

Review Article

## Role of *Harārat Gharīziyya* (Vital Heat) and *Tabi'At* (Physis) During Growth and Process of Ageing: A Review

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### ABSTRACT

**Background and objectives:** Concept of *Tabi'at* (Physis) is pivotal in Unani system of medicine. Physis executes various metabolic functions in human body and uses vital heat as a tool for these functions. Physis maintains normal *Mizaj* (constitution) of the body because it is the basis for health. It causes growth and development in all organs of the body. This process of growth and development remains continue by Physis till the vital heat is in sufficient quantity. As much as age advances and development reaches the stages of stability *Harārat Gharīziyya* remains active and accomplishes all developmental tasks very well up to this stage. After this deterioration starts in vital heat and dissolution comes gradually. When vital heat decrease Physis becomes unable to execute its functions. In this article we will discuss the role of Physis regarding growth and process of ageing with the help of vital heat.

**Key words:** *Tabiat, Physis, Vital heat, Ageing, Hararat, Mizaj.*

### INTRODUCTION

Ageing is a phenomenon that presents various alterations in neurochemical, behavioural and physiological processes. This process brings about many changes in body composition, it is generally agreed that changes in body composition are due to alterations in energy balance, with a positive energy balance leads to weight gain and a negative balance results in weight loss. However, body composition and its changes are associated with ageing often occur in the absence of weight fluctuations. <sup>(1)</sup>

During living processes and tasks e.g. movement, respiration, metabolism,

growth, development and reproduction *Tahallul* (dissolution) occurs continuously. This dissolution is inevitable. Therefore, for continuation and sustenance of life this dissolution must be replenished. <sup>(2)</sup> For replenishment what material is being used must be identical to the lost material. It is a fact that nutriment is not utilised in the body directly as consumed. However, it undergoes a long process inside the body; hence, complex nutriment converts into a simpler form. This process starts in the stomach and intestines, Firstly nutriment converts into *kaylūs* (chyme) then further processing occurs in the liver where *kaylūs* converts into *Akhlāt* (humours) which are

capable of nourishment. These humours are transported to the organs of the body to be nourished and to provide replenishment of dissolution. These all processes occur in the body in presence of a heat known as *Harārat Gharīziyya* or vital heat. *Harārat Gharīziyya* acts as a common tool for all type of *Quwā* (faculties) whether it is *Quwwat ṭabī'iyya* (natural faculty), *Quwwat ḥaywāniyya* (vital faculty) or *Quwwat nafsāniyya* (psychic faculty).<sup>(3)</sup> These faculties are the source of body functions. Since no function of the body can be accomplished until *Harārat Gharīziyya* remains at moderation that is why *Harārat Gharīziyya* is said to be the tool of all body faculties.<sup>(4)</sup>

## REVIEW OF LITERATURE

Concept of *Harārat Gharīziyya* is unique in Unani system of medicine and it is based on description and fundamental of ancient physicians. They described that existence of human life depends upon *Harārat Gharīziyya* which is found in human bodies. Ali Bin Abbas Majoosi writes that all body functions are performed by this *Harārat*, various diseases occurs when there is imbalance in it. He also described it as a natural or innate heat. According to Jalinus (Galen) *Harārat Gharīziyya* is actually *Harārat Nāriya* 'unsuriyah that is produced while attaining *Mizāj* (constitution) and is responsible for body's consistency and remains in the body throughout the life.<sup>(4,5)</sup> This *Harārat Gharīziyya* keeps the body warm and all body faculties use this heat as a tool and perform their functions. Ibn Rushd said that this *Harārat* is present in seminal fluid and semen is a form of concocted blood hence it can be said that it is present in the body since conception afterward it get support by various *Arkān* (basic constituents).<sup>(6)</sup>

This is a well known fact that, various changes continuously take place in human body throughout the life. For example when body unexpectedly exposed to cold water or any sort of harmful thing or during running and exercise augmentation

in *Hajat-e-tarweeh wa tanqiya* (respiratory rate) occurs, Physis constantly stands to manage these situations and try to maintain equilibrium of the body. Physis preserve this *Harārat* by maintaining *e'tadal-e-mizāj* (normal constitution) in tissues, organs and entire body.<sup>(3,6)</sup>

Concept of *Harārat Gharīziyya* is a fundamental concept and it is described as physiological heat suitable to living beings. Originating in the heart, it takes part in the vital and organic functions of the human body.<sup>(4,6)</sup> Its nature and role is bound up with the definition of life within a theoretical framework combining natural philosophy and medicine. It is also related to innate moisture known as *Ruṭūbat Gharīziyya*, so that the *Harārat Gharīziyya* often refers to the vital substance formed by the spirit. Within the human body the *Harārat Gharīziyya* is sourced in the heart and cooled down by the inspiration of atmospheric air in the lungs during breathing. At the same time, it is spread from heart through blood towards whole body to operate the vital functions.<sup>(3)</sup> In particular, it is the tool of the soul in order to achieve the physiological functions of generation, growth, and nutrition mainly digestion and metabolism. It is also in charge of forming the vital spirit in the left ventricle of the heart.<sup>(2,7)</sup>

