

RESEARCH ARTICLE

Mizaj: Theory of Greko-Arabic Medicine for Health and Disease

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ABSTRACT

Unani Tibb is the knowledge of achieving perfect physical, mental and spiritual health. The primary goals of Tibb-e-Unani (Unani Medicine) are the maintenance of good health and healing of disease. According to the Unani medicine, there are seven important factors responsible for life of humans on earth called as Umoore Tabiyia, Mizaj is one of the those important Umoor and occupies second place next to Arkan, on which health and disease depend. Health is the maintenance of normal mizaj, any change in the mizaj brings about change in the person's state of health.

The Descriptions of mizaj by unani physicians are most valuable; they described the concept in details and have given the concept to the best of their knowledge and efforts.

Keywords: Mizaj (Temperament); Akhlat (Humour).

INTRODUCTION

In nature no two things, however allied in origin and structure, resemble each other perfectly. This is true of the animate as well as the inanimate creatures and applies most forcibly to that standing puzzle man in whom these diversities or peculiarities, find their most conspicuous embodiment. The name 'Mizaj' has been given to certain physical and moral differences in individuals. Every person has a unique Mizaj, which includes his physical characteristics, physiological profile, psychological and emotional status.

The Hippocrates (460-370BC) gave the fundamental principles of Greco-Arab System of Medicine with a belief that the body of the individual is composed of four basic elements, which together, are termed as 'Anasir-e-Arba' or Arkan (Elements) comprising earth, water, air and fire. These Anasir-e-Arba possess four different qualities, i.e. hot, cold, dry and wet. The admixture of these four basic elements results in the formation of four biological fluids or Humors viz. Blood (Dam), Phlegm (Balgham), Bile (Safra) and Black bile (Sauda); a right proportion, according to quality and quantity constitutes health and upright proportion and irregular distribution, according to their quantity and quality constitutes disease [1]. When these different *Kaifiate Arba* (qualities) of Arkan (elements) acts and reacts by their powers, then previous qualities become diminished and a new moderate quality is developed which is known as *Mizaj*.

Mizaj theory has its roots in the ancient four humors theory. It was the Greek physician Buqrat (Hippocrates

460-370 BC) who systematized and developed it into a medical theory. He believed certain human moods, emotions and behaviors were caused by body fluids (called "Humors"): blood, yellow bile, black bile, and phlegm. Next, Galen (AD 131-200) developed the first typology of Mizaj in his dissertation *De temperamentis*, and searched for physiological reasons for different behaviors in humans [2].

A lot was done and developed by Hippocrates and Galen, but the Arabs worked more attentively on the theory of mizaj. They were the first to locate relationship between diseases, various humors and the disturbance of mizaj [3].

The Literal Meaning of Mizaj (Temperament)

-The literal meaning of *mizaj* according to Nafis is "Intermixture" as he says "The word *mizaj* originated from Arabic word *imtizaj* meaning intermixture" [4]

-*Mizaj* is derived from Arabic word "*mzj*" which means mixing of humors. At other places it is described that *mizaj* refers to the intermixture of four humors within human body, it is the basis of body. (*Lisan-ul-Arab*)

-Azmi says "*mizaj* is an admixture". He writes "*mizaj* denotes admixture, it is a verb but metaphorically used as tempered (*Mamzuj*)" [5].

Temperament: Quoting the words of Rudolf E. Siegri, Azmi says: "The Greek used to call the mixture of humors as "krasis" which is derived from "kerannyni" meaning "to mix". The word *kerasis* is usually translated as temperament."

The word “temperament” is derived from the Latin word “tempero” which means “to mix”. This word temperament is used in the English language as a synonym of the Arabic word *mizaj*.

Azmi explains further saying, “there is another word constitution which is used as an equivalent of *mizaj*. This word means the natural condition of the body and mind and when it is used in chemistry, it denotes not only kinds and number of atoms but also the way they are linked. This meaning is fully in accordance with the elemental concept of temperament which I hold correct”^[5].

But, Shah has a different opinion, he says, “in modern medicine the terms “constitution” and “temperament” are often used synonymously but not so in the cannon of Avicenna. Constitution is *tabiyat* comprised of seven physical factors, *al umoor al tabaiyah*, of which temperament is one”^[2].

The Arab physicians described the concept of *mizaj* in a universal manner as compared to the modern concept of temperament that is limited to the psycho – somatic behavior only. Therefore, the word temperament does not hold the same meaning as *mizaj* meant in Greco Arab medicine rather *mizaj* has broader meaning.

In this regard, Grunner says, “the word temperament is not satisfactory for the Arabic word *mizaj* which contains the idea of mixture so the medieval translators used the word “commixtio” or “complexio” which carry the idea of mixing or blending and weaving. But neither words fit in with modern usage”^[6].

The Definitions of Mizaj: The physicians of Unani medicine have dealt with Mizaj in detail and they defined it to the best of their knowledge and concepts. The Arab medical authors worked on the theory of most assiduously and its description is found in the Arab medical literature under the heading “*mizaj*”.

