

Tabi'at (Physis) - A Distinction of Unani Medicine

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Abstract

Certain theories lie at the core of Unani (Greco-Arab) system of medicine providing it a solid foundation. Of these, the prominent ones and widely known are temperamental and humoral theories. But, the one that outshines it from other pathies is the concept of Tab'iat, which believes that every human body carries its real healer within itself and the role of physician is merely of a supporter. Tab'iat is the supreme controlling power of the body that governs all body functions and for this purpose it requires some medium at different levels of body organization. These media are basically the structure and temperament of the organs concerned. In this paper, it is aimed to present a comprehensive concept about tab'iat, its function and tools.

Keywords: Physis, Tabi'at, Unani medicine

Introduction

Tibb-e-Unani is a medical science with holistic approach, which is based on the concept that Tabi'at (Physis) is the supreme power of the human body that brings about ae'tidal-e-mizaj (moderation of temperament). Its importance can be understood from the fact that the seven al-Umur-al-Tabi'yah are attributed to this power. Tab'iat is essentially the intrinsic ability of the body to preserve health and heal itself. It can also be stated that in order to maintain a healthy balance, there is a power of self-preservation or adjustment called as "vis Medicatrix naturae" or Tabi'at. Natural medicine, to which the Unani Tib belongs, accepts the principle that healing comes from within, and that medical care should aim to support, protect and boost the inner physician. Tabi'at is activated at the time of fertilization and continues to act through life's journey, steering, balancing, and maintaining harmony between man and his or her environment. Tabiat does whatever is necessary to ensure that an ideal balance or homeostasis exists within the cells, tissues, organs and the entire body, mind and soul. It is the basic intelligence of our health and vitality, managing our ability to reinforce good health and ward off disease. It is what distinguishes living flesh and blood from a corpse.

How to Define Tabiat?

The term tabi'at is derived from the arabic word "tab'a", which in Unani medicine is being implemented on four meanings viz. temperament or constitution specific to humans (mizaj-e-insani), structural composition of the body (hai'at-e-tarkibiyah), administrating power of the body (quwwat-e-mudabbirah-e-badan) and respiratory movement (harkat-e-nafs).

The first person to present a consolidated view about the concept of Tabi'at was the father of medicine himself, Hippocrates. Tabi'at has been defined by different Unani Physicians in a number of ways, however, they all meant nearly the same thing.

- According to Hippocrates, "Tabi'at is a managing/ administrative power which works for the betterment of human body involuntary and unconsciously and it is a source of all motion and rest".¹
- Galen says that when the word Tabi'at is spoken, it refers to the Quwwate Mudabbirah-e-Badan and Tabi'at encompasses complete study and knowledge of Tab'a.¹
- Rabban Tabri in his treatise, Firdaus-ul Hikmat has mentioned that practically Tabi'at is regarded as an

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administrative power of the body. The function of administration of the body is accomplished by Tabi'at with the help of diverse powers (Quwa) of the body like Quwwat-e-Haiwani'ah (Vital Faculty), Quwwat-e-Nafsaniyah (Nervous Faculty), Quwwat-e-Tabi'yah (Vegetative Faculty).²

- According to Razi, Tabi'at is solely responsible for the performance of all physiological functions be it Homeostasis, Growth, Development, Reproduction or Body defense.¹
- Ali Ibn e Abbas Majusi states that when Tabiat is powerful enough to withstand the disease, it does not require the aid of the physician i.e. "each patient carries his own doctor inside".³
- Abu Sahel Masihi was of the opinion that the word Tabi'at happens to be used for two different meanings: the faculty, which administers the body involuntarily & the power, which performs actions suitable to the body, as in the case of minor illnesses that are self-healing.⁴
- Ibne Sina said that the Tabi'at-e-insania of the individuals has been provided with the capacity to resist the diseases and to make a defensive line against Maddah-e-Marz (Pathogens). Despite, if the human body is attacked, then fighting between the two begins against each other and continue until the Tabiat overcomes the disease or becomes perplexed.^{1,5}
- Allama Nafis says, "tabi'at is a power which when found in a physical body itself becomes primary source for its motion or rest".⁶
- Albert Schweitzer said that we are at our best when we give the doctor who resides within each patient a chance to go to work.⁷

Briefly, Tabi'at can be summed up as the Supreme governing power of the body, capable of regulating all the processes of life.

