



Review Article

**INTER-RELATIONSHIP OF LIVER AS A PART OF *HAYAT AL AZA* (MORPHOLOGY) IN THE
FORMATION OF TEMPERAMENT IN UNANI SYSTEM OF MEDICINE**

Sameena firdaus^{1*}, Ferasat Ali², Mohd Mohsin³

¹Assistant Professor, Dept. of Kulliyat (Basic Principles of Medicine) Allama Iqbal Unani Medical College Muzaffarnagar, U.P, India.

²Professor, Dept. of Kulliyat, AKTC, AMU, Aligarh, U.P, India.

³Associate Professor, Dept. of Amraz e Jild Wa Taziniyat (Dermatology), AKTC AMU, Aligarh, U.P, India.

ABSTRACT

Temperament occupies an important place in Unani Medicine and forms the basis of pathology, diagnosis and treatment. This concept was originally introduced by Hippocrates.(460-370 BC) in which he stated that “It is more important to know what sort of person has a disease than to know what sort of disease a person has”. Ibn Sina says “Allah most beneficent has furnished every one and each of its member with a temperament which is entirely the most appropriate and best adopted for the performance of its functions and passive state”. Human interest in the liver is as old as the science of medicine. Since time immemorial it has been considered as one of the vital organs of a human body. It was during the Greco-Arabian period of medical history that the intimate relationship between the liver and the health of the individual was established. Considering liver as an important and essential organ, Hippocrates (460-377 BC) says “if we live a good life, it is because of the health of our liver” (Ibn-e-Zohr, 1989). Galen (131-210AD) believed that liver retained a dominant role as the “seat of sanguification and the source of veins”. According to Avicenna- “Physicians regard the liver as the seat of manufacture of the dense part of the humours” (Grunner, 1930). Avicenna further writes- “Liver is a large factory where due to digestive and metabolic changes, the various humours of the body are formed in plenty (Kabiruddin, 1947). According to Unani Physicians, humours play an important and deciding role in the creation of human temperament. Therefore it can be revealed that liver is an important metabolic organ, which plays an important role in the formation of temperament of a person.

KEYWORDS: Temperament, Liver, Morphology.

INTRODUCTION

Hippocrate said that the human body is composed of three parts i.e., (i) Solid known as organs (*aza*), (ii) Liquid known as humours (*akhlāt*) and (iii) Gas known as pneuma (*arwah*)^[1]. Scholars of the Unani Tibb has mentioned the humours and their associated qualities as: (i) *Dam* (blood) as ‘hot and moist’; (ii) *Safra* (yellow bile) as ‘hot and dry’; (iii) *Balgham* (phlegm) as ‘cold and moist’ and; (iv) *Sauda* (black bile) as ‘cold and dry’^[1]. Galen, one of the ancient Unani physician, used to refer word temperament to bodily dispositions, which determined a person's susceptibility to particular diseases as well as behavioral and emotional inclinations^[2]. Hence word temperament is often used in psychological sense but in medical sense it implies the blend of humours (biological constitution). Accordingly temperament is created by mixing humours and is named after dominant

humour in the body. When a person is said to have a hot temperament it means *Dam* humour has dominant over other humours. In the same way cold humour signifies the dominance of *Sauda*, dry temperament demonstrate the dominance of *Safra*, and moist temperament shows the dominance of phlegm. On this assumption, human temperament is also termed as *Sanguineous* (blood), *Choleric* (yellow bile), phlegmatic (*Balgham*), and melancholic (black bile)^[3].

Root of temperament theory in ancient humors

Temperament theory has its roots in the ancient four humors theory. It was the Greek physician Hippocrates (460-370 BC) who systemized and developed it into a medical theory. He believed certain human moods, emotions and behaviours were caused by body fluids (called “humors”): blood, yellow bile, black bile, and phlegm. Next, Galen (AD

131-200) developed the first typology of temperament in his dissertation *De temperamentis*, and searched for physiological reasons for different behaviours in humans. He mapped them to a matrix of hot/cold and dry/wet taken from the four elements^[4].