### **Tabi'at. (Physis)**

Basically there is a special ability hidden in every individual called the administrative mechanism of the body or described as *Tabi'at muddabar-e-badan* in Unani system of medicine.<sup>(8)</sup> Physis is the best physician, and maintains the equilibrium of body humours. For the maintenance of health, the quantity and quality of the four humours should be as per the optimum composition of the body. A well-known Unani Scholar, Rabban Tabri in his treatise, *Firdousal Hikmat* has mentioned that, practically Physis is regarded as an administrative power of the body.<sup>(4)</sup> Now a day's environmental studies proved that there is a administrative mechanism in human body to face different environmental

changes and protect the body from the effect of environmental variations. This administrative power potentiates the body to perform all physiological functions without any effect of the environment on the body. (8)

According to Athenian philosopher Plato "Physis is God gifted faculty which is postulated for all welfare functions of the body" or in other words we can say that all body functions are executed by Physis. (3) Aristotle said that Physis is the hidden performer and is the source of all motions and rests of the living beings. Hidden performer means Physis execute its all functions in the body and person is not aware of them. (6)

Physis is also known as our life force. It has been described as our vital spark, and the governing principle of our existence. It is an old concept, with a history going back millennia, embodied in many forms of natural medicine. It is found not only in our own bodies, but in all living creatures. It is the healing power of nature, inborn from the moment of our conception, and lasts until our last breath. It is not a force which is open to direct experience. It does not reside as a discrete entity or structure within the body. It exists as a construct which organizes and controls all aspects of daily existence. It is only evident through its effects and qualities, especially the ability to keep the body in dynamic equilibrium or homeostasis. (10)

#### **Process of growth and ageing:**

Ibn Sina and Ibn Rushd writes "Sustenance of life depends upon *Harārat* and this *Harārat* depends upon a *Ruṭūbat* which takes part in growth and nutrition but for the proper growth and development there is need of *Quwwat-e-fa'lah* (active power), *Nafas* and Physis. Physis acts as a active power and uses *Harārat Gharīziyya* as a tool for these functions."

As per concept of Unani system of medicine that human being takes origin from *Ruṭūbat-e-Manwiyya* (seminal fluid) of their parents in which male sperm act as *fa'el* means active, female ovum is *Mafo'ol*

means passive and provides *Maddah* (basic material) for reproduction. (6,11) Every human being is born with specific and innate *Mizāj* (constitution). Ibn Sina said that longevity and existence of life determined by *Mizāj* in any particular person. In modern science the process of ageing and death are silent mysteries on the molecular level. (12) Ibn Sina has explained the process of ageing in detail. According to him at the time of birth quantity of *Rutubat* is more as compare to the *Harārat*, *Ruṭūbat* provides *Maddah* (basic material) for growth while *Harārat* makes changes in that *Maddah* and causes growth of the body in all three dimensions i.e *tool*, *eard*, *umaq*. (13) The ancient physicians have divided the entire period of life into four stages on the basis of quantity of *Ruṭūbat Gharīziyya* and *Harārat Gharīziyya* present in the body. (14) These are collectively known as *asnan-e-arba'a* and are as follows: (15,16,17)

I. *Sinn-e-numū* (period of growth)

II. *Sinn-e-wuqūf* (period of stagnation/stability)

III. *Sinn-e-kahūlat* (period of decline)

IV. *Sinn-e-shaykhūkhat* (period of superannuation)

#### ***Sinn-e-numū:***

It is the growing age that extends from the birth up to thirty years. (18) In this age Physis grow the body organs along with *Harārat Gharīziyya* and *Ruṭūbat Gharīziyya*. In this period *Ruṭūbat Gharīziyya* is in excess quantity and sufficient for the preservation of *Harārat Gharīziyya* which is necessary for various metabolic functions of the body and for growth and development of the body. (19) This period is further sub divided into *Sinn-e-tufulat*, which extends up to the four years of age, (16) *Sinn-e-saba*, which extends up to seven years of age. (16) In this period quantity of *Harārat* is more in comparison to other periods and that's why *Quwwat namiya* grow the body and body organs without any delay or resistance, this *Ruṭūbat* is acted upon by *Harārat Gharīziyya*, because *Ruṭūbat* can't cause growth independently, so *Harārat* in the form of

energy is essential. <sup>(16)</sup> *Sinn-e-tara'ru* this period extends up to thirteen years of age, *Sinn-e-rihaq* this period extends from thirteen years to twenty years of age, <sup>(16)</sup> *Sinn-e-fata* it is the last stage of *sinn-e-numū* and extends up to thirty years of age. In this period *Quwwat-e-namia* stops its work and *Harārat* and *Ruṭūbat* are excellent in this period. <sup>(3,15,16)</sup>

