Mizāj (Temperament) of A'ḍā Mufrada (Simple Organs): *History and Course;* A Review

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Abstract:

Purpose: This paper will review the history and course of A'ḍā Mufrada (simple organs) with respect to their temperament. Future prospects for the analytical and experimental research to consolidate the temperament of simple organs will be given to the Unani scholars.

Background: Unani physician of different eras had depicted the theory of temperament. Everything which exists physically has a particular distinctive temperament, so the organs also have a temperament which is in just accordance to their required normal function and properties. The normalcy of this required temperament keeps them on perfect functioning and deviation results in a disorder of their work. The theories and facts put forth on the subject by esteemed physicians of their times are present in this article.

Method: Unani scholars must look for the evidence based answer of these theories. As Unani Tibb is a science which has progressive history, so here we have to just find the gap and fill it with present knowledge.

Conclusion: Unani scholars have to give the answer that which organ is hot/cold/dry/wet and what are the basis to accept the facts. Fruitful research for the current advancements must be done.

Future prospects: To do scientific validation of temperament of each organ, analytical or experimental research should be done with respect to age, sex, race, and other possible intrinsic and extrinsic factors. For this anatomical, physiological, and morphological properties can be taken to rule out the temperament.

Index terms: A'ḍā Mufrada (simple organs), Mizāj of A'ḍā Mufrada, Temperament, Unani.

Introduction: Every animal and each of its members has a temperament which is entirely the most appropriate and best adapted for the performance of its functions and passive states. In the case of human, he has the most befitting temperament possible of all in this world, as well as faculties corresponding to all the active and passive states of man. Each organ and member has also received the proper temperament requisite for its function. Some are hotter, others colder, others drier, and others moister. From the concept of adal fil qismat it can be stated that: there is diversity and inequality in things created- not by chance, not as a result of diversity of matter, not on account of certain causes or merits intervening, but from adal fil qismat, in that he got super

perfection. In the life of men and other creatures, the nature with which they are endowed differs from the very beginning in the degree of its perfection. But even within the differing degrees of perfection there is the further variation in respect of clearness and translucence.[6] This is the Mizaj (temperament) which must be furnished to each and every organ of the body. This Mizaj is specific for each organ, or tissue. For example each of the bones, muscles, fats and nerves are furnished with specific Mizaj (temperament) which differs from one tissue to another. [1]. Until and unless A'ḍā Mufrada (simple organs) persists their temperament which is according to their desired functions and structure, they show normalcy in their functions. Sue Mizāj (dystemperament) results in altered and diseased state. Body is comprises of these A'ḍā mufrada (simple organs) which also have a strong impact to gives a normal Mizāj (temperament) to human body. In other words normal temperament of body depends upon normalcy of these A'ḍā Mufrada. [2]

Referenced Historical review from the Unani literature: ***Ibne Sina*** *(980-1037)* in Al Qanoon Fil Tibb [7, 8] (Alcanon) defines Temperament of simple organs as: ***Muatadil (attempered)****:* Jild (skin) is muatadil organ. The most attempered part of the skin is that of the hands. The most attempered part of the skin of the hand is that of palms and soles. The most attempered part of the skin of the palms of hand is that of finger pulps. The most attempered part of the skin of the finger pulp is that of the index. The pulp of the tip of the index finger is the most sensitive, and that of other finger tips is more sensitive than other parts, because they judge of the nature of tactile qualities. There must be a lessening of sensitiveness from the middle outwards in order that one can perceive a deviation from equability. He explains the reason behind it is that skin is an organ which has nerve endings and numerous small vessels. So the būrudāt (coldness) of nerve endings and Ḥararāt (hotness) of blood vessels neutralize each other and make the skin muatadil. Just like if cold water is mixed with warm/hot water, the Ḥararāt (hotness) and būrudāt (coldness) intermix and results in relatively normal temperament. This helps skin to feel the different tactile sensation according to their consistency and temperature. ***Ḥar A'ḍā (hot organs):*** Laḥm (muscles), Sḥarayin (arteries), Aurdah (veins), Jild (skin). ***Barid A'ḍā (cold organs):*** sha'r (hairs), Iẓām (bones), Ghuḍrūf (cartilages), A'ṣāb (nerves), Ribāṭ (ligaments), watr (tendons), Ghishā' (membranes). ***Ratab A'ḍā (moist organs):*** Laḥm (muscles)***. Yabis A'ḍā (dry organs):*** sha'r (hairs), Iẓām (bones), Ghuḍrūf (cartilages), Ribāṭ (ligaments), Watr (tendons), Ghishā' (membranes), Urooq (vessels), Laḥm (muscles) , A'ṣāb (nerves).[3,6]