Health and Temperament

When humours are balanced in quantity and quality and well mixed than condition of Eukrasia (in temperament) prevails, man remains healthy. When however, as a result of disturbances, the balance is upset, dyscrasia prevails and individual becomes sick.^[5]

Need for Knowing of Temperament^[6]

The main aim of medicine is to maintain health or restore it if lost, and getting of these two things is impossible without knowing temperament of the patient as well as of the disease. If the temperament of a person is changed, his functions as well as structure tend to change resulting in disease. Any temperament of a healthy person represents a good profile of biological state which keeps perfect harmony between the environment within the body and outside environment. People of one type of temperament may be prone to a particular group of diseases in different phases of their lives and under different climatic conditions, because a body is most susceptible to such diseases having same temperament as that of it.

Determination of Human Temperament

Ancient Unani physician described the parameters for the determination of temperament in various manuscripts. These parameters are related to the morphological, physiological and psychological conditions of the human beings. These parameters are known as the "determinants of temperament".

The most acceptable and appropriate determinants were given by Ibn-e-Sina in his famous book *Al-Qanoon-fil-Tib*. These determinants are ten in number and are applied and used universally in the assessment of temperament. They are known as *Ajnas-E-Ashra* that are as following:^[9]

Touch	(<i>Malmas</i>)
Muscles and Fat	(<i>Laham-wa-Shaham</i>)
Hair	(<i>Sha'ar</i>)
Body Complexion	(<i>Laun-al-Badan</i>)
Physique	(<i>Hayat-al-Aza</i>)
Responsiveness of organs	(<i>Kaifiyat-e-Infe'al</i>)
Sleep and Wakefulness	(<i>Naum-wa-yaqzah</i>)
Functions of the body organs	(<i>Afal-ul-Aza</i>)
Excreta of the body	(<i>Fuzlat-e-Badan</i>)
Psychic reactions	(<i>Infialat-e-nafsaniyah</i>) ⁷

Hayat Al Aaza (Morphology of Organs)

There is a direct relationship of the temperament with the personality of the individuals, diseases, drugs and seasons, as well as in the treatment of ailments. That is why scholars of Greco-Arabs system of medicine heavily stressed on temperament, and tried their best to assess it with the help of "Ten Determinants of Temperament" or *Ajnas-e-Ashra*, which also comprises a most important parameter, *Haiyat-al-Aza* or body physique. The *Haiyat-al-Aza* or body physique or more recently "physiognomy" is the most important parameter among the *Ajnas-e-Ashra*, because body physique not only completely reflects the temperaments but also directly help in its assessment. In modern times this technique of body measurement is a science and art. It is a branch of Anthropology termed as Anthropometry (Anthro-man; pometry-measure), the constitution and morphology of human body is very important regarding the temperament. The shape and structure of human body as a whole or of its parts is first which comes in contact with a physician. The Greco-Arab scholars have clearly mentioned in their texts that how the body physique is helpful in evaluating the temperament. Galen has mentioned that people with average built i.e. not very thin, are emaciated or fatty; possess nearly equable temperament (*mizaj-e-motadil*). The people with hot and dry temperament are thin with good height while with cold and moist temperaments are flabby and fatty. The excess of bile result in thin and emaciated body and excess of blood is responsible for beautiful face and jolly nature.^[8]

Types of people according to temperament

- 1) Hyperesthetic type:** These people are very strong, athlete in physique with vigorous aggressive nature. Such qualities are found in bilious temperament i.e. in *Safrawi mizaj*.
- 2) Sthenic:** These peoples have average above mentioned qualities. Such people have sanguine temperament i.e. *Damvi mizaj*.
- 3) Hypoesthetic:** These are lazy, fatty and have non-athlete physique. These people are cool and calm. Such qualities are the sign of phlegmatic temperament i.e. *Balgami mizaj*.
- 4) Asthenic:** They are thin and lean with long extremities. They have depressed, submissive nature. Such qualities are the sign of melancholic temperament i.e. *Saudavi mizaj*.^[9]

So it can be said after above valuable quotes that there is inseparable relationship between temperament and physique. The human body and its

organs have a specific shape and structure without which there is no existence of the body and organs. This is because all people are different in their looks from each other. This difference is equally present in internal and external organ, but only the external physique is applied to assess the human temperament.

