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The Etio-pathogenesis of Hypertension in Unani Medicine

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Abstract –

The management of Hypertension has been a challenge for the health care professionals for decades. It is high time for Unani scholars to make a universal strategic plan of a standardized management protocol for hypertension management to share the disease burden with other systems of medicine. But, before starting any intervention one must understand its etiopathogenesis in the light of Unani fundamentals. Keeping this objective in view this study was started and after following a set procedure, the updated Unani etiopathogenesis of Hypertension is presented.

Introduction –

Hypertension (Silent killer) is the major health problem of the heart across the globe. It is the number one health-related risk factor in India, with the largest contribution to the burden of disease and mortality (1, 2). It contributes to an estimated 1.6 million deaths annually in India, due to ischemic heart disease and stroke (3). 57% of deaths related to stroke and 24% of deaths related to coronary heart disease are related to hypertension and it is one of the commonest non-communicable diseases in India, with an overall prevalence of 29.8% (4,5.) The term hypertension was first used by HARRY GOLD in 1934 (6) and the term *Zightul-Dam-Qavi* is used by Unani Scholars of the contemporary world.

There is no strong definition of hypertension to date as normal blood pressure is so much the quantity in different age groups, sex, and races and even in a single individual in different considerations, still, some definitions presented on a clinical basis are as follows:

1- Persistent increase in the systemic arterial blood pressure is known as hypertension (8)
2- The level of blood pressure at which the benefits of treatment outweigh the cost and hazards (9)
3- Stable hypertension is considered when a continued elevation of blood pressure levels above 140/90mmhg is recorded (10)

Need of study –

Awareness of hypertension in India is low as suitable treatment and control are even lower. A majority of the patients with hypertension in India are unaware of their condition. This is due to low levels of awareness and the lack of screening for hypertension. Those who are identified as hypertensives, frequently receive inappropriate care and fail to adhere to therapy, and stay uncontrolled. Moreover, there is also the challenge of diagnosis of hypertension in India increasing the gravity due to misdiagnosis. This is due to poorly standardized techniques of BP measurement, poorly calibrated measurement devices, reliance on single readings taken on a single visit for diagnosis preferably than multiple readings confirmed by elevated readings on follow-up. Seeing the disease burden the holistic systems of medicine must play their role in the management of Hypertension. In *Tibb-e-Unani*,

Hypertension or *Zightul Dam Qawi* intrinsically is not reported but the majority of the Unani scholars were acquainted with manifestations of hypertension. It was experienced in terms of – *khafqan* (palpitation), *Suda* (headache), *Duar* (vertigo), *Ruaaf* (epitaxis), *Ghashi* (syncope), *Nabz-e-qawi* (Strong pulse), *Imtila-e-dam* (Hypervolumia), etc. therefore, before starting any management intervention, one must understand the Unani Etiopathogenesis of Hypertension; so that in the light of Unani fundamentals, the exact causative agents and whole disease process could be identified and rectified. Keeping an eye on the above points, this study was started in the PG department of *Munafeul Aza*, AKTC, AMU, Aligarh. The details of the study are discussed below:

Procedure –

1 – Defining the research problem.

- to identify causative factors of hypertension in the light of Unani fundamentals.
- To trace the pathogenesis of the disease as per Unani directives.

2 – Exploration of various Unani manuscripts, books, journals and thesis available offline and online for required information.

3 – Critical analysis of knowledge regarding hypertension both in Unani and modern medicine.

4 – Establishing the Unani etiopathogenesis of hypertension for further reference.

After following the above-mentioned protocol, the Unani etiopathogenesis of hypertension can be summarized as below:

Etiopathogenesis of Hypertension in Unani Medicine –

Asbab/causes –

Ibne Sina, said that there are four asbab (causes) of all the diseases viz. asbab-e-maddi, asbab-e-souriya, asbab-e-fayeliya and asbab-e-tamamia. (11)

▶ **Asbab-e-souriya -** these are the asbab related to Mizaj, Quwa and Tarakeeb.

1 – Mizaj –

- **Yaboosat-e-mizaj –** Hypertension appears to be (an) expression of dry temperament (mizaj-e-yabis) as:
- Hypertension is more dominant in elderly (over 60yrs of age more than 60%cases reported) and at this age temperament (*mizaj*) turns dry (*yabis*).
  Al Razi accounted the causal agent of a rapid pulse as *hararat* (hotness), *khalqi tazaiyuq-e-sharyani* (congenital narrowing of the lumen of arteries) and *yaboosat* (dryness).
  Ibn-e-Rushd states dryness is a component for narrowing blood vessels. The comparative diameters of blood vessels in different temperaments are *Haar-Ratab* (hot-wet), *Haar-Yabis* (hot-dry), *Barid-Yabis* (cold-dry).
  Allama nafis (1438) states that *nabz-e-sulb* (scelerotic pulse) is developed due to *yaboosat* (dryness). (12, 13)

