Dissolution, replenishment and vital organ: Liver in Unani perspective

Mohd Abu Bakar and Tariq Nadeem Khan

Abstract
Liver is a vital organ of the body. In the Unani System of Medicine all Unani Physicians and scholar has more emphasize on liver because it is a seat of natural faculty (Quwwat Ṭabiyya) and produce Humour (Akhlaṭ), which provide replenishment (badl maya taḥallal) to all organs of the body. According to Unani medicine formation of Humours occurs in Liver, when the temperaments and texture of liver is normal then produced humour is normal, if the temperaments and texture of the liver is deranged, abnormal Akhlāṭ are produced which may result in the disease causation. In Unani System medicine most of the disease produce by abnormal Akhlāṭ and in the treatment of most of the disease some drugs are used for correction of temperament of Liver and protection of adverse effect.

Keywords: Liver, Akhlāṭ, Mizāj, natural faculty

1. Introduction
Liver is the most important organ in the body. Unani scholars are assumes as kitchen of the body which prepare material for the replenishment for all body organs in the form of four Akhlāṭ {Dam (blood), Balgham (Phlegm), Ṣafra (Sanguine), and Sawda (Black bile)} [1, 2]. Liver is one of those three specific organs of our body which has been called by the physicians as Aaza Raisa (vital organs) executing three important faculties of the body, and is also responsible for the bodily functions [3, 4]. Hence, the physicians called these viscera as vital organs. These physicians also acknowledge that the digested food in the stomach and intestine goes to the liver via portahepatis where important transformation takes place. So, the nutritious matter which was earlier different in Mizaj (temperament), consistency, and even in colour turned in the liver into a homogenous substance which is red in colour, and includes traces of white, yellow, and black fluids named as Balgham, Ṣafra, and Sawda respectively. These four fluids, also said to be Akhlāṭ-Arba, (Four Humors) are at first transported to the heart through veins and then to other parts of the body for sake of nutrition through arteries [5].

2. Types of organ in the body
In human body Aaza (Organs) develop from denser part of Akhlāṭ (humors) are varying in size, shape and relationship, and Akhlāṭ are made from Arkan (Basic constituents i.e earth, water, air, and fire) are present in consumed food [6]. Ali Ibn Abbas Majusi says, Akhlāṭ are the proximate principles for the human body but more proximate are Aaza Basita (simple organ) which are composed of Akhlāṭ and are composed of Aaza Basita or mufrada (simple organs) combined to form Aaza Murakkaba or Aliya (compound organs) [7]. Therefore organs present in the human body are of two types-simple organs and compound organs. Every organ is having specific function and specific capacity to perform its function [6].
Simple organs are those in which visible and perceptible parts carry the same name and definition as the whole organs like bone, nerve, tendon etc. these organs are homogenous as their particles are of similar type. Simple organ has specific Mizaj. Some simple organs are soft like flesh, fat, membrane and skin etc. some are hard like bone, nerve, tendon and ligament etc. [8, 9]. Compound organs are heterogeneous and composed of many simple organs. The comprising parts of these organs differ in nature and name from whole organ e.g. face, hand, foot, stomach liver and heart etc. Thus a part of the face cannot be called face and a part of hand cannot be called the hand.

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Compound organs are also called the instrument of expression because it is through them that all movements and functions are carried out [9].

Compound organs classified in vital organs and non-vital organs. Vital organs are those which are necessary for the maintenance of life. According to Jalinus (Galên) numbers of vital organs are equal to the number of necessary Quwa (faculties) in the body. Since, there are three basic faculties for the preservation of individual, and one additional faculty for the preservation of species. Accordingly for preservation of individual vital organs are three in number [7].

1. Qalb (Heart): seat of Quwwat Haitaniya (vital faculty)
2. Dimagh (Brain): seat of Quwwat Nafsaniya (Psychic faculty)
3. Kabih (Liver): seat of Quwwat Tabiyya (Natural faculty)

### Table

<table>
<thead>
<tr>
<th>S.N.</th>
<th>Name of faculty</th>
<th>Specific vital organ</th>
<th>Other supporting organs</th>
<th>Main function</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Quwwat Haitaniya</td>
<td>Heart</td>
<td>Lungs and pulmonary arteries</td>
<td>Supplies nutrition and Ruḥ to all organs</td>
</tr>
<tr>
<td>2.</td>
<td>Quwwat Nafsaniya</td>
<td>Brain</td>
<td>Nerves aided by eyes, ears, nose, tongue and the skin</td>
<td>Control the sensory and Motor activity of the body</td>
</tr>
<tr>
<td>3.</td>
<td>Quwwat Tabiyya</td>
<td>Liver</td>
<td>Mouth, oesophagus, stomach and intestines</td>
<td>Production of Akḥlat and Digestion</td>
</tr>
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</table>

Non-Vital organs (Supporting organs) are those which provide the support to all three vital organs in their life saving functions [7]. In the three vital organs the centre of Quwwat Haitaniya is heart where the generation of Ruḥ is ensued, and its subordinate organs are lungs, and pulmonary arteries. The centre of Quwwat Nafsaniya is the brain and its subordinate organs are the nerves aided by eyes, ears, nose, tongue and the skin; the main functions served are sensory, motor, and cognitive functions. The centre of Quwwat Tabiyya is located in the liver, and subordinate organs are mouth, oesophagus, stomach and intestines; these organs render the food such a suitable form which is easily transformed into the blood under the influence of Ḥararat (Hotness) of liver [1, 3, 6, 8, 10].