In Kitab Ul Mukhtarat Fil Tibb,written by ***Abul Hasan Ali Bin Ahmad Bin Ali Bin Hubal Baghdadi****,* [7, 8] (1121-1213) Volume 1 stated Temperament of simple organs as: ***Ḥararāt (hotness):*** these organs are listed here in decreasing order as follows: Lahm (muscles) > Sharayin (arteries) > Aurdah (veins) > Jild (skin). ***Būrudāt (coldness):*** these organs are listed here in decreasing order as follows: Sha'r (hairs) > Iẓām (bomes) > Ghuḍrūf (cartilages) > Ribāṭ (ligaments) > Watr (ligaments) > Ghishā' (membranes) > A'ṣāb (nerves) > Shaḥm

(fats) > Sameen (fats in liquid form) > Jild (skin). ***Ruṭūbat (moistness):*** Sameen (fats in liquid form) > Shaḥm (fats) > Azla (muscles) > Jild (skin). ***Yubusāt (dryness):*** sha'r (hairs) > Iẓām (bones) > Ghuḍrūf (cartilages) > Ribāṭ (ligaments) > Ghishā' (membranes) > Awrida (membranes) > Sharāyīn (arteries) > Muharrik A'ṣāb (motor nerves) > Hissi A'ṣāb (sensory nerves) > Jild (skin). [4]

Ibne Rushd *in his famous book, kitab ul kulliyat* [7, 8] *(1126-1198) described* Temperament of simple organs as: Mizaj (Temperament) of A'ḍā Mutashabihul Ajza (simple organs): if we go through the genesis of the single organ, it has been assumed that all single organs are made up from four basic elements e.g. Nār (fire), Rīḥ (air), Āb (water), Mitti (earth). So Arkān (elements) made these single organs and a particular process is responsible for intermixing of arkān (elements). Ḥararāt (hotmess) is basic cause of their processing. In all these single organs, Ḥararāt (hotness), Būrudāt (coldness), Ruṭūbat (moitness), and Yubusāt (dryness) are present in required and different proportions. In short, every single organ keeps its unique properties and structure which are under the influence of Imtizāj (intermixing). Unani physicians lack to understand the physics behind the things which result in misconception of the actual facts which are based on Mantiq (logics), who understand the logics and principles reach to the perfect results. There are nine possibilities of Mizaj (temperament) of A'ḍā mufrada (simple organs): *Mutadil (equistate), Ḥar (hot), Barid (cold), Ratab (moist), Yabis (dry), Ḥar Ratab (hot and moist), Ḥar Yabis (hot and dry), Barid Ratab (cold and moist), Barid Yabis (cold and dry).* Temperament of these single organs is among these nine types. So, to know the specific temperament of single organ is necessary which is responsible for its normal structure and functioning. If this temperament deviates from its normalcy Unani Ṭibb reverts it back to normal. Specific temperament of single organs: ***Barid (cold) and Yabis (dry):*** Iẓām (bones), Ghuḍrūf (cartilages), Zufr (nails), Sha'r (hairs), Ribāṭ (ligaments), Watr (tendons), A'ṣāb (nerves), Urooq (vessels), Ghishā' (membranes). Būrudāt (coldness) keep them in solid form, on heating they soften themselves. According to the degree of būrudāt (coldness) and yubusāt (dryness), these single organs can be ordered in decreasing manner as: Iẓām (bones), Ghuḍrūf (cartilage) Ribāṭ (ligments), Watr (tendons), Ghishā' (membranes), Laḥm (muscles), A'ṣāb (nerves), Sharāyīn (artries), Awrida (veins). ***Order of yubusāt (dryness):*** Sha'r (hairs) > Iẓām (bones) > Ghuḍrūf (cartilages) > Ribāṭ (ligaments) > Watr (tendons) > Ghishā' (membranes) > Sharāyīn (artries) > Awrida (veins) > A'ṣāb (nerves). ***Order of burudat (coldness)****:* Sha'r (hairs) > Iẓām (bones) > Ghuḍrūf (cartilages) > Ribāṭ (ligaments) > watr (tendons) > Ghishā' (membranes) > A'ṣāb (nerves) > Awrida (veins) > Sharāyīn (artries). ***Ḥar & ratab (hot and moist):*** Pneuma , Blood, Laḥm (muscles). ***Order of Ḥararat (hotness):*** Arwāḥ > Blood > Laḥm. ***Order of rutubat (moistness);*** with respect to Ḥararāt (hotness): Arwāḥ > Blood > Laḥm (muscles). ***Barid and ratab (cold and moist):*** Fats (shaḥm: fat in solid form) > Sameen (fat in liquid form) > Bone marrow. ***Order of rutubat (moistness);*** with respect to būrudāt (coldness): Fats (Shaḥm: fat in solid form) > Sameen (fat in liquid form) > Bone marrow.