Ali Ibn Abbas Majoosi (930-994 AD) has defined the *mizaj*: “All sorts of bodies (light or heavy), which are found in this ever-changing world are formed by four elements (*ustuqussat*) after mixing in different or uniform quantities in accordance with the needs (of the body). As a result of this mixing, one or two qualities become dominant, over the body, and this is called ‘*mizaj*’. It is derived from Arabic word ‘*imtizaj*’, meaning ‘to mix with each other’”^[7].

Abu Sehal Masihi describes Mizaj as: “Because there are so many primary components (*ustuqussat*) of the body which are mixed together not in close proximity, it is necessary that the qualities of primary components must be mixed as a whole new qualities arise from inter-mixing of primary components which will be in between the previous qualities, called *mizaj*”^[8].

Ibn Sina (980-1037 AD) says “The Mizaj is a quality resulting from the interaction of opposite qualities present in elements consisting of minute particles so that most of the particles of each of the elements may touch most of the others. Thus when these particles act and react on one another with their properties, there emerges from their total properties, a uniform quality

which is present in all of them. This is the temperament (Mizaj).

Ibn Sina further writes that “Since the primary properties in the aforesaid elements are four namely hotness, coldness, moistness and dryness, it is obvious that the temperaments of the integrating bodies are the products of these very properties”^[9].

Ismaeel Jurjaneer writes about *mizaj* that: “When different qualities of elements acts and reacts by their powers then previous qualities become diminished and a new moderate quality is developed which is known as *mizaj*”^[10].

Galen (130-200 AD) says that: “Mizaj is a quality produced by action and reaction of opposite qualities of body fluids (*Akhlat*). When these components interact by virtue of their respective powers (qualities) a condition is achieved which is found in equal proportions in all the components of that intermixture; this is called Mizaj”^[11].

Ibn-e-Habal Baghdadi states that: “When elements get admixed, most of the elements mix with each other and their various qualities act and react so heat breaks the cold and cold breaks the heat. Similarly dryness try to breaks wetness and wetness try to breaks dryness. Low grade Qualities mix with high grade qualities light weight Particles mix with heavy weight Particles until a new Quality is developed which is equally found in all the components of elements this new and moderate Quality is known as *mizaj*”^[12].

Allama Nafees says that: “When elements mix with each other they act and reacts which result in developing a new moderate Quality in between the all four previous Qualities and new Quality is known as *mizaj*”^[13].

Gruner says that Arabic word *mizaj* contains the idea of mixture’, medical translators used the word commixtio or complexion which carry the idea of mixing or blending or weaving”^[14].

Mehdi Hasan described Mizaj along with the four elements, he says that:

“The four elements are result of four qualities cold, heat, moisture and dryness. Two qualities in combination constitute an element e.g. Cold + Moisture = Water

The ultimate units are pure qualities. These have been identified as follows:

Heat = Oxidation, Moisture = Hydration, Cold = Reduction, & Dryness = Dehydration.

So the Mizaj can be understood by the following examples: *Saudavi* or Melancholic Mizaj should be interpreted not as cold and dry but in which reduction and dehydration are preponderating”^[15].

Taiyyab suggest in “Greco-Arab Medicine” that: “The temperament is a synthetic concept which express the various physical as well as psychological tendencies of the individual in terms of matter and energy i.e. activity as, heat and cold reactivity as dryness and moisture”^[16].

Zaidi and Zulkifle writes that: “The temperament is an intrinsic state which enables an individual to survive and to procreate comfortability and is responsible for

distinctive morpho-bio-physio-immuno-psychological identity of an individual" [17].

Kinds of Mizaj: Ibn Nafis says that there are nine kinds of Mizaj; one is *mutadil* (equable/balanced) and eight kinds are *ghair mutadil* (inequable/ imbalanced).

Mizaj has generally been divided by Unani Physicians into two parts that are follows:

A. *Mizaj-e-Motadil* (Equable Temperament)

B. *Mizaj-e-Ghair Motadil*

(Immoderate temperament) [18]

A. Equable Temperament (*Mizaj-e-Motadil*):- It is again sub – divided into two types:

i. *Mutadil Haqiqi* (Real equable/Equiponderant)

ii. *Mutadil Tibbi* (Medical Equable)

i. *Mutadil Haqiqi* (Real equable/Equiponderant): This *mizaj* is the one where in the contrary qualities of all the participating elements in a compound are equal, which is impossible; therefore, this type of temperament does not exist at all [15].

ii. *Mutadil Tibbi* (Medical Equable): This *mizaj* is the one where in the contrary qualities and the quantities of participating elements in a compound are not equal but are just suitable and perfectly balanced according to the properties and functions of that compound. Hence in Unani Tibb this *mizaj* usually discussed [5].

Mizaj Mutadil Tibbi is divided into the following eight types:

1. Equable temperament of one species as compared to other species (Mu'tadil nau'i bi'l-qeyas ila-al-kharij): This is a particular *Mizaj* furnished to a particular species of animal, is normal and most benefitting for that species but is abnormal for other species. As for example the human temperament is most befitting and normal for human being for the performance of his normal functions, but it will not at all be normal and equable for other species of animal [1].