### 3. Liver and Akḥlat

Abu Sahl Masihi stated that Natural faculty is the faculty which supplies nutrition to entire body and expels out their waste products [8]. Actually, the nutriment we consume e.g. in form of different food is a potential nutriment, not real/actual nutriment, that cannot be utilised by body directly, so it has to be converted into blood in liver then only can be utilised by the organs of the body, as Ibn Rushd has mentioned that in the liver nutriment get converted into blood which provide nutrition to every organ [3]. That is the reason liver is said to be the seat of Natural faculty, hence with reference to Jalinus, Ibn Rushd has called the liver as Raʾis mutlaq (chief organ) for Natural faculty [3]. Although, blood is also potential nutriment but it is proximal potential nutriment [3]. A nutriment is said real/actual nutriment only when it gets converted into organs [10]. That is why after entering the body nutriment undergo a long process till it get converted in living tissue, in this way providing replenishment of what is lost from dissolution of the body, also helping the body to grow (if possible) hence preserving the body as well species [8].

Moreover, a person passes through many crucial stages of his life since zygote formation to his adulthood with a continuous process of growth. This substantiates the evidence that the human body is being provided constantly with those important matters which are a part of body constitution and also support to the survival and revival of the life, as no object may increase its size until supplemented with its constituents. Jalinus states that a plant of merely one meter height grows into a huge tree does indicate that the nutritional substances i.e. earth; water, air, and fire were adequately absorbed by the Ṭabiat, (physsis) it acted upon these matters, and made them the constituents of the plant. The same process of life does take place in the human beings. A person takes varied types of food substances, and then Ṭabiat acts upon them and transforms the same into the constituents of the human body [12]. For this purpose, human body endowed with a special faculty known as natural faculty and liver is the seat organ for this faculty while stomach, intestines are the supporting organs, the main function of this faculty is to provide the replenishment of the loss due to dissolution regularly occur in body organs by various metabolic activities. The process of conversion and digestion get started from the mouth and continues till it becomes the part of the body organs. These processes or changes have been named by the ancient physicians according to their locations where these occur, such as Ḥazm Medi (gastric digestion), Ḥazm Kabidi (Liver digestion), Ḥazm Uruqi (vessel digestion), and Ḥazm Uzwi (organ digestion) [5].

Gastraic digestion denotes transformation of ingested food particles into the simpler forms which encompasses the process starting from the mouth to intestines. Stomach transforms the large food particles into the simpler one, and the same process is again repeated in the intestines, and finally, it acquires the shape of a thick liquid substance, brown or whitish in colour, called as Kaylus (chyme) which drains into the liver through the mesenteric vessels, and contributes in the formation of Akḥlat [5]. These Akḥlat are finally supplied to the organs through vessels to provide the nutrition [13]. The digestive and metabolic changes occurring in the vessels and organs are known as vascular digestion and organ digestion respectively.

Regarding Vascular digestion, least literature is available, although there are such writings in abundance related to organ digestion which may aid in understanding the gastric digestion [5].

For instance, Ibn Sina says that every organ is bestowed with a unique and specific faculty, called as Quwwat Mughāyiya Saniya (secondary transformative faculty). This faculty, with the help of its subsidiary faculties, extracts only those portions from the blood which are required to the organs, and lastly renders the portion to the shape of that organ [5].

Moreover, Ibn Sina, in a discourse on classification of body fluid indicating to the organ digestion says that body fluid is broadly of two types: primary fluid and secondary fluid: Primary fluid is Akḥlat processed in the liver. Secondary fluid is further classified into Raḥbat Fazul (superfluous) and Ghair fazul (non-superfluous) [6].

Ibn Sina, under the description of which includes four other fluids, says these are not included into the Akḥlat. One of these Raḥbat is Raḥbat Manwiyya (inmate moisture/fluid) an inseparable part of the organs. Rest three Raḥbataat- Maḥṣura, Ṭaliya, Qaribbalqad- are secreted from the vessels into the
tissue spaces or cavities of the organs, but could not become a part of the organs due to their immature consistency and Mizaj [3].

In fact, these three types of fluids are the different than stages of transformation from blood to other organ which take place in the organs and come under the organ digestion. Thus, Akhliyat get converted, in terms of their temperament and consistency, into the shape of nutritive organs with the help of organic digestion [5].

The above discourse infers that the various types of the foods which the human ingest, are not directly processed to be the part of any organ, but undergo a continuous process of transformation at various stages and render it to the temperament and consistency of desired organ, these metabolic changes are called four digestion and all are comes under the natural faculty and the liver is the seat for this faculty it means that liver play very important role in the process in which organ get replenishment against their dissolution and that is essential for life.

4. Conclusion

Continuous dissolution is occurring in the body due to various reasons. If this dissolution remains continue and replenishment is not provided, then body as well as life cannot be sustained [14]. Therefore, replenishment of this dissolution is mandatory. To provide replenishment, replenishing entity must be identical to lost material [15]. In human body this replenishment is provided by ghiza (nutriment) and the process of providing replenishment to the body is referred to as Taghziya (nutrition). Provision of replenishment is a gradual process which is accomplished by vegetative faculty. The process of Nutrition is very complex as the nutriment enters body; it undergoes a long process that results in conversion of complex form of nutriment into simpler one that can be utilised by the tissues. So, to serve the function of Nutrition, body is furnished with vegetative faculty that provide badl maya taballal (replenishment) and eliminate waste products from the body and Liver is the seat organ for this Faculty and produces humours from nutrients and circulates it for all body organs for their nutrition via vessels.

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