

Pharmacology, Medical of ALMohads Empire era in Maghreb & Iberian Peninsula Medieval

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Abstract

Importance of progressive of AL Mohads state (1121 - 1289) in history is that empire of AL_Mohads which was formed from in Iberian Peninsula in south of France (Portugal and Spain) and Maghreb in North Africa, in a way caused quantitative and qualitative development of human knowledge. One of sciences that developed tremendously around, AL_Mohads is medicine and Pharmacology. The AL Mohads era has a physical role in history of world medicine. Averroes (1198) and his medical activity is enough to establish development of this era. His philosophical writings are dominated by a kind of logic systematization. He also ruled in medical education in field of organizing physician in special organizations of AL_Mohads court. It took place and a hospital was established in Morocco, capital of Maghrebi, in first time studied plants purely scientifically from point of view of botany without medicinal use. AL_Mohads period is a special era of history of medicine in Middle Ages, in which Averroes is located, which is final of Islamic medicine, and it is one of periods of integration of medicine with herbalism and pharmaceutics. Undoubtedly, Averroes's genius as a characteristic of AL- Mohads period in design of falsifiable and probable propositions in medicine, and it is close to scientific method that Popper introduced as a characteristic of science in 20th century.

Key words: pharmacology; falsifications; popper

1-Interrogation historical and geographical:

AL-Mohads is first Islamic state that succeeded in uniting the Iberian Peninsula and the Great Arab Maghreb and establishing this hundred and ten-year-old empire consisting of the Iberian lands in the south of France and the North African part of the Arab lands in neighboring Egypt, an Arab-European region with The great scientific heritage is, among other things, in the field of medicine, and the most brilliant periods of Islamic civilization were formed in that period, and Ibn Rushd is one of its outstanding products. There are seven manuscripts of this book, which is the world heritage of mankind in the Middle Ages. Five Arabic versions and two Hebrew and Latin versions of which many Latin versions have been produced. In Europe, this book was called "Summa del Colliget", The present study is role of Ibn Rushd's anatomy in history of medicine in world, which emerged based on application of Averroes's philosophical method and its history goes back to Iran. The combination of medicine and humanities, philosophy and jurisprudence is one of the cultural measures in North African medicine, which was transferred from Iran to Africa during era of the Aghlabeh state. He organized book general in Medicine upon philosophical thinking (Abdol vahab, 1999).

2-Material for Averroes theory about scientific nature of medicine in medieval :

The books of generalities in medicine and method govern Averroes's thinking are suitable materials to prove Averroes's hypothesis about the nature and method of medical research, which is briefly mentioned.

2 1--Averroes's scientific revolution in medicine, break "killer's rod", idol of imitation by scientific method

Averroes is one of elite personalities of Islamic civilization due to depth and breadth of his influence over time and until now, he is center of philosophical discussions in world and he can be referred to as an independent philosophical model. Now a paradigm of her thinking continues to exist in the field of Western philosophical thought

2-2- paradigm of Averroes Latinus

In history of science, there are people who are all-rounders of science who are able to modify structure and content in general. Averroes in his time, who was under absolute rule of bad imitation, turned to this work in the vast field of philosophy of Islamic law and medicine and criticized his

medical legacy. gave averroes's works are in accordance with human logic and nature and understandable community of nations. He is founder of science in Islamic civilization and the origin of" *Averroes Latinus* "intellectual stream in Christian West and Jewish rationalist societ (Copleston, 1972) .

3- 2- **Medicine, theoretical sciences with falsifiable statements:**

One of his general discussions is about medical science and its superior and valid part according to Averroes's opinion. He started this discussion with fact that medicine is a theoretical science and the general logic and rational method and the method of experimental sciences are rulers, and diagnosis is dependent on physician's intellect, understanding and scientific tact. As a science, it has rational principles with falsifiable propositions., and for this reason, he criticizes the ancient schools of Hippocrates and Galen and medieval schools of Ibn Sina, Kennedy, Razes and all other physician. and due to avoidance of science and belief in certainty and certainty of medical statements, he has considered this as a deadly poison in medical knowledge. He has mentioned it as killer's rod. According to him, medical method should change from killer's rod method to method of science, which means permanent falsification of medical propositions. Throughout book, most of principles of medical knowledge have been theoretically and generally discussed by Averroes. In false opinion of some who think that medical propositions are definite like rulings of some sciences, he writes: Medicine is place of propositions of possibilities and not place of definite propositions. Medical propositions are falsifiable and propositions with fixed and unchanging propositions are not. This look at the propositions of medical science is in accordance with latest scientometric method that was presented in 20th century. Popper (1902-1994) has made a detailed discussion on scientific criteria of propositions (Popper, 1964), in his opinion, the scientific nature of any proposition is based on falsifiability potential of proposition, and certainty is not criterion of proposition being scientific(Averroes, jenral in medicine , 1999).

4- 2- **Criticism of ancient and medieval medical schools**

His critique is a wide volume of schools and medical figures, from Hippocrates to Galen, Ibn Sina, Razes, Magusi, and Ibn Bajah. One of common points of his criticism is criticism of scientific method. According to opinion and method of physicians until his era, it is not based on scientific method and on this basis . Because they are falsifiable scientific propositions and scientific method in medical science says that medical propositions should be placed in the bush of probability because they are not definite propositions. And this method was presented in 20th century by Popper in a book titled *Conjectures and Refutations and Growth of Scientific Knowledge*. By rejecting certainty in medical propositions, Averroes considered promise of certainty in a medical proposition to be cause of stagnation and considered the probability of medical propositions to be cause of growth.