Ḥar (hot) and Yabis (dry): Mirra Safrā (form of bile). ***Barid (cold) and Yabis (dry):*** Sawdā (black bile). ***Barid (cold) and Ratab (moist):*** Balgham (phlegm). (5)

Gruner, O. C. (1973), A Treatise on the Canon of Medicine of Avicenna: organs in order to degree of heat; breath is the hottest, and the heart in which it arises. The blood: Though this is generated into liver, it derives more of its heat from the heart than from the liver, the two organs being in continuity. The flesh: which would be as hot as the liver was is not for the nervous tissue (cold temperament) which pervades it. The muscles: which are cooler than the flesh because of their tendons and ligaments, as well as the nerves. The walls of artries: these are warm in spite of the nerve substance present, because they receive heat from the blood and the breaths within them. The walls of veins: which owe their heat to the blood alone. In the last The skin of the palms and soles. *In order of degree of coldness:* the coldest thing in the body is the serous humour, next in degree, the hairs, the bones, the cartilages, the ligaments, tendon, the membranes, the nerves, fat, the skin. In general, organs rich in blood are of hot temperament, those poor in blood are of cold temperament. *In order of degree of moisture:* the serous humour is the moistest constitute of the body, next in degree are: the blood, fat, muscles, skin. *In order of dryness:* the driest thing in the body is the hair, for this comes from the ethereal element carrying up with it the material dispersed to it from the rest of the body, which is then left behind in the hairs as pure fumosity. The next is bone: this is the hardest of all the members, cartilage, ligaments, tendons, serous membranes, artries, veins, motor nerves, sensory nerves, skin.(6)

Discussion: The view of ***S.I. Ahmad*** *(An Introduction to Al Umur al Tabiya 1980)* was the most scientific from the above reviews, he discussed the Basis of Temperamemt of the organs as follows: When different elements undergo different types of imtizāj (intermixture) various compounds of specific surat nauiyah (specific form/state) and Mizāj (temperament) are produced. These compounds constitute the Akhlāṭ al Badan (fluids of the body); when these compounds combine together biological molecules are developed. And combination of these bio-molecules gives birth to organelles and khaliyat (cells) – the structural and functional unit of A'ḍā e Mufradah (simple organs). Temperament of A'ḍā Mufradah (simple organs) depends upon the specific character of Ruṭubat Usṭuqussiyya (intracellular fluid) of the cells of each kind of tissue, which makes the internal environment of the cells. This fluid is also called as Ruṭubat Gharīziyya or Ruṭubat ūlā. It is specific for each tissue. The temperament depends upon the balance of this Ruṭubat (moistness) or Khilṭ (humour). Temperaments of organs in the light of four qualities: Temperament of the cells can find out by testing Ruṭubat Usṭuqussiyya (ICF) and that of the whole body, by testing of Ruṭubat Tajaweef (blood and various tissue fluids). But this process is very difficult, therefore the ancient physicians took the aid of four qualities-heat, coldness, moistness, and dryness to express the temperaments of the organs. In doing so they have classified all the organs of the body in four categories are under:

Ḥar A'ḍā (hot organs)- A'ḍā Ḥarrah (hot organs) are those which are very active and in which the rate of metabolic activity is very high. This is determined by;

(1) The rate of blood circulation. Abu Sahal Maseehi has pointed out that the organs whose blood supply is very rich are Ḥar (hot) and those whose blood supply is poor are cold.

(2) High rate of oxygen consumption. This is determined by the following formula. O_2 used by tissues divided by O_2 content of arterial blood multiply by 100. This can be shown by the following equation:

$$\text{Rate of oxygen consumption} = \frac{\text{O2 used by tissues}}{\text{O2 content of arterial blood}} \times 100$$

(3) Excess of those compounds which produce more energy and heat. [9]

This all leads to excess of heat production. The following organs are considered as Ḥar (hot): ***Ḥar A'ḍā (hot organs):*** muscles, shaḥms, artries, serous and mucus membranes and skin. ***Barid A'ḍĀ (cold organs):*** A'ḍā baridah are those which are less active in comparison to Ḥar A'ḍā (hot organs), the oxygen consumption is poor and blood supply is also very low. Therefore the production of heat is very low. These are Sha'r (hairs), Ghuḍrūf (cartilages), Iẓām (bones), Ribāṭ (ligaments), Watr (tendons), fibrous Ghishā' (membranes), A'ṣāb (nerves), and nails. ***Ratab A'ḍĀ (Moist organs)-*** A'ḍā Rataba are those which contains more water in comparison to other A'ḍā (organs). The organs which contain more Shaḥm (fats) are also known as cold (Barid A'ḍā). These are shaḥms (fats), glands, Ghishā' (membranes), muscles, sḥarayin (artries), aurdah (veins) and jild (skin). ***Yabis A'ḍĀ (dry organs)***-A'ḍā yabisa are those which contain comparatively less quantity of water. These are sha'r (hairs), Iẓām (bones), Ghuḍrūf (cartilages), Watr (tendons), Ribāṭ (ligaments) and A'ṣāb (nerves). [9]