2 – Quwa – the strong retentive faculties (*quwwat-e-masika*) or weak expulsive faculties (*quwwat-e-dafia*) inducing *Imtila* manifests in hypertension specially *Imtila ba hasbil quwa* (repletion in regard to vitality) – also named *imtila ba hasbil kafiyat*.
Quwa in the human body are the natural specified powers that are furnished to a living body for the execution of specific functions. Repletion in considering vitality means that the human body faculties get so weak that even a small product gets toxic. Here the *quwa* referred are *quwwat-e-ghaziyah*. According to *Majoosi* the weakness of *Quwwat-e-Ghaziyah*, is the main cause of *imtila* as in such conditions the food is not digested appropriately and waste products are formed in excess which causes heaviness and results in weakness, tiredness, tenderness, and loss of appetite. (14,15)

3 **– Tarakeeb –** Arteriosclerosis (Salabat-E-Sharein)

Due to atherosclerosis (Salaabat E Sharaeen) in old patients which comes down arterial compliance that also increases *imtila* and characteristics of *imtila* or hypertension. So, hypertension is a sanguineous disease (Damwi Marz).

in tibb-e-unani salabat-e-sharein (arteriosclerosis) is a cardinal feature and prerequisite for hypertension, merely not a diagnostic one. (16, 17, 18)

Hence, *sue-tarkeeb* is one of the significant causes of hypertension in which the lining of the arterial wall (tunica media) is disrupted. The collections of LDLs (low density of lipoprotein) stimulate monocyte adhesion to endothelium.

▶ **Asbab-e-maddia –** these include the arkan, arwah, akhlat and aza:

1) – **Arkan –** from the above discussion it is established that hypertension may be a manifestation of *Hararat* and *Yaboosat-e-mizaj*. Hence, hypertension can be considered as a result of exaggeration of *Rukn-e-nar* in human beings, which is *har-yabis* in temperament.

2) **– Arwah –**

Al-Razi, said that there is a collection of *pneuma* (*ruh*) which frequently produce *tamaddud wa tanaaw* (tension), which increases tension in the vessels due to raised blood volume, more than their capacity.

After *Al-Razi* other Unani scholars like *Majoosi, Ibne-sina, Ibne-rushd* and *Al-jurjani* have also accounted and accorded with the *Razi*'s description. (13)

3) **– Akhlat –**

Imtela ba hasbil auiya (repletion in regards to vessels): In repletion concerning vessels there is an increase in blood volume resulting in increased vascular pressure. The *akhlat* (humors) of the body is not a single entity but they are distinct in functions and properties. It assists different functions when intermixed with each other particularly in the blood vessels. [14, 16]. *Ibne-sina* and *Majoosi* have accounted that the excess of food, alcohol, rest, and lack of exercise lead to accumulation of the waste products in the body; whether normal (*mehmoodah*) or abnormal (*ghair mehmooda*), both are toxic for the body. This type of *imtela* is detected more in obese people, it appears that there is relative depletion due to increased lumen of blood vessels. The incidence of the decreased lumen of the blood vessels has also been described by *Ibne-rushd*. He described that callose (*kaimoos*) becomes accumulated in blood in the excess amount resulting in increased pressure and repletion of blood and *rooh*, inducing general repletion of the body. This type of *imtela* is evidenced as *suda* (headache), *imtela-e-chasm* (congested eyes), pulsatile arteries, puffiness of the face, heaviness in the head, restlessness, yawning, *ruaaf* (epistaxis), dark-colored turbid urine, lethargy, flushing of the face, warm body without any external cause and eruptions.

4) **– Aza –** Hypertension is primarily a disease of heart and blood vessels but owing to the significant role of the nervous system and excretory system. The dysfunction of the brain and kidneys may also manifest in hypertension.

▶ **Asbab-e-Fayeliya –** these causes are divided into two groups:

1) **Asbab E Sitta Zarooriya –** Asbab-e-Sitta Zarooriyah includes six essential prerequisites which are as follows- (19, 20, 21, 22)

a) **Hawa-e-Muheet (Atmospheric air) -** Air has got first priority over all the six essential factors, without air we cannot think about the existence of life. [19] Air performs the function of *Ta'deel-e-Rooh* at the time of inspiration by exchanging the air. At the same time, it also works for the *Tanqiya-e-Rooh* at the time of expiration. [23, 24] Change in character of atmospheric air produce changes to the human body. Polluted air induces putrefaction to humours. Human life demands fresh and pure air to perform physiological functions and to maintain health. We can control and prevent most of the chronic lifestyle diseases like hypertension through strengthening of *rooh*, fresh and pure air.

b) **Makool wa Mashroob (Food and drinks) -** Unani physicians had recommended a precise diet for a specific disease. [21] Avicenna accounted for this in his famous treatise "*Al Qanoon fit tib*" Dietetics and Nutrition are some of the significant medical subjects. [21] The importance can further be described by Gruner in his book Al qanoon fit tib "the stomach is the house of disease and the diet is the head of healing. This was famous by Hippocrates, Galen and Ibn Sina, the original pioneers of *Tibb*. Most chronic disorders result from malnutrition. Hypertension, obesity, inflammatory diseases, and cancer can trace their origin back to poor or unwise consumption of food – too much salt or fat; too little fibre; not enough fruit and vegetables; bad eating habits, etc.