A: Criticism of ancient medical schools of Hippocrates and Chains

In general, Averroes mentioned about legacy and Heritage remnants of ancient medicine in dispersion and lack of logical order about these two. Hippocrates (460 BC), a believer in power of nature and author of theory of t mixture of four elements, to describe nature, health and disease is based on fact that balance of four elements is water, wind, soil, and fire. which was ruler of medical thought until the 18th century and Averroes criticized it in 12th century. Unlike Hippocrates, Galen (born in 131, 2nd century AD) believes in a perceptive understanding based on observation and induction. He added the theory of mixing to the theory of Arab. Which is formed under influence of internal and external factors, such as geography, ethics, life, etc., and found a political and social dimension. According to Galen, the head of body is liver, and heart is subordinate, and this growth is contrary to Galen's opinion, which physician have imitated for centuries without A rational opinion based on personal reason (ijthad) . And that is why some orientalist attributed to Averroes a physician who corrupted all physicians. Criticism of European thinking

in medicine in Middle Ages is in unmistakable imitation in best medical works .Averroes has criticized Galen's theories in many issues and has mentioned different point of view.

B: Criticism of medieval medical schools

AL-Kindi (873AD) has criticized Avicenna and Razes due to influence of non-medical opinions in medical results, such as use of Pythagorean sleight of hand in mysteries of numbers. Avicenna was criticized by some in Islamic West, including by his contemporary physical, Avenzoar(1162)who wrote an article refuting Avicenna (Averroes , 1999).

5-2--The logical position of hygiene in medical knowledge

And then he discussed the knowledge of health preservation, which is considered by Averroes to be starting point and goal of medical science, which has shown its importance in Islamic medicine. In book "Alcoholism", two parts deal with health and maintaining hygiene. And second and sixth part of book is dedicated to him with titles of hygiene and his general and theoretical definition of knowledge of hygiene (Shahidipak, 2002) .

3- Establishment of botanical science by Ibn Rumiyyeh Ashbili (638) and Ibn Bitar - from 300 plants to 1400 plants:

One of facts of history of botany is that collection of plant knowledge that was transmitted to mankind from ancient times by Dioscorides(40-90AD) is about three hundred plants, and after translation and research of this work in scientific circles of Islamic civilization between seventeenth and eighth centuries AD, it reached five hundred plants and up to period Ibn Bitar (1248AD) reached 1400 plants. by Muslim botanists This wonderful development and establishment of science accomplished by any scientists of medieval form Andalusia and Maghreb ,such as Ibn Jazzar, Ibn Waftts(1074AD), Ibn Rumiyyah, Ibn Bitar and others, who started extensive local and global research to identify plants.And thus Islamic civilization is founder of botanical science in history of science(Hunkah, 2018) .

3-1-Abolhasan Nabati(1240)

Nabati and Ibn Bitar are pillars of pure botanical science in AL-Mohads period. According to the researchers, he is first Tayyib to identify plants without considering their medical use. did Among his practical accomplishments is the training of Ibn Bitar, cylinder of botany in Islamic civilization, which is also practical fruit of his training of Ibn Abi Asiba, a researcher of medicine and pharmacology of Islamic civilization, who created a lasting work in history of medicine(Sarton , 2000) .

3-2- Ibn al-Baytar (1248)

Ibn Bitar made Islamic civilization standard bearer of botany in Middle Ages by producing a book that is a comprehensive introduction to flora of mankind before him. Like his teacher, he traveled to all cities of East and West of Islam to learn about plants(Ibn- Abi osaybah , 1999) . The collection of 1400 plants that he introduced is fruit of scientific movement of Islamic civilization in increasing and developing quantitative and qualitative knowledge of botany in world, from about three hundred plants of ancient period, of Descorites period (Sarton, 2000)

4-Medical administrative organization in AL-Mohads era

One of faces of Islamic civilization is administrative organization for managing affairs. Among these organizations, in some governments, they have been in service of medical management (Shahidipak, 2002)

1- 4- Organization of people and system for medical owners during AL-Mohads era:

One of rare reports of history of civilization of AL-Mohads era is establishment of administrative order among community of Andalusian and Moroccan physician s. An organization of physicians was established in court of AL-Mohads Caliphate, which was a group of physician who

were obliged to carry out missions in order of medical services for purposes of Caliphate. They used to call the group of physician and walahs.

2- 4-Establishment of Moroccan hospital in Middle Ages

In history of establishment of hospital in Islamic civilization of 7th century, there is process of establishing this medical facility in Morocco, capital of AL-Mohads in Maghreb (Marakeshi,1389, 2002)..

5-Discussion and result: necessity of presenting a rational opinion and rational opinion (ijtihad) of physicians:

Averroes founded a method of diagnosing a physician based on ijtihad and taqlyd (physician's rational opinion and absolute adherence to tradition) of physician and forbade mere imitation. This work of Averroes and past criticism of human medical heritage is a turning point in history of medicine that Averroes did seven hundred years ago.

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