Functions of Tabi'at

Tibb-e-Unani sees good health as the natural state of the body resulting from a harmonious balance between a person's nature (constitution), the physical and emotional environment he or she lives in, and the general lifestyle or behaviour adopted.⁷ Each cell, tissue, organ and the whole body is furnished with the power of Tab'iat, which controls the functions of the cells, tissues and organs and establishes inter-relationship among these organs and ensures that as a whole they function properly. However, the functions of Tabiat can be broadly classified into organization of the body (nizamat-e-badan), detoxification (tadbeer wa is'lah), and defense (man'aat).

Physis operates in all dimensions of health: at the physical, the emotional, the spiritual, and even at the social levels.⁷ It acts to heal and restore the body to full health when it is sick, and protects and regulates its development during the growing years through its subordinate Quwwat-e-Namiah. Tabiat is the governing force that tries to keep the body in

a state of homeostasis (ae'tadal-e-mizaj) i.e., the state of constant internal environment. Moreover, Tabiat controls not only the spiritual, emotional and physical interaction but also regulates this interaction to ensure harmony and continuation of life. In our bodies, millions of biochemical reactions are taking place every second, damaged cells are being replaced, transfer of emotions, activity of thoughts, etc. and Tab'iat controls all of these.

Tools of Tabi'at

Aala-e-Tabi'at that is the tools required by the tab'iat to carry out its functions does not refer to some physical body; instead it is the medium or source without which the functions of Tabi'at cannot be delivered.⁸ According to the great Unani Physician, Abu Sahel Masihi, "the functions (irrespective of vital functions, psychic functions or natural functions) performed by the tabi'at (mudabbirah-e-badan) in our body are dependent of a tool (Aala or Waseela) and it does everything with a purpose or motive; the purpose being what is achieved through the actions of tabi'at".⁸

It is believed that the site of action of quwa (powers/faculties) is a'aza i.e., these faculties act through their associated organs to bring about the desired functions. Since, tabi'at is also a power present in all body cells, therefore, it ought to utilize them for its functioning. Aala-e-tabi'at is therefore the Mizaj (temperament) of an organ or its Tarkeeb (structure) or both, which implies that an organ can deliver its functions with regularity only if it is appropriate with respect to its Mizaj and Tarkeeb. Abu Sahel Masihi further states that Tabi'at utilizes the Kaifiyat Arba (Hararat, Burudat, Rutubat and Yabusat) which are present in the johar-e-a'aza (substance or essence of an organ) and their mutual interaction and interpretation imparts a temperament specific to each organ. Similarly, the structure and composition of every organ varies with respect to its shape and position, which means that every organ not only has a specific temperament but also a specific structure, utilized by the tabi'at as a tool for delivering its functions.⁸

Tools of Tab'iat at Different Levels of organization

For the purpose of ta'deel-e-mizaj, the body must recognize the deviation of any physiological activity from the normal limits. Fortunately, body is provided with appropriate detectors or sensors, which recognize the deviation. These detectors sense the deviation and alert the integrating center. The integrating center immediately sends information to the concerned effectors to either accelerate or inhibit the activity so that the normalcy is restored. The entire human body has been classified into five levels of organisation⁹ or tarakeeb and at each level, tabi'at has its tool for physiological functioning. If either the structure or the temperament deviates from the normal, then tab'iat will not be able to deliver the required function. In order to better understand it, the tools of tab'iat and their abnormality is discussed below at different body organizations.