2. Equable temperament of a member of one species as compared to other members within the species itself (Mu'tadil nau'i bi'l-qeyas ila-al-dakhil): It is that equable temperament, that is furnished to a member of a species, and is most appropriate and best among all the members of that species and has not been furnished to any other member of that species and owing to this particular *mizaj* the particular individual possesses the complete potentiality and capacity for performing the required functions of species of man in comparison to all the members of that species. Therefore, Ibn Sina' says; "This second kind is situated in the middle of the maximum and minimum limits of first kind. This *mizaj* is found in a member of that most *mu'tadil* sinf (equable race) who is most *mu'tadil*, and he has attained the age when his growth and development has reached to its maximum limit. Although this *mizaj* is not *mu'tadil haqiqi* as discussed earlier, and whose existence is impossible, but it is very rare and difficult to be found" [1,9].

3. Equable temperament of one race as compared to other races (Mu'tadil sinfi bi' l-qeyas ila-al-kharij): It is a temperament (*mizaj*) that is furnished to each of the races (*asnaf*) of human species, and owing to this *mizaj*

the required racial functions of each race are performed with almost completeness. There are maximum and minimum limits (range) for this *mizaj* also, between which the *mizaj* of individual members of that race fluctuates. But this range is narrower than *e'tadal nau'l bi'l qeyas ila-al-kharij*. This *mizaj* is most befitting for one race but is not suitable for other races to perform their required racial functions [1].

4. Equable temperament of a member of one race as compared to other members of the same race (Mu'tadil sinfi bi'l-qeyas ila-al-dakhil): This is a *mu'tadil mizaj* (temperament) which is furnished to a member of a race and is not furnished to any other member of that race and is better than all the members of that race. It is also rare and nonexistent.

5. Equable temperament of one man as compared to other men (Mu'tadil shakhsi bi'l-qeyas ila-al-kharij): This is a particular *mizaj* (temperament) of a person which is most benefitting for himself to perform his normal functions but is not suitable for any other person. Ibn Sina' says; "Its extent is very narrow in comparison to first and second types of temperaments." It is that temperament which is furnished to a particular person, due to which he is surviving and healthy. This *mizaj* has also extensibility (range) of maximum and minimum limits, between which *mizaj* of a person remains fluctuating within normal limits. It should be known that each and every person has got a specific *mizaj* (temperament) which is not shared by any other person. (It is why no two persons are alike).

6. Equable temperament of a person as compared to his own temperaments in different states (Mu'tadil shakhsi bi'l-qeyas ila-al-dakhil): This is a particular *mizaj* (temperament) which is furnished to a person which is most befitting for a particular period or state in his life. For example that *mizaj* which is furnished to a man in his young age is better for him than old age or which is furnished to him in rabi' is better than other seasons. The *mizaj* of a person remains fluctuating under different conditions. Therefore, the *mizaj* of a person is most befitting for him which is furnished to him at best of his health, best of age and best of the seasons [18].

7. Equable temperament of an organ as compared to other organs of the body (Mu'tadil 'uzwi bi'l-qeyas ila-al-kharij): Ibn Sina says; this is the *mizaj* (temperament) which must be furnished to each and every organ of the body. This *mizaj* is specific for each organ, and owing to this, one organ or one tissue differs from that of another organ or tissue (the protein of one tissue differs from that of another tissue). For example each of the bones (bony tissue), muscles (muscular tissue), fats (adipose tissue) and *a'sab* (nervous tissue) are furnished with specific *mizaj* which differs from one tissue to another. Furthermore, the *mizaj* of muscles is not suitable for bone and vice versa.

8. Equable temperament of an organ as compared to his own temperaments in different states (Mutadil uzwi bil qayas ila-al-dakhil): Ibn Sina says; specific pattern of an organ is the one which lie midway between the

limits, of the seventh pattern and is the most suitable for that organ under its special circumstances [9, 19].

B. Immoderate temperament (*Mizaj-e-Ghair Motadil* or *Su-e-mizaj*): *Azmi* states that a temperament which deviates to certain degree from the moderation (*Etedal*) in the natural temperament is known as immoderate temperament or *Mizaj-e-Ghair Motadil* [15].

When a *Kaifiyat* (quality) is increased from *E'tidal* (balance) the condition is known as "*Mizaj-e- Ghair Mo'tadil*" or *Sue Mizaj*.

Sue Mizaj is of 2 types:

A. *Sue Mizaj Sada* (simple imbalance mizaj without matter)

B. *Sue Mizaj Maddi* (imbalance mizaj due to any matter)

Sue Mizaj Sada is of 2 types:

a. *Sue Mizaj Mufrad Sada*: When one *Kaifiyat* out of *Kaifiate Arba* is increased in any compound, it is known as *Sue Mizaj Mufrad Sada*. It is of 4 types.

b. *Sue Mizaj Murakkab Sada*: When *Mizaj* is deviated in two *Kaifiyat* out of *Kaifiyate Arba* then it is known as *Sue Mizaj Murakkab Sada*. It is also of 4 types.

