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CODEN: IJRSFP (USA)

International Journal of Recent Scientific Research Vol. 10, Issue, 03(F), pp. 31574-31577, March, 2019

International Journal of Recent Scientific

Research

DOI: 10.24327/IJRSR

Research Article

EXPLORATORY APPROACH OF HARĀRAT GHARĪZIYYA (INNATE HEAT) IN GREEK-O-ARAB MEDICINE: A REVIEW

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DOI: http://dx.doi.org/10.24327/ijrsr.2019.1003.3289

ARTICLE INFO

Article History:

Received 15th December, 2018 Received in revised form 7th January, 2019 Accepted 13th February, 2019 Published online 28th March, 2019

Key Words:

Harārat gharīziyya, Unani, Tabiat, Rutūbat gharīziyya, innate heat, innate moisture.

ABSTRACT

Unani system of medicine also known as Greek-o-Arab medicine it is one of the popular traditional systems of medicine and well known for its unique concept and rational approach for exploring the unsolved and difficult problems related to health and diseases. Among various concepts of Unani system of medicine one of the sole concept is of Harārat gharīziyya. It is defined as natural heat which is endowed in the body at the time of conception and exists up to the entire life. This heat is associated with a fluid known as Ruṭūbat gharīziyya (innate moisture) and every individual receives this Ruṭūbat from parents. Performance of all important functions is concerned with innate heat such as digestion, metabolism, growth, development, replenishment of dissolute substances etc. When Harārat gharīziyya deviates from its normal level produces serious pathological conditions in the body. In this review the basic concept of Harārat gharīziyya and its importance in human body will be discussed in detail.

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INTRODUCTION

According to Unani system of medicine every organ has a specific function and performance of that function depend upon an innate heat which is known as Harārat gharīziyya. Literally it has the meaning of natural harārat (heat) which is present in living body since its existence. (1,2) This heat performs all physiological functions for the survival and continuation of life. (3) All the functions of human body which are necessary for life, concerned with replenishment, growth and dissolution requires an optimum level of body temperature. Ancient physicians described this heat or temperature as Harārat gharīziyya or Harārat tabiyya which is essential for the maintenance of sihhat (health), and deviation from its normal level, due to any reason, can affect the normal physiological functions and may cause certain disorders. (3,4,5) Unani scholars had described this heat in detail as vital heat, innate heat or vital pneuma in their literature. (6,7)

Review of Literature

Basic Concept of Harārat Gharīziyya

Human body continuously produces heat and energy in all organs within a normal range so that they can perform their normal functions adequately. Any type of variation in the body either it is chemical change, humoural movement (akhlāt moharrika), hormonal secretions, growth of organs and physiological functions all are based on Harārat gharīziyya. (8) Basically this heat perform metabolism in the human. If quantity of Harārat gharīziyya in any person is more but within the normal level as compare to other person, that person will be considered having har mizāj (hot constitution) and if Harārat gharīziyya is less, the person will be of barid mizāj (cold constitution). When Harārat gharīziyya is normal in range the constitution of that person will be moatadil (normal constitution). (4)

According to the Unani system of medicine human and all creation in this world are formed by intermingling of four

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arkān- ard (soil), ma (water), hawā (air) and nār (fire). (9) In human being, these four arkan are endowed in the body from semen of their parents. Male secretion contains more parts of rukn hawā (air) and nār (fire) whereas female secretion contains more rukn ard (soil) and ma (water). (10) Through eatables, drinks and respiration, in form of nutriment and air, the 'unsuri mawād (basic constituents) enter in the body and remain inside organs in the form of akhlāt (humours). Within 'unsuri mawad, various metabolic processes and interactions occur which result in formation of different products and biproducts. These metabolic processes and stages are denoted by various names like hadm (digestion), nudj (concoction) or tabakh etc. (11) These processes not only occur in the digestive system but also inside each and every organ. Therefore within each organ, various complex mechanisms of istihāla (metabolism) or kaun-wa-fasad (genesis and destruction) occur. These processes lead to formation of number of products. Besides this, it is a well known fact that istiḥāla or kaun-wa-fasad is invariably accompanied by production of heat. This means that in each and every organ of the body, above mentioned process takes place continuously resulting in constant production of heat. Until the production of heat occurs in moderation, the organs remain constitutionally balanced. This heat is conductive to bodily functions and is termed as Harārat gharīziyya. (4,12)