c) **Harkat wa Sukoon-e-Badani (Physical activity and repose) -** Unani physicians recommended that physical activity is essential for the activation of *hararat ghariziya* (innate energy) and to excrete the waste products of the body but the prolonged activity of every kind results in the dispersion of the *hararat ghariziya* (innate heat). Rest is necessary to relieve fatigue and to decrease the body temperature which is harmful to body fluids. Excess of both causes coldness of the body because motion leads to the decrease of the innate fluids, excess of rest increases the body fluid which decreases the innate energy.[19] *Riyazat* (exercise) stimulates innate heat and matures the thick morbid matters after that eliminates it through a proper outlet. *Riyazat* enhances arterial blood supply and nutrition to the affected part of the muscles. Physical activity can help people to attain a variety of goals, including increased cardiorespiratory fitness, increased vigor, improved glycaemic control, decreased insulin resistance, improved lipid profile, blood pressure reduction, and maintenance of weight loss.

d) **Harkat wa Sukoon-e-Nafsani (Mental activity and repose) -** Mental stress is associated with many lifestyle disorders like hypertension, diabetes, etc. Mental relaxation through several ways protects human life.

e) **Naum wa Yaqza (Sleep and wakefulness) -** *Ismail Jurjani* said that normal sleep is very good for all, while sleeplessness degenerates the temperament of the brain. According to *Allama Nafis*, excessive awakening develops dissolution of *rooh* leads to weakness and *yaboosat* (dryness) of brain and indigestion. [24] Excess of sleeping causes coldness in temperament which is the cause of weakness, laziness in the body and headache etc, and may develop many diseases. Insufficient sleep has also been associated with obesity, diabetes, cardiovascular diseases like hypertension, and other health problems and it is regarded as an important risk factor getting enough high-quality sleep may be as significant to health and wellbeing as nutrition and exercise (19)

f) **Ehtibas wa Istifragh (Retention and elimination) -** Retention and deposit of *Balgham* (Atherosclerosis) obstructs *Nufuz* of *Rooh* (passage of oxygen) in the organs. Proper *ehtibas wa istifragh* (retention and elimination) through proper channels is very important to maintain health and wellbeing.

These six causes (factors) essentially influence each and every human body, therefore, they are called *Asbabe-Sitta Zarooriyah*. No one could escape from these factors so long he is living. (22)

2) **ASBAB E GHAIR ZAROORIYA –** these are discussed below:

a) **Mulk wa balad –** Hypertension can occur in all the countries of the world; population studies have consistently revealed higher blood pressure levels in black communities than in another ethnic groups. Average difference in blood pressure between the two groups varies from slightly less than 5mmHg during the 2 decades of life to nearly 20 mm Hg during the sixth. Black Americans of African origin have been shown to have higher blood pressure levels than whites. (25)

b) **Jins -** Early in life there is little difference in blood pressure between both sexes male and female. However, at adolescences, men display a higher average level. This difference is most evident in young and middle-aged adults. Late in life difference is narrow and the pattern may be reversed. Post-menopausal changes in women may be the responsible factor for this change.

c) **Asnaan -** In both sexes' male and female, blood pressure rises with age. The rise is greater in those with higher initial blood pressure.

d) **Adaat -** Smoking over a long period has detrimental effects on arteries, it causes atherosclerosis. Alcohol intake is associated with an increased risk of high blood pressure. Alcohol consumption raises the systolic pressure more than the diastolic.

e) **Umoor-e-ghariba -** Obesity acts as a risk factor for the development of hypertension. Greater the weight gain, the greater the risk of high blood pressure. Central obesity indicated by an increased waist to hip ratio

has been positively correlated with high blood pressure in several populations. In drugs, bronchodilators, OCPs, steroids, mood elevators are also included in *umoor-e-ghariba* causing hypertension.

- **Asbab-e-tamamiya –**
  1. Exaggeration of retentive functions of the body.
  2. Weakening of expulsive functions.
  3. Impaired extensibility capacity of blood vessels.
  4. Exaggerations of pumping action of the heart.
  5. Exaggeration of the sensory function of the brain and nervous system.

Discussion:

After the above discussion it can be concluded that Hypertension is a *marz e murakkab,* in which *sue e mizaj, sue e tarkeeb* and *tafarruq e ittesal* all occur at a time. It Unani etiological factors are established to be the *sue e mizaj haar yabis, zor e quwwat e masika, zoaf e quwwat e dafiya, salabat e sharayin, ghalba naar, fasaad e rooh, imtela e akhlaat e fasida, zoaf e qalb o dimagh o kulliya, fassad e hawa e muheet, na maozun makul o mashroobat, qillat e riyazat, qillat e sukun e nafsani, qillat e noam, na munasib rihayish, aadaat e mukhallifa, amraz e muzminah* and *adviya.*

Conclusion:

After the above discussion, the causes of hypertension in Unani medicine are identified to visualize the whole disease process. The rectification of these causative agents promises a sure cure of the condition while these causes may play a key role in formulating the prevention plan.

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