Sue Mizaj Maddi is of 2 types:

a. *Sue Mizaj Mufrad Maddi* (single-imbalance mizaj due to any matter): *Sue Mizaj Mufrad Maddi* is the mizaj in which one *kaifiyat* dominated substance(s) is increased. It is of 4 types.

b. *Sue Mizaj Murakkab Maddi* (compound imbalance mizaj due to any matter): It is the mizaj in which two *Kaifiyat* dominated substance(s) increased. It is also of 4 types.

Like this, there are 16 types of *Sue Mizaj* as:

1. *Sue Mizaj Mufrad Sada*: *Har, Barid, Ratab* and *Yabis*.

2. *Sue Mizaj Murakkab Sada*: *Har Ratab, Har Yabis, Barid Ratab, Barid Yabis*.

3. *Sue Mizaj Mufrad Maddi*: *Har Maddi, Barid Maddi, Ratab Maddi, Yabis Maddi*.

4. *Sue Mizaj Murakkab Maddi*: *Har Ratab Maddi, Har Yabis Maddi, Barid Ratab Maddi, Barid Yabis Maddi*.

Causes of *Sue Mizaj*

The factors which are responsible for changing the mizaj of human being:

1. Internal Factors (Internal environmental factors): These are the factors which influence the mizaj of human being at the time of its formation and development in the uterus. The foetal development is the outcome of interaction between the gametes (sperm and ova) of the parents. Gametes, undoubtedly, transfer the parental characters to the offspring. *Unani* physicians are of the opinion that some active forces (*Quwwate Mughayyirae Oola and Musawwirah*) present in uterus, finalize the morphological and biochemical composition of the foetus in the light of mizaj of the gametes.

Any abnormal change in the *Maaddae Manwiah* (gametes) may alter the mizaj of the foetus because of which different types of congenital deformities are developed in the foetus. For example, if the semen or gametes is less or more in quantity, foetus will not be developed properly. If *Maddae Manwiah* is less in quantity any organ maybe smaller in size as

"Microcephally". Similarly, if the quantity of *Mani* is more, any organ of the body may enlarge as "Macrocephally" [1].

There are so many kinds of congenital diseases that develop in child due to any disturbance in the genetic material (chromosomes and genes) in the uterus like, Congenital rubella syndrome; Down's syndrome; Thelassimia; phenylketonurea etc.

2. Acquired factors External Environmental Factors (*Iktisabi Awamil*): These factors depend upon the environmental conditions in which the man is living. These are of two types i.e. the *Asbab-e-Sittah Zaruriyah* (six essential factors) and the *Asbab-e-Ghair Zaruriyah* (non-essential factors) [19].

A. *Asbab-e-Sitta Zaruriyah*:-The six essential causes are: Atmospheric air (*Hawa-e- Muheet*); Food and Drink (*Makul- wa- Mashrub*); Physical or Body movement and repose (*Harkat wa Sukun badani*); Mental or Psychic movement and repose (*Harkat wa Sukun nafsan*); Sleep and Wakefulness (*Naum- wa- Yaqzah*); Retention and Depletion (*Ehtebas wa Istafrah*) [20].

B. *Asbab-e-Ghair Zaruriyah*: The non-essential causes are:

Age (*Umr*); Sex (*Gins*); Habitat (*Maskan wa Balad*); Habits (*Adaat*); Occupation (*Sana't*)

Other remote causes (*Umoor-e-baeeda*)

Razi, while discussing the factors influencing the temperament, says that age, dwelling and diet play a very important role in the change of *Mizaj* [21].

Ibn Rushd was also agreed about the effects of environmental factors on human *Mizaj*, He says that there may be variations in *Mizaj* due to external factors like the occupation and dietary habits [22].

Bhika and Haq explain "At birth when functional causes affect particular qualities, then changes occur partially or totally, temporarily or permanently. Naturally, hereditary factors play a vital role. Environmental factors do not contribute in the formation of a person's mizaj, but influence it overtime" [23].

Thus, we can say that apart from genetic influences the ultimate physiological and anatomical set up of an individual is also influenced by external factors.

Age: Age of an individual is the factor which influences the mizaj directly. Every person has specific mizaj in different phases of life which is responsible for health and diseases of an individual. Because of abnormal changes in this mizaj, so many diseases may develop in the body [9].

Air (Wind): It is one of the most important external environmental factors, responsible for influencing mizaj of an individual. Although there are so many kinds of winds blow in the atmosphere, but, only four winds i.e. Northerly (cold dry), Southerly (hot moist), Easterly (equable mizaj) and Westerly (cold dry or near to equable) are of great importance from medical point of view. Because of having their specific *mizaj*, each wind is suitable for the person having opposite *mizaj* and harmful or not suitable for the persons having same mizaj as that of the wind and may cause diseases

in the body accordingly. Northerly wind having cold & dry mizaj may cause diseases having cold & dry mizaj. Same like this, remaining winds tend to develop the diseases having same mizaj as that of the winds [9].