Role of liver in the formation of temperament

Galen says:

The structure and composition of the body is in accordance with the temperament of heart and liver. Among these organs, the one with powerful temperament will dominate on the body.^[8]

Razi holds the view that the temperament of an individual is proportional to the temperament of vital organs- heart, liver, brain and the testicles.^[10]

Thus on the basis of the above discussions, it is evident that the temperament of liver plays an important role in the formation of the temperament of an individual.

Liver, the largest gland of the body is said to be the seat of production of *Akhlata*. Unani physicians believe that humours play an important and deciding role in the creation of human temperament. Thus, liver is an important metabolic organ, which plays an important role in the formation of temperament.

Humours are produced in the liver

Various Unani physicians have described the role of liver in the production of humours from liver.

Ibn-e-Nafis asserts- liver is the largest factory for the production of humours.^[11]

Jurjani holds the view that liver is the seat of digestion of chyme and humours.^[12]

Khairallah explains the formation of humours in the following way:

“Humours are produced from the food. The food is first digested in the stomach (first digestion), where most of it is converted in chyle, and a small part is half digested and is converted into phlegm. The chyle passes on through the portal vein into the liver where the second digestion takes place. Here the chyle is divided into three parts- (a) the scum making the yellow bile, (b) the sediment, making the black bile, and (c) the remainder (the third that is filtered) which makes the blood”.^[13]

Kabiruddin while quoting Avicenna says:

“Liver is a huge factory where due to digestive and metabolic changes, the various humours of the body are found in plenty”.^[14]

Lateef observes in the regard – “Four things which are produced from liver metabolism are – dam, balgham, safra, sauda”.^[15]

Gazroni observes that humours are produced from second digestion, which occurs in liver.^[16]

Ahmad has pointed out towards this very fact as- “major metabolic processes of the body are performed through liver metabolism and most of the constituents of blood are formed through this metabolism. It is why the liver is said to be the seat production of *akhlata*.”^[15]

Hakim Taiyab has explained the formation of humours in liver in the following manner:

In the process of digestion the food is first changed into chyle and a part of it, which is not fully digested, is changed into phlegm. The chyle passes into the liver where it goes back through the second stage of digestion and yellow bile, black bile, and blood are formed.^[16]

Bhika and Haq observes in this regard- “traditionally humours are believed to originate from the liver”.^[17]

Unani physicians while explaining the importance of liver in the formation of humours have emphasized that major portions of the humours (*Akhlata*) are formed in the liver. This can be proved by the following:

1. In the formation of humours various organs take part but liver plays the most important and maximum role.
2. The function of liver in the formation of humours is greatest and most important but there are several other small organs where this process occurs continuously.

Thus, from the above discussion, it is evident that:

1. Humours are produced in the liver.
2. Not whole but major portions of humours are formed in the liver.
3. All the metabolic processes which results in the formation of humours and which are continuously going on in all organs are present in much greater amount in the liver.
4. Blood is admixture of humours (*akhlata*)

According to Unani medicine blood is admixture of all four kinds of *Akhlata*. In other words blood (*Dam*) is the name of admixture of *Akhlata*.

Following inference can be derived from the above discussion (conclusion)

1. Humours play an important role in the formation of temperament. In other words temperament is created by mixing of humours and is named after the dominant humour.
2. Liver is said to be the seat of production of humours.
3. All the metabolic processes which result in the formation of humours, occurs in almost every

organ, but are present in much greater amount in the liver.

4. The temperament of liver is responsible for the temperament of an individual.
5. Thus, liver plays an important role in the formation of temperament.

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*Address for correspondence

Dr Sameena Firdaus

Assistant Professor,
Dept. of Kulliyat (Basic Principles of
Medicine), Allama Iqbal Unani Medical
College, Muzaffarnagar, U.P, India.
Email:

samina_ahsan786@rediffmail.com

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