Conclusion: The above references and discussed information about the topic is authentic in itself and has a historical course of more than 1000 year. They were quite logical and appropriate in accordance of aids and technology of their period. The variations in the temperaments of simple organs were within the range of their extremes in their theories. In the last century which is century of evolution, in every field a lot of studies, researches, and experiments have been done by scholars and scientist of various divisions of sciences and technologies. So with help of advancements in physiology and anatomy the experiments can be set, if experimental research has to be done or analytical study can be done on the basis of current knowledge and facts. Followers of Tibb have to answer that what organ is hot/cold/dry/wet on the basis of accepted facts and fruitful research of current advancements.

Future prospects: To do scientific validation of temperament of each organ, analytical or experimental research should be done with respect to age, sex, race, and other possible intrinsic and extrinsic factors. For this anatomical, physiological, and morphological properties can be taken to rule out the temperament.

References:

1. Kabir. H., Kulliyate Qanoon, (2nd Edition) Pp: 45.
2. Jurjani. A.H., Zakhira Khawarizm Shahi, Vol 1, Pp:16, 17.
3. Sina, I. Al-Qanoon-Fit-Tibb, Pp: 58.
4. Baghdadi. H., Vol 1, P: 25.
5. Rushd. I., Kitab ul Kulliyat, Pp: 31-34.
6. Gruner, O. C., A Treatise on the Canon of Medicine of Avicenna, Pp: 62, 65-68,
7. Qadeer. A., Tibbi Sahaif, Pp 57, 94, 111, 121, 131.
8. Qadeer. A., History of Medicine and Medical Ethics, Pp.158, 160, 169.
9. Ahmed. S. I., Introduction To Al-Umur Al- Tabiyah, Pp: 29, 40-42.
10. Kabir. H., Kulliyate Nafeesi, Pp: 50-59.
11. Ahmed. S. I., Kulliyate Asri, Pp: 59-60.
12. Kabir. H., Ifada Kabeer Mufassal, Pp: 82, 83.
13. Sina. I. Alqanoon Fil Tibb Book 1, P.58.
14. CCRUM. Standard Unani Medicine Terminology, Pp: 8, 24-27.

Bibliography:

1. Kabir. H. (2015), Kulliyate Qanoon, Idara Kitabul Shifa, (2nd Edition) Pp: 45.
2. Jurjani. A.H. (2010), Zakhira Khawarizm Shahi, Vol 1,Urdu Translation By Hakim Hadi Hasan Khan, , Idara Kitabul Shifa, New Delhi, Pp:16, 17.
3. Sina, I. Al-Qanoon-Fit-Tibb, (Urdu Translation By Ghulam Hasnain Kantoori), Idarta Kitab-ul-Shifa, New Delhi, Pp: 58.
4. Baghdadi. H. (2005) Kitab ul Mukhtarat Fil Tibb, Vol 1, Urdu Translation By CCRUM, New Delhi, P: 25.
5. Rushd. I. (2017), Kitab ul Kulliyat, Maktaba Daniyal, Urdu Bazaar, Lahore, Pakistan, Pp: 31-34.
6. Gruner, O. C. (1973), A Treatise on the Canon of Medicine of Avicenna, AMS Edition, AMS Press Inc, New York. Pp: 62, 65-68,

7. Qadeer. A. (2004) Tibbi Sahaif, Education Publishing House, Kuncha Pandat, Lal Kunwan, Delhi. Pp 57, 94, 111, 121, 131.
8. Qadeer. A. (2003) History of Medicine and Medical Ethics, 2nd Edition, Jamia Education Beureu, New Delhi, Pp.158, 160, 169.
9. Ahmed. S. I. (1980), Introduction To Al-Umur Al- Tabiyah, Mrs Nuzhat Ishtiaq, Pp: 29, 40-42.
10. Kabir. H. YNM, Kulliyate Nafeesi, Idara Kitabul Shifa, Pp: 50-59.
11. Ahmed. S. I. (1983), Kulliyate Asri, Mrs Nuzhat Ishtiaq, staff quarter, Tibbiya College, Karol Bagh, New Delhi, Pp: 59-60.
12. Kabir. H. (2001) Ifada Kabeer Mufassal, Sharah Mojizul Qanoon, NCPUL, Pp: 82, 83.
13. Sina. I. Alqanoon Fil Tibb Book 1, Institute of History of Medicine and Medical Research (IHMMR), New Delhi. P.58.
14. CCRUM. (2012), Standard Unani Medicine Terminology, published by CCRUM, New Delhi, India, Pp: 8, 24-27.