With reference to Zakaria Razi, Mahmood Amli has written that when it remains at equilibrium, it is known as Harārat gharīziyya but when it elevates from normal then it is known as Harārat gharība (increased heat). (4) Ḥarārat gharīziyya is associated with a fluid known as Ruţūbat gharīziyya (innate moisture). At the time of conception every individual receives this Rutūbat from parents. (13) It is an established fact that human body is formed from the union of seminal fluid of male and female. Gonadal fluid of male is considered as active while that of female is passive and both are moist. Ajza' ardiya and ajza' maiya are comparatively more in gonadal fluid of female while in seminal fluid of male ajza' nariya and ajza' hawaiya are more. After interaction of male and female gonadal fluids zygote is formed which is hot and moist in mizāj (constitution). (4,13) This *Rutūbat gharīzivva*, is actually *rutūbat* aşliyya acted upon by Harārat gharīziyya continuously, results in dissolution of this rutūbat gradually because Harārat gharīzivva facilitate those functions which are necessary for continuation of life. (4) Since *Ruṭūbat gharīziyya* is the seat for Harārat gharīziyya and continuously undergoing the process of dissolution, if replenishment is not provided then it will come to an end or it will get dissolute completely. (3,14,13) This process of dissolution of Ruţūbat gharīziyya can be understand by considering Ruṭūbat gharīziyya as oil of a lamp and Harārat gharīziyya as lamp's flame and flame is lit by consuming the oil which it eventually consumes. (14) Once the Ruṭūbat gharīziyya vanishes, Harārat gharīziyya would be extinguished and the person will die. (15)

Although the amount of *Ruṭūbat gharīziyya* (innate moisture) alone is not sufficient to sustain life for more than few weeks. (4) So to sustain life for a definite period innate moisture gets support from food/nutriment consumed. It is a fact that *ruṭūbat* or *akhlāt* produced from the consumed food cannot replenish innate moisture because both are different. That's why, process of maturation of *Ruṭūbat gharīziyya* is different from that of

ruţūbat or akhlāt produced after the digestion and metabolism of consumed nutriments. However, its dissolution can only be minimized by providing support through nutriment. Replenishment of these body fluids and moisture occurs by nutriments which are continuously getting dissolute along with innate moisture under the effect of heat. (16) These are Rutūbate damwiya (blood) as stated by Allama Kabiruddin. Moreover, the support through nutriment can be provided only up to a certain age as long as quwā (faculties) responsible for providing replenishment or nutrition are strong. Since with advancing age, quwā become weak hence they cannot provide replenishment equal to dissolution. (12) As small amount of Rutūbat gharīzivva is getting dissolute daily along with other fluids of the body, so at a time when whole quantity of innate moisture dissolute results in extinguishing of Harārat gharīziyya. This process of complete dissolution of this moisture causing extinguishing of Harārat gharīziyya is referred to as natural death. (3,12)

Views of Different Unani Scholars

Many theories evolved in early antiquity to explain the different aspects of innate heat, the formulation of Galen (second century), who incorporated aspects from, among others, Hippocrates and Aristotle, superseded those of his predecessors. Galen's theories of human physiology, including innate heat, remained prevalent, with only minor variations, up to the eighteenth century. (17) In "De anima" Aristotle (384-322 BC) defined body heat as that "any natural body that has dimensions and limits is held together by the continually ongoing activity of its internal heat. This is a special kind of heat in living bodies and a substance he calls "pneuma" which is needed for living things to initiate motion". Aristotle thinks that internal heat is a contributory cause for digestion. (6,7)

