



DEFINITION AND COUNT OF A'ḌĀ MUFRADA (SIMPLE ORGANS): A CRITICAL REVIEW

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ABSTRACT

Purpose: This paper aims to direct the unani scholars to research and analyze the things and make them more clear and accurate. This paper also giving the direction that how the listing and understanding of A'ḌĀ baṣīṭa (simple organ) should be done and research must go on to validate the A'ḌĀ baṣīṭa in the light of definitions given by unani scholars and modern histology. The A'ḌĀ Mufrada (simple organs) comes on number four in Umūr Ṭabī'yya. Ali Ibne Abbas and Ibne Sina says akhlāṭ are the proximate principles for the human body, but the more proximate are A'ḌĀ e baṣīṭa which are composed of akhlāṭ and A'ḌĀ Aliya (A'ḌĀ) are composed of A'ḌĀ e baṣīṭa. A'ḌĀ Mufrada are also known as A'ḌĀ baṣīṭa /A'ḌĀ mutashābihal al-ajzā'. A'ḌĀ Mufrada is defined as the organ which consists of the smallest part of that resembles exactly to the whole organ. A simple organ is therefore, homogeneous in their structure throughout e.g. a piece of bone is also known as a bone, as applied for the whole bone. (*Ibne Sina 980-1037*). The definition completely confirms to the description of tissues available today. Infact the Ṭibbī physician call the tissues as A'ḌĀ baṣīṭa (simple organ). These A'ḌĀ are said to be made up of primary combinations i.e. combination of the smallest unit of A'ḌĀ known as khaliyya (cell). These A'ḌĀ Mufrada should be reviewed and revised for their anatomical, physiological, morphological and histological knowledge but it must be remain on the definition of A'ḌĀ Mufrada which is given by unani scholars and they may be concluded that either they are single or compound like: Sharāyīn, Awrida, Mukh, Zuf, Sha'r. On the basis of definition and organization of A'ḌĀ Mufrada, the list given by unani scholars must re-organized.

KEYWORDS: Unani, Definition and count of simple organs, A'ḌĀ Mufrada (simple organs).

INTRODUCTION

Definition and types of A'ḌĀ Mufrada

Majoosi defined in his book *Kamil Us Sanna Al-Tibbiya (Liber Regius)* 930-994^[14,15]. A'ḌĀ mutashābihal al-ajzā' are single and baṣīṭ so their resemblance of a part of that organ is just similar to the whole, likewise whole is also resemble to its smallest part. These A'ḌĀ are Izām, Ghudrūf, A'sāb, Sharāyīn, Awrida, Ghishā', watr, Ribāṭ, shaḥm, Laḥm, sha'r, zufr and jild. There are seven categories of above mentioned single A'ḌĀ: majoosi categorized simple members into seven types: (1) Gha'dārif & Izām, (2) Ribāṭ & Watr, (3) Awrida, (4) Sharāyīn, (5) Laḥm, shaḥm: These are those soft structures which are comprised of large amount of oily matte. Ghishā' and Ribāṭ consists of large amount of adipose tissue. It is of two types- Sameen: shaḥm which is thin, less viscous and have less ability to solidify or liquid shaḥm. Sameen are found in muscles and Ghishā'. Riḥaj: type of shaḥm which are thick and viscous or solid shaḥm, & Ghudad, (6) Ghishā' & bashara, (7) Zuf, & sha'r.^[1] *Abu Sahal Maseehi* (972-1010)^[14,15] described A'ḌĀ into two groups A'ḌĀ mufrada and A'ḌĀ murakkaba. A'ḌĀ mufrada are those whose smallest part

is homogenous to the whole. According to maseehi A'ḌĀ mufrada are Izām, Gha'dārif, A'sāb, Zuf, Ribāṭ, Watr, Urooq, Laḥm, shaḥm, Thurb, mukh, Ghishā', Jild.^[13,17] *Ibne Sina* (980-1037)^[14,15] in his book in *Al Qanoon Fil Tib* mentioned A'ḌĀ mufrada has the members of body derived primarily from the akhlāṭ, just as the akhlāṭ are derived primarily from the ārkan. Simple A'ḌĀ means homogenous and indivisible. These are those organ whose structure is homogenous throughout, so that their names described them in all part. For e.g. Laḥm, A'sāb, Izām, because the part of Laḥm and Izām have similar function as that of whole organ that is why they are also known as A'ḌĀ mutashābiha al-ajza.^[2,12,16] These are: Izām, Ghudrūf, Ribāṭ, Watr, Ghishā', Laḥm, A'sāb, Sharāyīn, Awrida.^[2,12,16] Definition by *Al Hasan Aljurjani* in his book *Zakheera Khawarizm Shahi* (1042-1136)^[14,15]: A'ḌĀ yaksan are those A'ḌĀ if a piece is taken among them, the exact name and qualities of that piece would be as same as to the whole.^[3] For example Izām, Laḥm, jild. Laḥm from different parts of the body carries same properties which makes Laḥm.^[3] These A'ḌĀ are also known as A'ḌĀ baṣīṭ means mutashābih al-ajza.^[3] A'ḌĀ baṣīṭa: Izām, Ghudrūf, Laḥm, A'sāb,

