

# The Father of Medicine A Historical Reconsideration

TIBBIN BABASI  
TARİHSEL BİR İNCELEME

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## Summary

The early beginning of medicine appeared in ancient Egypt. It was written on the medical papyri, more than a thousand years before Greek time. The Greeks and Romans extolled the antiquity, wisdom and scientific knowledge of the Egyptians and added their own experience. Hippocrates' activities and writings are obscuring and available information is much doubted. Writings attributed to Hippocrates and his followers are full of quotations from the ancient Egyptian medicine.

In this paper, it is emphasized that the original home of medical science is Egypt and not Greece.

**Key Words:** Greek medicine, Egyptian medicine, Hippocrates

**Türkiye Klinikleri J Med Ethics 2004, 12:171-176**

## Özet

Tıbbın başlangıcı eski Mısır'da ortaya çıktı. Bu durum, Yunan döneminden 1000 yıldan fazla bir zaman önce tıbbi papirüslerde yazılıydı. Yunanlılar ve Romalılar, Mısırlıların antikle, bilgelik ve bilimsel bilgisini övdüler ve kendi deneyimlerine eklediler. Hipokrat'ın eylemleri ve yazıları pek az tanınmakta ve elde edilen bilgiler şüphe uyandırmaktadır. Hipokrat'a ve onun yandaşlarına atfedilen yazılar eski Mısır tıbbından alıntılarla doludur.

Bu çalışmada, tıp biliminin asıl evinin Yunanistan değil, Mısır olduğu vurgulanmaktadır.

**Anahtar Kelimeler:** Yunan tıbbı, Mısır tıbbı, Hipokrat

Early man started his progress and development very slowly in prehistoric time. Through trials and careful observation, he put the basis of sciences and arts. The pioneer great men who established the early principles of such sciences are considered the founders of them.<sup>1,2</sup> Medicine was one of the early sciences that appeared thousands of years ago in ancient Egypt and Babylon as a healing system transitional between the less complex prehistoric activities and the materialistic curing associated with classical medicine. Both had a basic magical religious orientation and were immersed in myth and magic.<sup>3</sup>

By time, the progressive development, scientific experience and observation gathered and rational medicine came into practice. Great men were the prominent figures behind this progress. The ancient medical papyri are important documents that reveal the great progress achieved in that time. The ancient Egyptian language was a mystery to all scientists till the mid-nineteenth century. At that time the medical papyri were not yet discovered and hence the ancient Egyptian medicine was very obscure and completely ignored till the end of the 19<sup>th</sup> century. Credit goes to the French historian Jean Francois Champolion (1790-1832) who was able to decipher the hieroglyphic text of the

Rosetta stone in 1822, and elucidated all the basic principles of the ancient Egyptian hieroglyphic writings.<sup>3</sup>

Middle ages historians were unaware of the early beginning of medicine and the activities of the great men of ancient time. They considered classical Greek medicine; the original beginning of medical science and Hippocrates, the founder of medicine and honored him by the title "Father of Medicine".<sup>4</sup> In the present time, the history of medicine is clearly studied and the early beginning is revealed. The role of the genius pioneer medical men is quite evident. Hence it is quite suitable to recorrect the previous misunderstanding and to give the credit to those who are the real founders of medicine.

## The Father of Medicine

Historians studying the past events of human beings were always very keen to begin with the early prehistoric activities of man and to follow the successive steps of its slow development through the subsequent ages. They used to put light on the most eminent pioneer figures of the past that put the bases of sciences. They consider them the founders and the fathers of these sciences as they were practitioners and teachers of them on rational thinking and

left behind a treasure of knowledge and experience for the coming generations. As the beginning of ancient medicine in Egypt was obscure, the most important figure who fulfilled the scientific requirements - from the point of view of some middle age historians - was Hippocrates and hence considered him the father of Medicine.<sup>4</sup>

The required criteria for fatherhood in medicine comprises six items:

