalia Arjuna* Linn.) *Lahsun* (*Alium sativum* Linn.)<sup>51</sup>.

Subjective and objective symptoms are a clue for understanding the pathophysiology of a plethora and may suggest the selection of a more appropriate therapeutic procedure.

Lifestyle modifications may help to prevent *imtila* (plethora); Avoiding the consumption of excessive meat, alcohol, sexual intercourse, strenuous exercise etc.

Manage weight. Obesity is a risk factor for *imtila* (plethora). Regular mild exercise lowers the risk.

The patient who has *Imtila'bi Hasbil Auiya* (Repletion regarding vessels) should refrain from excessive movement like strenuous exercise, and shouting and avoid using the *hammad* (bathroom) immediately after a meal.

The patient who has *Imtila'bi Hasbil Quwa* (Repletion regarding faculty) should refrain from *Baydari* (wakefulness), *Istafraḡhe mufrat* (excessive evacuation), and excessive movement like heavy exercise<sup>4</sup>.

### 3. Discussion

The environment in which a person lives, their eating habits, their jobs, and the activities they engage in all have an ongoing impact on their body, yet at the same time, the body maintains its homeostasis. Without ever producing a symptom, *tabi'at* (medicatrix naturae) can correct most of the body's functional dysfunctions. However, speculate the body cannot amply reverse the pathological alterations. In that case, *tabi'at* attempts to lessen its consequences and continue to carry out its usual duties while alerting through symptoms. Therefore, there is a lag time between the moment one establishes a self-uncorrectable malfunction and the symptoms that follow as a result. For example, coronary arteries are partially blocked long before we suffer from angina/ chest pain or MI. The physician's responsibility is to identify *Imtila*(plethora) signs and symptoms and have them treated. Obtaining a clinical history and speaking with a patient during an interview not only helps to build a strong rapport between the physician and the patient but also gives crucial information for making a diagnosis<sup>52</sup>.

The physician begins by assessing a patient's complexion, posture, abnormal movement, level of discomfort, and other signs and symptoms of *Imtila*(plethora) that may help to determine the types of *Imtila*(plethora). A careful physical examination can help physicians refine the next steps in the diagnosis process, and prevent unnecessary complications.

Medical and biotechnological developments have enhanced clinical testing, as well as prevention, diagnosis, and therapy. We can also make a diagnosis of *Imtilai* (plethoric) condition through haematological, biochemical and other laboratory investigations likes increasing the haemoglobin and RBCs count in case of polycythemia<sup>53</sup>, increasing iron storage in case of Hemochromatosis<sup>54</sup>, hyperglycaemia in diabetes<sup>55</sup>, hyperuricemia in gout<sup>56</sup>, etc.

Fluid balance and circulation are essential in helping to maintain hemodynamic homeostasis. *Tabi'at* (medicatrix naturae) efficiently regulates this balance to maintain hemodynamic stability. However, several factors or causes weaken the *tabi'at* (medicatrix naturae) in illness, and this stability is adversely affected. Insufficient sodium intake, renal failure, congestive heart failure, liver failure, and other diseases that affect sodium regulation can all result in hypervolemia, which is characterized by increased blood volume<sup>57</sup>.

### 4. Conclusion

*Imtila* (plethora) is caused by the disequilibrium of humour in terms of quantity and quality which includes the complex consequential process. So, to highlight it, ancient physicians described its pathogenesis as follows

- Excessive production of *khilte dam* (blood) due to dietary factors like consumption of excessive meat and alcohol, behavioural factor, and genetic or hereditary factor.
- Excessive and abnormal production of *khilte balgham* (Phlegm) due to diminished *hararate ghariziyah* (innate heat), and hepatic dysfunction like *Barudate kabid*, which lead to accumulation of *Fazul* (metabolic products) in the blood vessels.

Haemorrhage, apoplexy, and sudden death could be caused by severe *imtila* (plethora). Therefore, it is essential to identify the symptoms of *imtila* (plethora). Early detection will aid in obtaining urgent medical attention and treatment, which can reduce complications.

The following are the principal advantages of early disease identification;

- Enables physicians to design treatment plans that will arrest the progression of the disease.
- Provides an opportunity for patients to mentally prepare for therapies, and lifestyle modifications.
- Early disease detection and treatment can save lives by preventing complications.

In the Unani System of Medicine, several therapies are being used for *imtila* (plethora), which are comparatively safe. However, such regimen therapies are still not validated on scientific parameters. Thus, a clinical trial was conducted to provide safe and effective therapies in



the management of *imtila* (plethora). *Ilaj bil Ghiza* is the safest modality which may be found helpful in restoring normal health thus alleviating *imtila* (plethora).