Awrida, Sharāyīn. *Abul Hasan Hubal Baghdadi* in his book *kitab al mukhtarar fil tibb* (1121-1213).^[14,15] A'dā are the parts of body and instruments of the powers (quwa), through which functions occur. Definition: A'dā mufrada has homogenous parts in its structure. Baghdadi grouped A'dā mufrada as: (1)Izām, Ghudrūf, Ribāt, (2)A'sāb, (3)Laḥm and watr, (4)Awrida, (5)Sharāyīn Laḥm, shaḥm, Ghishā', jild.^[4] *Ibne Rushd* in his book *kitab ul Kulliyat (1126-1198)*.^[14,15] defined A'dā mufrada as these are those A'dā whose smallest part and whole organ carries same name, like Laḥm and Izām because smallest part of Laḥm and Izām also known as Laḥm and Izām respectively.^[5] According to *Ibne Rushd* A'dā mufrada are; Izām, A'sāb, Watr, Urooq Ribāt, Azla (it has major three types: 1. Laḥm made up of A'sāb And Watr, known As Azla 2. Pure Laḥm 3. Laḥm Gududi) Charbi, Jild, Jhilliyan, Dam, Balgham, Mirra-I-Sawdā, Mirra-I-Safra, Rooh.^[5] According to *Ibne Rushd* every part of an body is an organ either it is solid, gas or liquid. On this opinion he included akhlāt and arwāh in A'dā mufrada, while other rest all unani philosopher considered A'dā are solid. *O.C.Gruner* writes from the reference of *Ibne Sina* that the members of the body are derived primarily from the commingling of the akhlāt, just as the akhlāt are derived primarily from the commingling of the aliments and the aliments are primarily composed of commingled elements. The simple members are those whose structure is homogeneous throughout, so that their names describes them in all parts: e.g. Laḥm, Izām, A'sāb and the like. These are Izām, Ghudrūf, Ribāt, Watr, Ghishā', Laḥm, A'sāb, Sharāyīn, Awrida.^[6] These are those solid substances which are formed through initial formation of akhlāt e-mehmooda or from ibtidā mizāj or from Ruṭūbat Ṭhāniya. Likewise Akhlāt are those liquid substances which are formed through initial formation of arkān. Ruṭūbat Ṭhāniya is formed through initial formation of akhlāt and A'dā are formed from that Ruṭūbat Ṭhāniya. Types of A'dā (1) A'dā mufrada (2) A'dā murakkaba. A'dā mufrada: these are those organ whose structure is homogenous throughout, so that their names described them in all part. For e.g. Laḥm, Izām, because the part of Laḥm and Izām have similar function as that of whole organ that is why they are also known as A'dā mutashabiha al- ajza or Aze-Basiṭa. A'dā murakkaba: these are those A'dā whose structure is not homogenous throughout, so that their names do not describe them in all part. They are also called as A'dā Āliya as they perform body functions.^[7,9]

Brief Illustration of A'dā Mufrada

1. **Izām:** This is sufficiently Ḥard to form the foundation of the body as a whole and provide the purchase needed for its movements.^[1,2,4,6]
2. **Gha'dārif:** Being softer than bone this can be bent and yet it is Ḥarder than other all the members. It was made for the purpose of providing a cushion between Ḥard and soft Ghishā' so that the latter should not be injured when exposed to fall or compression or a blow. In case of joints, it prevents

the tissue from being torn by the Ḥard bone. It give a purchase for a muscle to obtain extension in places where there is no bone to give attachment or support (for e.g. Laḥm of the eyelids) and also give attachment to Laḥm without being too Ḥard for them (epiglottis).^[1,2,4,6]