Season: It is also an important factor which may affect the mizaj of human being. There are four types of seasons in the year. Each season has its specific *Mizaj* because of which it affects the mizaj of an individual. If the mizaj of human being and season become same, diseases having same mizaj as that of the season and of human being may be developed. That's why; Dam (blood) related diseases occur in *Rabi'*, diseases related to *Safra* develop in the Saif (Summer) and diseases related to *Sauda* prevail in the Kharif, while *Balghami* diseases occur in the *Winter* season. The diseases occurring in the end and in the beginnings of the season are related with both pre and proceeding season [9].

Habitat (residence/country/city): Habitat of an inhabitant exerts its effect directly on human life by its specific mizaj. For example, Northern countries with cold and dry mizaj, Southern countries with hot and moist, Eastern countries with *Mo'tadil* mizaj and Western countries with *Mo'tadil mail ba Rutoobat* (moderate tilt toward *rutoobat*) which is similar to the mizaj of *Mosame Kharif*. Because of specific *Mizaj* (mizaj/ climate) of habitat, some specific diseases, related to the mizaj of the same, are developed. For example, Inhabitants of hot places are generally of soft and delicate constitution of body, complexion of the body and hair are black. Similarly, inhabitants of cold places are usually strong and brave because, in the cold mizaj *hararate gharizyah* resides inside the body resulting in good digestion of inhabitants. If the mizaj of these countries becomes damp or moist along with cold, persons living in these countries will become fleshy and fatty with inconspicuous veins (invisible).

Inhabitants of damp countries are distinctly fleshy and fatty with soft and smooth skin [9].

In dry countries, both winter and summer seasons are in their extreme condition, because of which mizaj of inhabitants of these places become dry, as a result their skin becomes rough and cracked. Their brain tends to be dry, because of which so many abnormal consequences may develop in the form of diseases.

Residents of high altitudes are generally brave, strong and long lived. It is because of pure air having cold mizaj which is present at these places [9].

Habit is also an important factor to change the mizaj of human being:

If a person adopts a habit for a long period, it will act like a *Mizaje Taba'i* for him, because *Aadat* (habit) considered as *Tabia'te Saniah*.

Aadat of a person may be of so many kinds; for example, the person who is habitual to work in heat or hot environment like Black smith or the people who work before heat and fire in a factory or other places do not get trouble from heat, but when they go to the cold places or come in contact of cold air they will be affected from cold mizaj or environment.

These people are more prone to develop hot diseases and have more capability to tolerate the heat.

Similarly, inhabitants of northern countries and the people whose occupation is related to water like fisherman, washer man, sailor etc. are not affected by cold mizaj. These people are more susceptible to develop cold diseases in comparison to hot diseases. These diseases may be treated easily because the mizaj of the diseases is similar to the mizaj of the body [9].

Besides these two examples there are so many types of habits found in persons for example,

-Habit of eating of cold and hot food

-Habit of eating in specific time

-Habit of bathing

-Habit of sleep and wakefulness

-Habit of coitus.

-Habit of *Istifragh* (elimination) etc.

Occupation: It is an important external environmental factor responsible for influencing the *mizaj* of a person.

For example, if a person is involved in such occupation in which he has to face heat or fire; in this condition he develops dryness (*Mizaje Yabis*) in his body because of which he will be more prone to develop dry diseases. Similarly, if a person adopts such profession in which *buroodat* and *rutoobat* are in excess amount like fishery, sailing, washing of clothes etc, he will be more susceptible to develop diseases of cold and moist mizaj [9].

Classification of temperament according to age: The process of aging and change in temperament depends on *Rutubat ghariziyah* (protoplasm). It is a kind of khilt or fluid which is established and maintains the internal environment of the cells, i.e. mizaj depends upon this *rutubat* it is also responsible for binding of organelles together. If this *rutubat* decrease or vanish, the particles of the organs are shattered. Unani physicians have divided the entire span of life into four phases according to the quantity of *rutubat ghariziyah* present in the body. These are known as *asnan arba* (four periods).

a). *Sin-e-namu* [period of growth and development]: It extends from birth to the age of twenty five and their temperament is *haar ratab*.

b). *Sin-e-shabab* or *waqaf* [manhood], which lasts up to about Thirty five to forty years. And their *Mizaj* is *mutadil*.

c). *Sin-e-kahulah* (*Aetus verelis*): From forty to sixty years. The *Mizaj* during this phase tends to become *barid yabis*.

d). *Sin-e- shaikhukhat* [Senility/old age] during which the vital centre's become progressively weak until death and their *Mizaj* extreme *barid - yabis*.

An organism can exist only when it responds to environmental changes which demands respective adaptation. Each animal or organism, as a part of nature, is a complex and integral system, whose internal forces work so long as it exist, are equilibrated at every moment according to age with the external forces of the surrounding medium Thus, life is a long series of equilibration with the external environment.

These countless equilibrations of organism are manifested in the organism's diverse reactions to the influence of agents of the surrounding world.

From the findings of this study, it may be concluded that temperamental changes occur from birth to end of life because it is necessary for existence of life. The physiological conditions and requirements there under do not remain static throughout the entire span of life, they do vary so does the temperament also varies [24].