Muḥammad bin Yūsuf Harawi (1542 A.D) mentioned in his book *A'inul Ḥayāt*, that existence of human life depends upon *Harārat gharīziyya* which is found in human body. According to him this heat is present in the body and is responsible for keeping the body live or maintaining the morph of the body. This heat helps in accomplishment of all those functions of the body which are responsible for sustenance of life e.g. absorption and assimilation of useful entity and excretion or expulsion of waste from the body. (3) As described in Unani literature this heat is different from other types of heat. It does not have the characteristics of *hiddat* (intensity), *laza*, *ehraq* (burn) and does not causes putrefaction and destruction in the body. *Tabi'at* (physis) uses *Harārat gharīziyya* as a tool in different body functions. (4)

Plato (428-348 BC) described *Harārat gharīziyya* as God gifted heat. Sustenance of this heat depends upon a *maddah* (basic matter) known as *Ruṭūbat gharīziyya* (innate fluid) which is used as a fuel for this and the quantity of this fluid is fixed in human body but it persist in the body till death because *Tabi'at* gives the supplementary support to *ruṭūbat ghidaiyya* regularly. The end of this fluid can quenches the *Harārat gharīziyya* and it is the fact that dissolution mainly affects the *ruṭūbat ghidhaiya* and a very little amount of *Ruṭūbat gharīziyya* also dissolute. So the proper and regular amount of nutriment is very important for any person to achieve his normal age. If proper nutriment is not provided *ruṭūbat ghidhaiya* is not produced properly, *Ruṭūbat gharīziyya*

undergoes dissolution process and finish in 10-15 days. This results in quenching of *Harārat gharīziyya* and ultimately death occurs. On the other side when adequate and proper nutriment is provided *Ruṭūbat gharīziyya* persists for a long time and makes human being healthy and live. This is the reason that ancient physicians described the relation of *Harārat gharīziyya* and *Ruṭūbat gharīziyya* as an example of oil and light of lamp. (3,4)

Rabban Tabri (770-850 AD) described the relation between *Harārat gharīziyya* and *Ruṭūbat gharīziyya* by an example of lamp and stated that *Ruṭūbat gharīziyya* is like oil in the lamp when oil is in either very excess quantity or in very low quantity the flame or light of lamp can be diminished or quenched, same process apply on *Harārat gharīziyya* and body fluids. (18)

According to Ibn Sina (980-1070 AD) "Sustenance of *Harārat gharīziyya* is by *Ruṭūbat gharīziyya* which is a basic matter for it and its relation with *Harārat gharīziyya* just like oil of lamp". "Harārat gharīziyya is the tool of all faculties and *brudat* (cold temperament) is the contrary to all faculties and it is beneficial only indirectly. This is the reason that *Harārat badani* (heat of body) is called *Harārat gharīziyya* (*gharīziyya*: nature) and not *brudat-e-gharīziyya*". (11)

Hakim Mohammad Kabiruddin (1889-1976 AD) written in translation of kulliyat-e- nafisi, there are two groups of philosphers regarding *harārat gharīziyya*.

- A) Mutaqaddimin philosophers (ancestors)
- B) Mutakharin philosophers (precedors)

The first group which include Galen and Razi explains that *Harārat gharīziyya* is actually *ḥarārat nāriya* '*unsuriah* that is produced while attaining *mizāj* (constitution) and is responsible for body's consistency and remains in the body throughout the life. Second group which include Ibn Sina and his followers described it as a kind of heavenly heat which is gifted by God along with *nafs*. ⁽⁴⁾

According to Galen (129-200 AD), heat is the most important element in the body, facilitating the existence of life. Innate heat is housed within the heart where the heat is the greatest, and heat is disseminated to the rest of the body. (17)

Galen described that a *moatadil harārat* (balanced heat) is produced when *rukn-e-nari* (fire) mixed with other *arkān* (constituents). The characteristic of this heat is that it does not causes *ehraq* or burning in the body and is sufficient to perform body function such as concoction and digestion. Because of these characteristics, it is called *Harārat gharīziyya*. When this heat deviates from its normal level or elevate due to some external or internal causes then it is called *Harārat gharība* or increased heat.^(4,12)