First level of organization (a'za-e-murakkabah ba tarkib-e-awwal or tissues): Tarkeeb-e-Awwal means that an organ is composed of only a'zae mufradah i.e. cells.⁹ Tools of Tabi'at at tissue level are the cellular receptors, which detects the changes within fractions of seconds. A receptor is a protein molecule that receives chemical signals from outside a cell and responds to them. When such chemical signals bind to a receptor, they cause some form of cellular/tissue response, e.g. a change in the electrical activity of a cell. Cells can upregulate or downregulate the number of receptors to a given hormone or neurotransmitter to alter their sensitivity to different molecule. This is a locally acting feedback mechanism. If these receptors get defective, then it may lead to various pathologies, one of which is diabetes mellitus. In our body, there are two systems for transport of glucose into the cells; one is Insulin-independent transport system and the other is Insulin dependent transport system. The latter operates in myocytes and adipocytes through GluT4 channels to transport glucose from the extracellular fluid into these cells. The presence of insulin, which signals the fed state, leads to a rapid increase in the number of GluT4 transporters in the plasma membrane.^{10,11} Normally, insulin binds with an insulin receptor on the cell and activates it, which then causes the translocation of GluT4 vesicle to the cell membrane and thus, cell takes up glucose through GluT4 from Extra Cellular Fluid, which is used for energy production. In Diabetes Mellitus, either there is an insufficient production of insulin (su-e-tarkeeb or su-e-mizaj of beta islet cells) or the body tissues become resistant to insulin (su-e-mizaj of myocytes and adipocytes) that inhibits signaling to the GluT4 and thus, the absorptive power (quwwat-e-jazibah) of the cell becomes low preventing GluT4 to absorb glucose into the cytoplasm.¹²

Second level of organization (a'za-e-murakkabah ba tarkib-e-dom/sanwi) includes the organs which are composed of simple organs that contains air as an essential component to their function.⁹ Unani literature mentions that in Tarkeeb-e-Dom, organ is composed of compound of Tarkeeb-e-Awwal along with some other parts. Although, they have not clarified as to what is that other component is! we can comprehend that at this level of organization (Tarkeeb), air comes to be a part of the structure and function of an organ either directly or indirectly. The possible examples of this Tarkeeb can be middle ear, alveoli and paranasal sinuses, whereby air is an essential component to their physiology. To understand the importance of air in the functioning at this level, the example of middle ear has been discussed below.

The hollow space of the middle ear (tympanic cavity) is filled with air that is important to allow the ear-drum and middle ear bones to be vibrated by sounds collected by the ear canal.¹³ However, unlike the ear canal, the air of the middle ear is not in direct contact with the atmosphere outside the body, but communicates with the nasopharynx through Eustachian tube (ET). The ET serves two main

functions in the middle ear: pressure equalization and mucus drainage. When the ET opens via active muscular contraction (during chewing, swallowing, yawning), a small amount of air is allowed into the middle ear, which serves to equalize pressure between the middle ear and ambient air thus, it is responsible for pneumatization of the middle ear and the mastoid and for maintaining normal pressure between the middle ear and the atmosphere. Eustachian tube dysfunction causes middle-ear pressure to be decreased relative to atmospheric pressure.¹⁴

Regarding third level of body organization (tarkeeb-e-soyam), physicians have mentioned that it should include an organ of first level of organization plus some other component. But, again they have restrained from discussing about the morphology of that particular component. Tarkeeb Soyam means that there is direct involvement of fluid in the structure and function of an organ of tarkeeb-e-awwal.⁹ At this level of organization, Tabi'at brings in use the structure i.e., tarkeeb of that particular organ as its tool to carry out the desired action. The examples of it could be eye, pleural space, joints etc.