Determination of Human Mizaj:

The Mizaj is among one of the basics or fundamentals of Unani system of medicine. For a particular species the Mizaj is specific, lying in a particular range of maximum-minimum limit within which the Mizaj for all members of that species is confined. The *etidal* or equilibrium of this distinct Mizaj i.e. maintenance of constant internal environment (homeostasis) in different individuals leads to a healthy body i.e. normal body functions. Any derangement of Mizaj from *etidal* or imbalance of normal Mizaj results in *su-e-mizaj* which causes deranged body functions i.e. diseases.

Thus, it becomes necessary to ascertain some parameters to diagnose the human Mizaj. Determination of Mizaj in healthy or diseased state is very important. For this purpose, Unani physicians have described several parameters for determination of Mizaj. These parameters are known as the "Determinants of Mizaj". Almost all prominent Unani scholars described these determinants. However the most acceptable and appropriate determinants have been given by Ibn-e-Sina (980-1037 AD) in his famous book *Al-Qanoon-fil-Tib*; that are ten in number and are applied and used universally for the assessment of Mizaj [1, 9].

They are known as *AJNAS-E-ASHRA* shows in table no. 1:

Classification of Mizaj according to humours

The human body, as Greco-Arab system of Medicine quote, comprises four body fluids namely -*Dam* (blood), *Balgham* (phlegm), *Safra* (yellow bile) and *Sauda* (black bile), constituted by initiation of different proportion of all four *arkan*. *Dam* is hot and wet in temperament, *Balgham* is cold and wet, *Safra* is hot and dry and *Sauda* is cold and dry. The Mizaj of a man is characterized both by the fluid element and its physiological and physiognomic effects, and it is expressed by the preponderance of a particular *khilt* present in his body. Thus a man may be *Damvi* (sanguineous), *Balghami* (phlegmatic), *Safravi* (choleric) or *Saudavi* (melancholic) in nature according to the preponderance of *dam*, *balgham*, *safra* or *sauda* respectively.

The characteristic features of four types of Mizajs are as follows:

1. Sanguine Temperament (*Damvi Mizaj*): These people have hot and moist temperament, tall, strong and muscular body, broad chest, large and strong bones and well-formed joints, reddish complexion, thick, black and straight hair which shows rapid growth, mildly prominent veins, full and strong pulse.

According to Ibn Sina they have slight feeling of heaviness in their body especially at the base of the eyes, head and temple. They get troubled with hot environment and food. They feel comfortable with cold and dry things and like cold weather [9, 25].

Their digestive power is wonderfully good; the appetite keen, sleep sound, excreted urine is concentrated and in moderate quantity, physical activity and speech are average, psychological aggressiveness and psychic condition comes on easily and easily lost, mental condition is good, in dream red object are seen frequently and the general health is remarkably sound. The sanguineous individual looks everything from the bright side. He is optimistic and is always sure of success. He is extrovert and makes acquaintance with other people [17].

2. Choleric Temperament (*Safravi Mizaj*): These peoples have hot and dry temperament, a medium stature, thin and hairy body, moderate musculature, deficient fat, well-formed and prominent joints, yellowish complexion, thick, curly, black, rough and abundant hairs, prominent Veins, strong and rapid pulse. They pass fiery and yellow urine. Sometimes, they feel sensation of pain and pricks over the body [1, 9]. They feel comfortable with cold things and get troubled with hot things. Their most suitable weather is winter. The bilious (*safravi*) temperament manifested a short response delay, but the response is sustained for a relatively longer time.

Their digestive organs are active, appetite is good and sleep is light and often disturbed. According to Ahmad, these people are proud, revengeful, shrewd, and zealous and get angry quickly. They are also energetic and intelligent individuals with a strong inclination to indulge in sexual pleasure.

3. Phlegmatic Temperament (*Balghami Mizaj*): They have cold and moist temperament, flaccid and obese body built with soft and flabby muscles, flat chest, large and not well formed joints, whitish complexion, thin, straight, brownish or whitish hairs which shows slow growth, not prominent blood vessels, soft, slow and infrequent pulse. Their urine is colourless and more in quantity. They experience excessive heaviness of the body. Their movements and activities are sluggish. Their functions like digestion, appetite and thirst are poor, sleep is excessive, memory is bad and irretentive and their power of imagination and perception is slow and feeble. These people feel comfortable with the use of hot and dry things and in hot weather. They are sexually frigid and also do not get angry easily [19, 22].

The phlegmatic (*Balghami*) temperament is characterized by a longer response delay but the response is also short-lived.

4. Melancholic Temperament (*Saudavi Mizaj*): They have cold and dry temperament. They are characterized by lean and thin built with narrow chest, coarse and rough skin. Body hairs are profuse and the complexion is dark. Hairs are black, thin but have slow growth. According to Ahmad, the blood vessels are narrow and pulse is slow. Their digestion is weak and

has irregular appetite. They have interrupted sleep and often suffer from insomnia. Their sense is acute and excellent memory. Hock observed that the individuals of this temperament are irresolute, reserved, despondent without courage, slow and awkward. He further writes, "The melancholic is a man of missed opportunities." They show sluggish inclination towards sexual activity. They experience excess of evil thought and anxieties. The melancholic temperament exhibit along response delay and the response is sustained at length, if not, seemingly permanently [9, 17].