#### **Sinn-e-wuqūf:**

This period starts after the age of *Sinn-e-numū*. In this period body faculties are very strong however dissolution and its replenishment are equal. In this period the quantity of *Rutubt Gharīziyya* is sufficient for preservation of *Harārat Gharīziyya* that means neither it is excessive nor deficient. <sup>(19)</sup>

“*Harārat Gharīziyya* is strong in young age because they have proper quantity of blood, that's why they suffer from epistaxis frequently and persons constitution is *Har* in this age and tilted towards *khilt-e-safra*”. <sup>(16)</sup>

Physis maintains this equality between dissolution and replenishment with the help of *Harārat* and body faculties, in this period neither any growth nor any degeneration in the organs takes place. This period continues up to forty years of age due to the balanced quantity of *Rutubt Gharīziyya* and *Quwā*. <sup>(3,16)</sup>

#### **Sinn-e-kuhūlat:**

“After *Sinn-e-wuqūf Harārat* begins to decrease because the ambient air dries up the *Rutubt* of the body. *Harārat Gharīziyya* also causes dry up of this *Rutubt*. Various physical and psychic activities which are integral part of human life, also reduced by this *Ruṭūbat*. Physis is incapable of resisting these factors forever, as all bodily faculties are limited, as it has been proved by physicians. They can't function perpetually in supplying food. And even if the supply were unlimited and had been perpetually compensating for what is destroyed, while the destruction is not fixed in quantity but goes on increasing day by day, compensation could not counteract the

destruction and later would annihilate the *Ruṭūbat*. When in such case, it is necessary follow that the *Ruṭūbat* should perish and consequently and *Harārat* will be extinguished”. <sup>(17)</sup>

In this period quantity of *Ruṭūbat Gharīziyya* is lesser than the quantity required for preservation of *Harārat Gharīziyya* and not sufficient for metabolic and digestive functions. <sup>(19)</sup> This period extends up to the age of sixty years and in this age deterioration in the *A'da'* (organs) starts thus body starts losing its stability. <sup>(16)</sup> Due to gradual decrease in *Harārat Gharīziyya*, constitution of human begin diverts from its normalcy (*har ratab*) towards *Brudat* (coldness) and *Yaboosat* (dryness). *Brudat* occurs due to loss of *Harārat Gharīziyya* and *Yaboosat* occurs due to dissolution of *Ruṭūbat* at organ level. This period is also called *Sinn-e-inhitat* due to dissolution of *Harārat Gharīziyya*, body faculties and body organs. <sup>(3,17)</sup>

#### **Sinn-e-shaykhūkhat:**

This period starts after the period of *sinn-e-kuhūlat* i.e. after sixty years of age and lasts till death. In this period quantity of *Ruṭūbat Gharīziyya* is deficient and lesser than the quantity required for the preservation of *Harārat Gharīziyya* and body function. In this age dissolution of *Harārat Gharīziyya* and body faculties occurs to greater extent. <sup>(16)</sup>

“*Brudat* and *Rutubat Gharībiyya* (altered innate moisture) are dominant in this age”.

*Brudat* is more dominant than *sinn-e-kuhūlat* as replenishment is not provided as per need. In these last two phases of age *Yaboosat* of bone and skin indicates the *Yaboosat* in the constitution due to insufficient quantity of *Ruṭūbat Gharīziyya*. In this period there is marked deterioration in the body faculties, seen due to markedly reduced *Ruṭūbat Gharīziyya* and *Harārat Gharīziyya*. <sup>(1,19)</sup> And indigestion occurs so *Ruṭūbat fadliya* is produced and accumulate in large quantity and causes further diminution in the *Harārat Gharīziyya*. <sup>(3)</sup> *Sinn-e-shaykhūkhat* causes so many abnormal conditions in human body such as

behavioural, physiological and psychological abnormalities.

## CONCLUSION

From the above explanation of ageing process, it is quite clear that, the process of ageing is completely dependent on *Ruṭūbat Gharīziyya* and *Harārat Gharīziyya*, means both are directly proportional with each other and *Harārat Gharīziyya* is the tool of Physis. As this *Harārat* decreases with the advancement of age, the functions of Physis also reduces because the function executed by Physis are interlinked with *Harārat Gharīziyya*, *Ruṭūbat Gharīziyya* and constitution of human. (18,20) As these are considered as tools of Physis, any deviation in these, finally affect the action of it and if this condition persists it leads to detritions of health (i.e. ageing or death). (11)

The concept *Harārat Gharīziyya* of is based on deep philosophical insights and principles and considered most important tool during the process of ageing. During the period of growth it is excess in quantity and sufficient for development of body organs. As much as age advances and development reaches the stages of stability *Harārat Gharīziyya* is more active and accomplishes all developmental tasks very well up to this period. After the stage of *sinn-e-waquf* deterioration starts in this heat and dissolution comes progressively. When person reaches the stage of *shekhukhat* vital heat is about to diminish completely and *Brudat* occupies all the organs. When complete extinction occurs in *Harārat Gharīziyya* Physis becomes unable to perform its functions for continuation of life.

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