The significant concepts of *imtila* (plethora) need a thorough revisit from the modern perspective.

## 5. References

- Fariba KA SA. Avoidant Personality Disorder - NCBI Bookshelf [Internet]. StatPearls. 2022. Available from: <https://www.ncbi.nlm.nih.gov/books/NBK559325/>
- Ali F. Concept of physio-dynamism of Tabiat in the Unani system of medicine. *Journal of Integrated Community Health*. 2012; 1(2):25-8.
- Zargarani A, Kordafshari G, Kenari HM, Nazem E, Moghimi M, Reza M, *et al*. The role of nature (Tabiat) in Persian Medicine. *Traditional and Integrative Medicine*. 2017; 4(7):177-81.
- Razi MZ. *Kitabul Murshid*.pdf. 1st ed. Urdu Tarjuma by Mohd Raziul Islam Nadvi, editor. Delhi: Taraqqi Urdu Bureau; 2000. p. 48-54.
- Majoosi AIA. Sana K. Part-1 UT by GHK, editor. Matba Munshi Naval Kishore, Lukhnow; 1889; 41-60:548-551.
- Kabeeruddin HM. *Tarjuma wa sharah Kulliyat-e-Qanoon*. Part II. *Daftarul Maseeh Karolbagh*, New Delhi; 1930. p. 433-437,457-461,463-464.
- Masihi ASI bin Y bin I. *Kitabul Miah fil Tib*. 1st ed. CCRUM UT by, editor. New Delhi: CCRUM; 2008. p. 101-110, 180-190.
- Abu Al Walid Mohammed Ibne Rushed. *Kitabul Kullyat*. Urdu Translation by CCRUM, editor. New Delhi: Central Council for Research in Unani Medicine; 1980. p. 156-160
- Khan BD, Azmat J. Hypertension in Unani system of medicine 1. 2017; 12(1):21-30.
- Al-Shaikh, Al- Rais, Abo Ali, Al-Husain, Bin Abdullah, Bin Sina. *Al Qanun Fil Tibb*. 1st ed. English translation of the critical Arabic text, editor. New Delhi: Department of Islamic Studies, Jamia Hamdard; 1993. p. 183, 198.
- Grmier OC. *The canon of medicine of Avicenna*. 1st ed. New York: AMS Press; 1973. p. 252-259.
- Alam MA, Quamri MA, Sofi G, Tarique BM. Understanding hypothyroidism in Unani medicine. *J Integr Med*. 2019; 17(6):387-91. <https://doi.org/10.1016/j.joim.2019.05.006> PMID:31164280
- Ahmer S, Amin MMW, Fahad A. Geriatric care in pandemic era: From the perspective of Unani medicine guidelines. *Journal of Indian System of Medicine*. 2021; 9(4):235. [https://doi.org/10.4103/jism.jism\\_44\\_21](https://doi.org/10.4103/jism.jism_44_21)
- Urooj S, Jahangir U, Maaz M, Azam R. Dyslipidemia from Unani prospective and its management with Safoof e Muhazzil: An update. *Phytomedicine Plus*. 2021; 1(4):100103. <https://doi.org/10.1016/j.phyplu.2021.100103>
- Syed Ishtiyag Ahmad. *Al Umoor Al Tabi'yah*. New Delhi: Central council for research in Unani Medicine; 1980. p. 162-167, 174-175 p.
- Kabiruddin M. *kulliyat-e-Nafisi*. part 1,. Urdu translation by Nafis, editor. New Delhi: Idara kitab al Shifai; 1954. 13-77, 119, 319, 474.
- Khan AA. Clinical study on management of essential hypertension with a compound formulation of Sankhahauli, filfil Siyah and parsiyoshan. *Jamia Hamdard*, New Delhi; 2004.
- Khan QA, Khan AA, Jabeen A, Jahangir U KM and AS. Essential hypertension: A co-relational approach in Unani medicine. *International Journal of Pharmacognosy*. 2016; 3(6):240-4.
- Iqbal N, Ali SR SR, Ansari AA, Khan KZ, Khan BD AN. Concept of hypertension (Zaghtuddam Qawi) in Unani system of medicine. *Int Pharm Sci*. 2013; 3(2):1-5.
- Avicenna (980-1037). *Kitāb al-Qānūn fī al-tibb*. Arabic. Romae In Typographia Medicea 1593; p. 80.
- Anwar A, Khan AA, Anjum PR. Hypertension and its management through Unani approach -A review. *J Emerg Technol Innov Res*. 2020; 7(8):1873-7.
- Pathological Physiology of the Blood System*; 2010.
- Heydari M, Dalfardi B, Golzari SEJ, Habibi H, Zarshenas MM. The medieval origins of the concept of hypertension. *Heart Views*. 2014; 15(3):96. <https://doi.org/10.4103/1995-705X.144807> PMID:25538828 PMID:PMC4268622
- Shazia Parveen F, Qaumri Reader M, Ahmed Medical Officer K, Sultan T, Anzar Alam Scholar M, Farooqui Shazia Parveen C, *et al*. Concept and management of hypertension: A review. *International Journal of Unani and Integrative Medicine*. 2017; 1(1):17-20.
- Borrelli S, Provenzano M, Gagliardi I, Ashour M, Liberti ME, De Nicola L, *et al*. Sodium Intake and Chronic Kidney Disease. *Int J Mol Sci*. 2020; 21(13):1-13. <https://doi.org/10.3390/ijms21134744> PMID:32635265 PMID:PMC7369961
- Nafees B. *Kulliyat-e-Nafeesi*. Part-1, Ta. Kabeeruddin H, editor. Matba Daftarul Maseeh, Hydrabaad; 1954. p. 70-86.
- Kantoori GH. *Tarjuma Qanoon*. Volume-1. Urdu translation original author S, Sina AI e AI, editors. Lucknow, UP: Munshi Nawal Kishore; 1889. p. 498-549.
- Abul Hasan Ali Bin Raban Tabri. *Firdausul Hikmat*.pdf. Deoband: Faisal Publication; p. 124, 306, 307, 470.
- Hakim Syed Kamal Husain Hamdani. *Daqaiqul Kulliyat*. New Delhi: Aijaz Publishing House; 1996. p. 180.
- Shah MH. *The general principles of Avicenna's Canon of Medicine*. Darya Ganj New Delhi: Idara Kitab-ul-Shifa; 2007. p. 227.
- Jurjani A ul H. *Zakhira Khwarzam Shahi*. Vol-II, Ur. Lukhnow: Matba Munshi Naval Kishore; 1902. p. 17, 23, 102, 220.