Of varied structural composition of the eye, aqueous humor¹³ is an optically clear, slightly alkaline liquid that occupies the anterior and posterior chambers of the eye. Its purpose provides these nutrients as well as oxygen to eye tissues that lack a direct blood supply, such as the lens and Cornea and also removes their waste products. In addition, it provides an internal pressure, known as intraocular pressure that keeps the eyeball properly formed. The normal intraocular pressure is about 15 mmHg above atmospheric pressure, which gets raised in the condition of glaucoma, which is not a single disease process but a group of disorders characterized by a progressive optic neuropathy resulting in a characteristic appearance of the optic disc and a specific pattern of irreversible visual field defects that are associated frequently but not invariably with raised intraocular pressure. Of the various types of glaucoma, there are developmental glaucoma associated with high abnormal intraocular pressure due to developmental anomalies of angle of anterior chamber. Another variety of glaucoma known as Primary Closure-Angle glaucoma is characterized by rise in intraocular pressure occurs due to blockage of the aqueous humor outflow by closure of a narrower of the anterior chamber with no apparent systemic or ocular disease.¹⁵

A'za-e-murakkabah ba tarkib-e-chaharum (organ systems/compound organ type IV): Tabi'at at this level of organization brings about the normal functioning of body through coordinated work of different organs of the body that together forms an organ system be it Cardiovascular system (CVS), Central Nervous system (CNS), digestive system, Excretory system etc. Here, CVS has been taken into consideration where resides the Quwwate Haiwania, the faculty that furnishes vitality to the organs enabling them

to receive Quwwate Nafsaniyah and Quwwate Tabi'yah. The coordinated work of circulatory and respiratory systems is responsible to sustain the life. The normal function of heart is thus dependent on lungs also and vice versa. If any of them cannot function properly, then it is bound to affect the working of the other as one can see in the condition of right sided Heart failure (RHF). RHF or Cor Pulmonale mostly occur due to pulmonary hypertension which sets in because of parenchymal lung disease.^{16, 17}

Fifth level of body composition (a'za-e-murakkabah ba tarkib-e-panjum) applies to the human body as a unit, based on different systems and organs, and each one responsible for the maintenance of health.¹⁸ When it comes to the whole of body, then the Tabi'at utilizes as its tool the chief controlling organ i.e. Hypothalamus, which is one of the central elements of the limbic system; the prime organ responsible to sustain the supreme faculty. Also, according to Hippocrates, brain is the prime organ, which governs all other faculties. Hypothalamus is the important part of brain, concerned with homeostasis of the body. It regulates many vital functions of the body like endocrine functions, visceral functions, metabolic activities, hunger, thirst, sleep, wakefulness, emotion, sexual functions, etc. One of its many functions is thermoregulation i.e., whenever the internal body rises or reduces, the temperature-controlling areas in the brain sends signals to the person to make appropriate environmental adjustments to re-establish comfort, such as moving into a heated room or wearing well-insulated clothing in freezing weather.¹⁹

Conclusion

It can thus, be concluded from the above discussion that Tabi'at is Sayyadul Quwa i.e. the Supreme power present in the body that comes into existence at the time of fertilisation and disappears only with the last breath of person. It involuntarily administers the body; protects it against any possible harm, and heals it. In a nutshell, Tabi'at brings about Ta'deel-e-Mizaj, thus it is an "amender". Every single power (Quwwat) that functions in the body is under the control of Tabi'at. The concept of Tabi'at is not novel, people were aware since time immemorial that there is some conscious power in the body that somehow is working for the body. However, the first consolidated view was put forth by Hippocrates. Each cell, tissue, organ and the whole body has been furnished with the Tabi'at, which acts as nazim-e-badan, mudabbir and musleh. Whatever function it does in the body is for the sole purpose of maintaining Mizaj-e-Mo'tadil Tibbi Shakhsi (individual temperament). For carrying out its functions Tab'iat depends upon its tools viz. temperament of an organ and its structure. At every level of organization tabi'at has tools that helps in delivering its functions. The centre of Tabi'at lies in each and every cell of the body along with it Chief centre- the Hypothalamus. Our body can be viewed as Federal Government where, Centre and State both have functions to perform. Here,

Hypothalamus holds the central position, whereas cells are in place of state.

Conflict of Interest: None

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