3. **Ribāt:** These structures have the appearance and feel of A'sāb. There are two kinds – true and false. The latter extends to the Laḥm and the former does not reach as far as muscle, but simply joints these two ends of the Izām of a joint firmly together. This false ligament has not felt of ligament and is not painful when move or rubbed. The auxiliaries of the Ribāt are the structure attached to them.^[1,2,4,6]
4. **Watr:** This forms the termination of the Laḥm. They resemble A'sāb in appearance. They are attached to movable Ghishā' and when the Laḥm contracts and relax the parts to which the watr are attached move to and fro. They may sometimes broaden when the Laḥm expand and then become narrow again on their own account lengthening and shortening apart from the lengthening and shortening of the muscle. Sometimes this is through the intervention of Ribāt. The upper part of the Laḥm is called Laḥm that leaves the Laḥm and passes to the joint bringing the two close together is the tendon.^[1,2,4,6]
5. **Ghishā':** The structure are formed of extremely minute interwoven filaments which are extremely delicate. Their object is to form the external covering for the other structures and their by preserves the form and outline of these structures and to support the Ghishā'. By means of their fibers, they bind together the A'sāb and Ribāt. They hold the kidneys in position. Lungs, liver, kidney, spleen they themselves are insensitive, distention due to flatus or inflammation can only be felt by the Ghishā' over them that stretches and make us aware of the condition.^[1,2,4,6]
6. **Laḥm:** Laḥm includes Laḥm, fasciae, watr, Ribāt, connective tissues and so forth all together. Laḥm is that which fills up the spaces left within the members thus, impairing firmness and solidity.^[1,2,4,6]
7. **A'sāb:** These are the structures arising from the brain or spinal cord. They are white, soft, pliant and difficult to tear and were created to sub serve sensation and movements of the body.^[1,2,4,6]
8. **Sharāyīn:** These structures arise from the heart. They are hollow, elongated, fibrous and ligamentous consistency. Their movements consist in expansion and contraction, which distinguishes them from the aurdah. They were created in order to enable the heart to be ventilated, fuliginous vapors to be expelled from them and the breath distributed by their means to all parts of the body.^[1,2,4,6]
9. **Awrida:** These resemble sharayin expect in so far as they arise from the liver and do not pulsate. Their purpose is to carry the khoon away from all parts of the body.^[1,2,4,6]

DISCUSSION

Rhazi does not include Sharāyīn, Awrida, watr and Ghishā' into simple members. He stated that all these members are made up of A'ṣāb and Ribāt, then only the definition of simple A'ḍā i.e. those whose structure is homogenous throughout. So, that their name describe them in all parts. *Burhan-ud-din nafees* supporting the view of *Rhazi*, further explained that every simple member has its particular matter and sūraṭ nauīya that compels it to form a particular naw (species). This sūraṭ nauīya and matter is formed in every part of simple members that is why there is no difference between the part or whole member. sūraṭ nauīya can be defined as the one which form the structure of anything, which differentiate it from others.^[8] *Sharāyīn*: Unani scholars had defined artery as a single A'ḍā, but they also knew that Sharāyīn have two layers. *Ali Ibne Abbas Majoosi* said that Sharāyīn have three layers, but he was not able to differentiate these three layers individually at microscopic level. Nowadays, as we know that at microscopic level three layers of Sharāyīn are not of same composition, they are entirely distinct and has outer layer (tunica externa) made up of fibrous tissue, middle layer (tunica media) made up of muscular tissue and elastic tissue and internal layer (tunica interne) made up of endothelium.^[11]

CONCLUSION

It can be concluded that Sharāyīn are not A'ḍā mufrada, infact Sharāyīn are A'ḍā murakkaba because in its composition ribat (ligamentous tissue), Laḥm (muscles) and Ghishā' (Ghishā') takes participation which are individually A'ḍā mufradah.

Man has observed ever the things by five senses. So that ancient physicians did the same to put forth structure of the body. *Ibne Sina* give the list of A'ḍā Mufrada based on macroscopic observation. But nowadays to observe the things efficacy and the vision has reached to micro level from macro level with the achievement of time and aids. With the given example of artery it has been shown that how a A'ḍā Murakkabah has been enlisted in A'ḍā Mufrada because of its macro level appearance. There is a need of hour to re consider and to prepare a list of A'ḍā Mufrada on the basis of the study with the incorporation of knowledge available.

By this study we would be able to get the knowledge of A'ḍā Mufrada, and after getting satisfactory an up to date list of A'ḍā Mufrada, it must be included in the syllabii of A'ḍā Mufrada in kulliyat umoor e tabiya for students to make their vision and knowledge correct, which will enhance the theortical facts more clear and correct.

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