Relationship between Diseases and Mizaj: There is a close relationship between mizaj and diseases. People of one type of mizaj may be prone to develop a particular group of diseases in different stages of life and under different climatic conditions. For example, a person of cold mizaj is generally prone to obesity and of hot mizaj is prone to acute fever, heat stroke, dehydration, hypertension etc.

Diseases Associated with Sue Mizaj (Table no. 2 & 3) [7,9,10,21,26,27,28]

Parameters	Damvi	Safravi	Balghami	Saudavi
(1) MALMAS (Touch)				
i) Touch	Moderately Soft	Dry	Soft	Dry
ii) Temperature	Warm	Warm	Cold	Cold
(2) LAHM-WA-SHAHM (Muscles and Fat)				
Body Built	Muscular Muscles are fully developed & strong	Moderately muscular & less Fatty, Muscles are moderately developed/ large joint	Fatty & less muscular Joint well covered	Lack of fat & muscle Muscles are under developed
(3) SHAIR (Hairs)				
i) Texture	Thick & lusty	Thick & curly	Thin & straight	Straight & coarse
ii) Growth & Distribution	Rapid average	Rapids profuse	Slow Scanty	Rapid Excessive
iii) Colour	Blackish	Black	Brownish	Black & White
(4) LON-E-BADAN (Body Complexion)				
Complexion	Reddish	Yellowish	Whitish	Blackish
(5) HAYAT-E-AZA (Physique)				
i) Built	Muscular & firm	Slim & firm	Fatty & flabby	Lean & thin
ii) Chest	Broad	Wide	Flat	Narrow
iii) Height	Tall	Medium	Short	Short
iv) Blood vessels	Mild prominent	More prominent	Not Prominent	Narrow
(6) KAIFIAT-E-INF'AL (Responsiveness of organs)				
i) Tolerate well	Dryness	Cold	Heat	Dampness
ii) Remains well in	Spring	Winter	Summer	Autumn
(7) AFAL-E-AZA (Functions of the body organs)				
i) Digestion	Average	Strong	Poor	Irregular
ii) Appetite	Normal	Increased	Less	False
iii) Taste	Sweet	Bitter	Normal	Sour/normal
iv) Thirst	Normal	Increased	Decreased	Low
v) Salivation	Moderate	Decreased	Increased	Low
vi) Voice	High	Medium	Slow	Slow
vii) Respiratory rate	Easily / Rapid	Rapid/Increased & Regular	Slow	Slow
viii) Physical Activity	Average	Hyperactive	Not active	Decreased
ix) Speech	Average	Quick	Slow	Slow
x) Pulse	Azeem wa Qawi	Sari wa Matwatir	Saghir wa Bati	Bati wa Sulb
xii) Nausea	Sometimes	Very rare	Frequent	Frequent
xiii) Favorable Diet	Cold & Dry	Cold & moist	Hot & Dry	Hot & moist
xiv) Dislikes	Hot & moist	Hot & dry	Cold & moist	Cold & dry
(8) FUZLAT-E-BADAN (Excreta of the body)				
i) Urine Colour	Normal/Reddish	Yellowish	Whitish	Darkish/Blackish
ii) Urine Concent.	Concentrated	Dilute	Turbid	Turbid
iii) Urine Quantity	Moderate	Less	More	Less
iv) Stool Consistency	Semi Solid	Loose	Loose	Constipated
v) Stool Quantity	Voluminous	Less amount	Voluminous	Less amount
vi) Stool Colour	Brownish	Yellowish	Whitish	Blackish
vii) Stool Odoure	Odoured	Odoured more	Odourless/Avg	Bad odoured/less
viii) Sweat	Odoured, More	Odoured, more	Odourless, Avg	Bad odoured, less
(9) NOM-WA-YAQZA (Sleep and Wakefulness)				
Sleep	Average	Less	Excessive	Less & Disrupted
(10) INFALAT-E-NAFSANIA (Psychic reactions)				
i) Response	Aggressive	Brave	Weak	Coward
ii) Angers / Joy	Easily come easily lost	Frequent, severe & Persist for long time	Comes hardly easily lost	Infrequent but persists
iii) Mental Alertness	Enthusiastic prepared	Reactive provoked	Dull sluggish	Deep thinking
iv) Memory	Excellent, Long term Retention	Good, Short term Retention	Not good, can not retention for Long time	Not good but excellent retention
v) Behavior	Cheerful	Angry/Loose temper easily	Calm, Quick	Depressed, Nervous
vi) Decision Taking Power	Bold	Quick	Hesitate	Afraid
vii) Dream	Blood, red object	Five red or yellow object	White cold object	Fearful black object