32. Mohammad Zakariya Razi. Kitabul Mansoori. Urdu Trans. CCRUM, New Delhi; 1991. p. 160.
33. Ali SJ, Ansari AN, Anwar M. Study of risk factors of stroke in patients visiting neurology OPD, NIUM, Bangalore with special reference to Unani Medicine. *World Journal of Pharmaceutical And Medical Research*. 2017; 3(7):118-21.
34. Adams F. Aphorisms. The works of Hippocrates and Galen: Hippocrates, Galen: Free Download, Borrow, and Streaming: Internet Archive. Available from: <https://archive.org/details/TheWorksOfHippocratesAndGalen>
35. Nozad A, Naseri M, Safari MB, Abd Al Ahadi A, Ghaffari F. Food reduction in Avicenna's view and related principles in classical medicine. *Iran Red Crescent Med J*. 2016; 18(6). <https://doi.org/10.5812/ircmj.25760> PMID:27621927 PMID:PMC5003059
36. Parvizi MM, Nimrouzi M, Lankarani KB, Alorizi SME HM. Health recommendations for the elderly in the viewpoint of traditional Persian medicine. *Shiraz E Med J*. 2018; 19(1):1-8. <https://doi.org/10.5812/semj.14201>
37. Ahmed A, Nasir Ansari A, Javed Ali S, Yasir M. Efficacy of munzij wa mushil-e-balgham (poly herbal formulations) and massage with roghan-e-malkangani in falij nisfi (Hemiplegia): A randomised controlled clinical trial. *Int J Pharm Sci Res*. 2015; 6(1):453. Available from: <https://ijpsr.com/bft-article/efficacy-of-munzij-wa-mushil-e-balgham-poly-herbal-formulations-and-massage-with-roghan-e-malkangani-in-falij-nisfi-hemiplegia-a-randomised-controlled-clinical-trial/>
38. Eghbalian F, Mohammadi Kenari H, Kordafshari G, Karimi M, Atyabi A, Shirbeigi L. The role of phlebotomy (Fasd) and cupping in the treatment of epilepsy from perspective of Persian medicine. *Iran J Public Health*. 2019; 48(7):1392-4. <https://doi.org/10.18502/ijph.v48i7.2977> PMID:32548057 PMID:PMC7283194
39. Hakim Kabeeruddin. Meezanut Tib. 1st ed. Daftarul Masih, Karolbagh ND, editor. Barqi Press, Delhi; 1923. p. 3, 4, 15
40. Kordafshari G, Ardakani MRS, Keshavarz M, Esfahani MM, Nazem E, Moghimi M, *et al*. The Role of Phlebotomy ( Fasd) and Wet Cupping ( Hijamat) to Manage Dizziness and Vertigo From the Viewpoint of Persian Medicine. *J Evid Based Complementary Altern Med*. 2017; 22(3):369-73. <https://doi.org/10.1177/2156587216672757> PMID:30208737 PMID:PMC5871156
41. Mehta P, Dhapte V. Cupping therapy: A prudent remedy for a plethora of medical ailments. *J Tradit Complement Med*. 2015; 5(3):127-34. <https://doi.org/10.1016/j.jtcme.2014.11.036> PMID:26151023 PMID:PMC4488563
42. Mohamed Ameen Shaikhu. Addawaul Ajeeb. 1st Edition. Syria: Published by Markaz Al Hassam Lit Tiba'ah; 1999. p. 229-233.
