

Editorial

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## Medicine and Nephro-Urology in Ancient Iran: Part IV: Hypertension in Ancient Medical Texts

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The history of traditional Iranian medicine goes back to 8000 years BC. According to Cyril Elgood, the English medical historian, "this medicine existed before Greek medicine and Persian taught the Greek the principles of medicine, which has been known ever since as Greek medicine. In the ancient times, medicine was more advanced than that of Assyrian medicine." [1]. During that period, physicians were called "Hakim" (wise) for their domination and mastery over several sciences. Avicenna (Abu Ali al-Husayn Ibn Sina), Muhammad ibn Zakariya al-Razi, Ali ibn Abbas ibn Tabari, Majusi Ahwazi, Ibn Abi Sadiq al-Naishaburi, and Seyed Esmail Jorjani (known as Hakim Jorjani) were the most famous physicians at that time. Their books used to be taught in medical schools across Europe and Asia for 500 years. The aim of this article is to summarize some aspects of hypertension, its definitions, and related words in ancient Persian medical texts.

### **Hypertension and its Manifestations in Ancient Medical Texts**

In traditional Iranian medicine, hypertension (HTN) was considered equivalent to "Imtila"

although they are not exactly the same. This would be more understandable by defining the exact concept of "Imtila" and its different types. Generally, "Imtila" means fullness of the body with fluids and accumulation of normal or abnormal fluids in the body which might produce certain symptoms [2,3]. Based on the principles of traditional Iranian medicine, the consumed food passes through various digestion stages before reaching the blood and other related organs. According to Avicenna and most ancient physicians and scholars, digestion is divided into four stages of gastric, hepatic, vascular, and organic digestions. In each stage, the eaten food changes to become suitable to use by the body. For example, after gastric and hepatic digestions, the humors are the final product. Overindulgence in eating in which stomach cannot properly digest the food could induce gastric Imtila. Then, in the vascular digestion process, the food situation becomes closer to the organs needs and in the organic digestion, the food and materials are completely similar to the target organ tissue [4,5]. If the body nature and expulsive force are strong, unrighteous humors and waste materials are disposed of but if the expulsive forces of the

organs are weak and unable to repel the bad humors, these humors cause diseases. For example, existence of humors, blood, and waste products in the head and their accumulation in the vessels and arteries could cause sanguine stroke and nasal bleeding. In their opinion, the improperly digested food enters the arteries and remains raw and undigested. Penetration of raw and undigested food and materials into vessels can cause symptoms such as a feeling of heaviness, yawning, lethargy, and body stretching. In the severe form, excessive accumulation of raw materials in the blood vessels could cause fatal side effects such as arterial wall complications like stretching or tearing [6]. The ancient Iranian physicians thought that HTN originated from Imtila, which was the source of almost all disorders [7-9]. In their opinion, If the materials could fill free spaces inside tissues and ducts, they could cause obstruction in vessels which resulted in infarction. They believed that the obstruction of vessels and in particular arteries of important organs such as the heart, brain, kidney and liver was extremely dangerous [10]. Rhazes, Avicenna, and Haly Abbas described Imtila in this regards, and believed that excessive food and alcohol in addition to lack of exercise would result in the accumulation of undigested food and waste products in the body which were toxic to the body. The accumulation of these waste products might lead to increase in blood volume, tension of the vessels wall, and vascular pressure [2]. Imtila can also be considered as changes in the blood quality and viscosity. Increased blood viscosity is an example of the change in blood quality due to its mixture with improper humors. Therefore, HTN can be synonymous to Imtila only in the case of changes in the blood quality. Shamshad Ahmad believes that most of the HTN symptoms are mentioned under the heading "Imtila bi hasbil auiya". He is also of the opinion that symptoms mentioned by Rhazes in the description of this type of Imtila are similar to clinical features and definitions of modern HTN [2]. However, based on the principles of traditional Iranian medicine, an increase in blood pressure is not exactly Imtila and might also occur due to other disorders such as impaired cardiac pump due to hot dystemperament of heart, vessel wall dry dystemperament, or even involvement of other organs including the kidneys, liver, and nervous system. For example, sedimentation of black bile in the vessel wall (so-called atherosclerosis) along with reducing arterial elasticity would lead to HTN in spite of normal blood volume or blood

viscosity [11,12]. In conclusion, based upon ancient medical texts, some forms of HTN are related to Imtila and the total process of food digestion. It seems that when we are dealing with a kind of HTN that corresponds to Imtila, we can approach hypertension with recommendations for reducing Imtila.

### References

1. Algoird, Cyril. History of Medicine of Iran and the Territories of Oriental Caliphate, translated by Bagher Forghani, Tehran, Amirkabir Publication, Pp 22 and 37, 1992.
2. Ahmed S. Clinical evaluation of khameera sandal sada in the management of zaghtuddum qavi ibtida. Karnataka, Bangalore: Rajiv Gandhi University of Health Sciences; 2007.
3. Iqbal FA. A study on prevalence of zaghtuddam qavi (hypertension) in specified population of kottigepalya and its association with mizaj (temperament). Karnataka, Bangalore: Rajiv Gandhi University of Health Sciences; 2007
4. Mostafavi Kashani, Seyed Jalal, Pakdamen, Abolghasem, Comparison of Iranian Ancient Medicine and Modern Medicine, Tehran University Publication, Pp 8-11, 1979.
5. Emtiazy M, Keshavarz M, Khodadoost M, Kamalinejad M, Gooshahgir SA, Shahradi Bajestani H, Et al. Relation between Body Humors and Hypercholesterolemia: An Iranian Traditional Medicine Perspective Based on the Teaching of Avicenna. Iran Red Crescent Med J. 2012;14(3):133-8.
6. Shirazi MT. Tahsil Al-Elaj and Resale Hafez Al-Sehha (Facilitating Treatment and a letter for Health preservation). 1st ed. Jalal Al-din Publication; 2006.
7. Haslam DW, James WPT. Obesity. Lancet. 2005;366(9492):1197-209.
8. Shirzad M, Mosaddegh M, Minaii B, Nikbakht Nasrabadi A, Ahmadian-Attari MM. The relationship between heart and stomach in Iranian traditional medicine: a new concept in cardiovascular disease management. Int J Cardiol. 2013;165(3):556-7.
9. Turgut O, Manduz S, Tandogan I. Avicenna: messages from a great pioneer of ancient medicine for modern cardiology. Int J Cardiol. 2010;145(2):222.
10. Hosseini GR, Nasrabadi AN. Avicenna the First to Describe Diseases Which May Be Prevented By Exercise. Iran J Public Health. 2012;41(11)
11. Choopani R, Mosaddegh M, Gir AA, Emtiazy M. Avicenna (Ibn Sina) aspect of atherosclerosis. Int J Cardiol. 2012;156(3):330.
12. Emtiazy M, Choopani R, Khodadoost M, Tansaz M, Nazem E. Atheroprotector role of the spleen based on the teaching of Avicenna (Ibn Sina). Int J Cardiol. 2013;167(1):26-8.