Table no.1 Characteristics of Different Temperament

Sue Mizaj Har Sada	Sue Mizaj Barid Sada	Sue Mizaj Ratab	Sue Mizaj Yabis
-Hummae Yaum	- Istisqaetabli (Asicitis)	- Hummae Balghamiah	- Humme Rubo
-Hummae Shamsia	- Simone Mufrit	- Hummae Mukhtalifah	- Laghri
-Hummae Matbaqa	- BuhtusSoat (hoarsness of voice)	- Frequent infections	- Asthma
-Diabetes (Ziabitus Shakri)	- Hummae Balghamiah and mukhtalifah are more common in the person having sue mizaj barid	- Laziness	- Anosmia
-Headache		- Buhtus Soat (Hoarseness of voice)	- Bodyache
-Heat stroke	- Body ache	- Increased sleep	- Zo'fe Aaza
-Body ache	- Wajaul Mukassir	- Chest pain	- Male and female infertility
-Chest Pain	- Wajaul Khadri	- Zo'fe hazm (Dyspepsia)	- Ikhtilate Aql, fear
-Male and Female infertility	- Weakness of the body more common	- General weakness	- Chest Pain
-Weakness in the Organs or body	- Anosmia	- Prolonged fevers	- Fasaade Zikr
-Increased thirst	- Cough and Common cold	- Diarrhoea	- Suda'e yabis
-Insomnia	- Asthma	- Piles	- Suda'e Jimae (headache due to Coitus)
-Onset of senility occurs rapidly due to increased dispersion of fluid	- Chest pain	- Dysmenorrhoea	- Faasadus saut
-Complexion of Skin & hair becomes black	- Jooul Qalb	- Ulcers	- Thin and cracked skin
-Weak digestion	- Nafakh or flatulence	- Fistulae	
-Sudae Shirki Medi Har	- Infertility (male and female)	- Epilepsy	
	- Sudae Barid Sada (Khibtah)	- Stomatitis	
	- Symptoms due to Sue Mizaj Barid Kabid		
	- Loose motion		
	- Looseness in the body		
	- Tahabbuj (Swelling on the face)		
	- Decreased thirst.		

Table no. 2 Diseases Associated with Sue Mizaj

Har Ratab	Har yabis	Barid Ratab	Barid Yabis
- Hummyat	- Hummae Ghib	- Common cold	- Malancholia
- Epilepsy	- Hummae Matbaqa	- Pneumonia	- Common cold
- Bloody diarrhoea	- Hummae Diq (TB)	- Zatuljan'b (Pleuritis)	- Asthma
- Epistaxis	- Haemoptysis	- Hoarseness of voice	- Piles
- Inflammatory diseases and boils	- Ulcers in lung	- Throat pain	- Ulcer in lungs
- Haemoptysis	- Epilepsy	- Chest pain	- Frequent cough
- Paralysis	- Loose motion	- Back ache	- Irritation in the eyes
- Diphtheria	- Looseness of bowl	- Nervine diseases like	- Constipation
- Deafness	- Conjunctivitis	- Paralysis	- Increased urination
- Diseases in the eyes as false membrane is formed in eye	- General weakness	- Bell's palsy	- Female infertility
- Headache develops frequently	- Earache	- Isterkha	- Severe labour pains
- Digestion becomes weak (indigestion)	- Erysipelas	- Ikhtilaj	- Frequent vomiting
- Gout	- Inflammatory conditions	- Tashannuj	- Dawar
- Itching	- Sudae Safravi (Bilious headache)	- Dribbling of urine	- Jumood
- Epilepsy	- Usrul Bala'q (Dysphagia) due to Safravi	- Secretion from eyes, nose	- Fasade Fikr
- Insomnia	- Dawar (Vertigo)	- Sudae Balghami	- Qutrub (Type of mania)
- Piles	- Darde Meda (Safravi)	- Sarsame Balghami (Lisurghus)	- Epilepsy
- Decreased appetite		- Dawar (Vertigo)	- Saktah
- Asthma with cough		- Coma	- Darde me'da
- Falghamooni (Sarsame Damvi)		- Fasade Zikr	- Usrul bala
- Dawar (Vertigo)		- Epilepsy	- Insomnia
- Sakta		- Saktah	- Cancer
- Usrul Bala (Difficulty in swallowing)		- Tamaddud	- Qooba
- Sudae Damvi		- Kuzaz (Tetanus)	- Dry eczema
- Zaghtud Dam Qawi (HT)		- Siqlul Lisan	- Irregular fever
		- Usrul Bala'q (Difficulty in Swallowing)	- Hummae ruba (Quartern fever)
		- Fasaadus Saut	- Dysurea
		- Asthma.	- Spleenomegaly

Table no. 3 Diseases Associated with Sue Mizaj

CONCLUSION

Mizaj is a quality of an internal resultant of various body composition reactions, occurs in each and every cell of the body. It is a unique, suitable, perfect and benefiting to that body according to its requirements, and it is represented morphologically, physiologically, psychologically, and pathologically.

Mizaj of each and every individual varies widely as per composition as well as other surrounding factors and circumstances. Normal mizaj is defined as a condition in which a person survives comfortably with all signs of healthy life.

Mizaj of the body fluctuate within between certain minimum and maximum normal range according to the composition (quantity as well as quality), age of the body and environmental in which he reside.

From all these definitions it is proved that the Mizaj is a new quality which developed after inter mixing of the properties of particles of the elements which gives a new state to the compounds. For the formation of Mizaj it is necessary that different elements get combine together and form a new compound.

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