43. Kenari HM, Kordafshari G, Moghimi M. The effectiveness of cupping in Iranian researches: A systematic review of animal and human studies. *Traditional and Integrative Medicine*. 2022; 7(1):135-49.
44. Al-Bedah AMN, Elsubai IS, Qureshi NA, Aboushanab TS, Ali GIM, El-Olemy AT, *et al*. The medical perspective of cupping therapy: Effects and mechanisms of action. *J Tradit Complement Med*. 2019; 9(2):90. <https://doi.org/10.1016/j.jtcme.2018.03.003> PMID:30963043 PMID:PMC6435947
45. Ahmad T, Anwar M. Clinical importance of leech therapy. *Indian Journal of Traditional Knowledge*. 2009; 8(3):443-5.
46. Alshowafi FK. Effect of blood cupping on some biochemical parameter. *Med J Cairo Univ*. 2010; 78(1):311-5.
47. Niasari M, Kosari F AA. The effect of wet cupping on serum lipid concentrations of clinically healthy young men: a randomized controlled trial. *J Altern Complement Med*. 2007; 13(1):79-82. <https://doi.org/10.1089/acm.2006.4226> PMID:17309381
48. Waris Jamil A. "Tauzeehat-E-Kulliyat." Muslim University Press, AMU, Aligarh; 2010. p. 199.
49. Ahmad I, Azeez A, Ansari AN, Ali M. Efficacy of Riyazat ( Physical Exercise ) with Hammam-E-Bukhari ( Steam Bath ) in the Management of Simane Mufrit ( Obesity ). *Int J Health Sci Res*. 2019; 9:239-47. Available from: [https://www.ijhsr.org/IJHSR\\_Vol.9\\_Issue.8\\_Aug2019/IJHSR\\_Abstract.034.html](https://www.ijhsr.org/IJHSR_Vol.9_Issue.8_Aug2019/IJHSR_Abstract.034.html)
50. Kabir H. Murakkabat (Unani formulation) book.pdf. 1st ed. Shamsher Publisher; 2003. p. 71.
51. Kabir H. Introduction to Ilmul Advia. Shamsher Publisher and Distributors. Delhi: Bharat offset; 2002. p. 152.
52. The Diagnostic Process - Improving Diagnosis in Health Care - NCBI Bookshelf Available from: <https://www.ncbi.nlm.nih.gov/books/NBK338593/>
53. Ferguson DB. The cells of the blood. *Physiology for Dental Students*. 1988; 54-72. <https://doi.org/10.1016/B978-0-7236-0725-0.50007-1>
54. Seravalle G, Dell'Oro R, Quarti-Trevano F, Spaziani D, Bertoli S, Airoidi F, *et al*. Sympathetic overactivation in patients with essential hypertension and hepatic iron overload. *Hypertension*. 2020; 1444-50. <https://doi.org/10.1161/HYPERTENSIONAHA.120.15511> PMID:32981363
55. Pasquel FJ, Lansang MC, Dhatariya K, Umpierrez GE. Management of diabetes and hyperglycaemia in the hospital. *Lancet Diabetes Endocrinol*. 2021; 9(3):174-88. [https://doi.org/10.1016/S2213-8587\(20\)30381-8](https://doi.org/10.1016/S2213-8587(20)30381-8) PMID:33515493
56. Danve A, Sehra ST, Neogi T. Role of diet in hyperuricemia and gout. *Best Pract Res Clin Rheumatol*. 2021; 35(4):101723. <https://doi.org/10.1016/j.berh.2021.101723> PMID:34802900 PMID:PMC8678356
57. Sharma R, Sharma S. Physiology, Blood Volume. *StatPearls*. 2022.