Ghulam Jeelani writes about *Harārat gharīziyya* that it is the natural *harārat* which works for welfare of human body and it protects the body from putrefaction or destruction and persists in the body throughout the life. (19)

According to Ibn Sina and Allama Qarshi, it is a *jawhar-e-har* which is endowed by nature in body at the time of conception and this is responsible for continuous production of heat in the body. Source or reservoir of this heat is heart and from here, it

is distributed to all other parts of the body through the blood circulation. (3,4)

Hakim S.I Ahmad said that *Harārat gharīziyya* is produced in the body by a mechanism which also regulate and maintain it on a constant level. When the level of this heat falls below its normal range then it is called *harārat muqassira* and when it elevates then it is called *harārat gharība*. (19,20)

Ibn Sina and other philosophers said *Harārat gharīziyya* is produced and maintained on a constant level by *Juza-e-har gharīzi*. It is *har* (hot) and beneficial air substance which does not has the characteristics of burning and putrefaction. ^(3,4)

According to Ahmad Hasan Jurjani, Harārat gharīziyya is the main source of life. It remains in the heart and travels from heart towards all organs of the body. It is same as fire, when fire burst in a house, fine particles mixes in the air, temperature of that house increases and becomes high. Similarly, Harārat gharīziyya remains in the heart and makes the whole body warm and maintains the body temperature. This heat is produced by the quwwat-e-haywāni (vital faculty). He further explained importance of this heat in human life. According to him life depends upon harārat gharīziyya and body performs all physiological functions by it. Death is the name of loss of vital faculty and Harārat gharīziyya. This is due to su-e-mizāj of heart, because when su-e-mizāj occurs in any organ, it causes disturbance in its function and su-e-mizāj of heart can cause more disturbance or totally stop the movements as well as functions of heart and thus Harārat gharīziyya can't be supply to other organs and finally life ends.

Ibn Sina writes in Al-Qanoon about $Har\bar{a}rat\ ghar\bar{\imath}ziyya$ that it is the tool of $Tabi\ 'at$. It is beneficial for body and protects the body from effect of atmospheric air with the help of $r\bar{u}h$. It causes excitement in the $r\bar{u}h$ to expel and normalize the external heat, remove the hot material $(har\ maddah)$. (12)

According to Hakim Kabiruddin, there is continuous production of heat in the body due to metabolism of substances. This heat keeps the body warm. When the production of this heat is within normal range the temperature of the body remains constant. *Harārat gharīziyya* is beneficial for the organs to accomplish their functions. (8)

In Kamil us Sana, Majoosi (930-994 AD) stated that continuation of life depends upon $arw\bar{a}h$. And preservation and existence of $arw\bar{a}h$ is the result of e'tadal-e- $har\bar{a}rat$ $ghar\bar{\imath}ziyya$ (balanced innate heat) and this mechanism depends upon e'tadal-e-tanaffus (normal respiration) and other related health regimens which are the consequences of proper diets, drinks, and essential medicines subsequently blood produced, certainly it is the sole source for $Har\bar{a}rat$ $ghar\bar{\imath}ziyya$. Its normalcy is the cause of sihhat (health) whenever it deviation from its normal range leads to marad (disease). (14)

CONCLUSION

From above discussion it is clear that concept of *Harārat gharīziyya* is a fundamental concept, known as a physiological heat suitable to living beings. It originates in the heart and distributed to all parts of the body through circulation, it takes part in all organic functions of the human body including growth, digestion, production and regulation of the humours. Regarding the regulation of innate heat, Galen mentioned that

the heat must be supported innate moisture and by respiration, because it the source of life is to persist, in the absence of this supporting mechanisms, the heat will consume itself, and the person will die.

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How to cite this article:

Fateh Ali Tipo *et al.*, 2019, Exploratory Approach of Harārat Gharīziyya (Innate Heat) in Greek-o-Arab Medicine: a Review. *Int J Recent Sci Res.* 10(03), pp. 31574-31577. DOI: http://dx.doi.org/10.24327/ijrsr.2019.1003.3289