1. A real personality
2. Rational thinking
3. Original works
4. New additions
5. Teaching and practicing the specialty
6. Founding a learning school in medicine

According to these requirements, Hippocrates was credited by fatherhood of Medicine. Has Hippocrates all the historical and scientific requirements for that honorable position? This will be clearly discussed in the following chapters:

### **Life History and Personality Identification**

Very little is known about the birth, education and activities of Hippocrates. Available information is doubted and unaccepted by many authors. Logan Clendenin, the British historian in his book "Source Book of Medical History", edition of 1942, said that "Modern scholarship is inclined to be skeptical as to whether Hippocrates was really an actual person or whether from vague beginnings, the name came to be applied to all the writings of the Corpus, the product of numerous disciples of a school of thought."<sup>1</sup>

The Encyclopedia Americana, edition of 1982, under the heading of "Hippocrates" written by C.M. Saunders, said: "Little is known about his life, activities and writings and what is known is based indirectly on authors who lived at least 200 years after his death. It is believed that he led the life of a wandering physician, traveling extensively throughout Greece and Macedonia. Plato states that he taught medical students for a fee. Aristotle says that within a few years after his death, he was already known as the great Hippocrates. In conclusion, the same reference says: "The numerous claims of his heroic ancestry, all mythological, indicate the position held by Hippocrates in the minds of the Greeks as Plato, Aristotle, Galen and Menon who gave him the titles of Divine, Sage and Great."<sup>5</sup>

Arturo Castiglioni the Italian historian wrote in his text book: "A History of Medicine", edition of 1958, about the genealogy of Hippocrates, that all the available data is uncertain or even legendary and according to Soranos, he belonged to the 20<sup>th</sup> generation of Asclepiades, while

Jouradian says that he was the second of seven of the same name.<sup>4</sup>

A constant observation is clearly noticed when looking to the pictures of all available paintings or statues, is the dissimilarity between them that refers to multiple personalities or imaginary figures.

### **Writings and Teachings**

It is claimed that one of the important activities of Hippocrates is the writing of a good number of books. It entails a group of about 70 books, named collectively "The Hippocrates Corpus" and deals with different aspects of medical knowledge available at his time.

This genius activity in writing a large number of books was considered by ancient historians as an evidence of high experience and knowledge and honored him with the title: "The Great Hippocrates".<sup>5</sup> However, review of the available ancient and recent literature gave variable or even contradicting data about Hippocratic writings and some authors deny any written works by Hippocrates himself.<sup>6</sup>

(A) The two British historians, Charles Singer and Ashworth Underwood in their text book: "History of Medicine", edition of 1962, says: "The supposed Hippocratic books are the work of a number of authors belonging to different schools, holding various and often contradictory views, living in widely separated parts of the Greek world and written at different dates, perhaps of five to six centuries. There is not a single work which we can state with confidence to be the composition of Hippocrates and possibly none is."<sup>2</sup>

(B) Logan Clendenin, the British historian, wrote in his compiled book: "Source Book of Medical History", edition of 1942, that Hippocrates wrote 9 books, but they are probably all written by a school rather than one man.<sup>1</sup>

(C) Guenter Risse, the American teacher, in his article on medical history in the Encyclopedia Americana, edition of 1982, in referring to Hippocrates writings said: "Over the next centuries after Hippocrates, unknown followers wrote about 60 books on medical subjects."<sup>7</sup>

(D) Dr. Saunders, under the heading of Hippocrates", wrote in the Encyclopedia Americana, edition of 1982: "As early as the first century A.D, Galen and others attempted to identify the genius works of Hippocrates. Scholarship grew more and more skeptical so that by the beginning of the 20<sup>th</sup> century none of the writings of the collection was accepted with any confidence as the work of Hippocrates himself. At the core of the Hippocratic problem is the question of what standard of genuineness or spuriousness can be adopted since there is no single work or passage nor any verbal quotation that we know for sure is the work

of Hippocrates, and therefore, nothing from which to make a comparison.<sup>2</sup>

(E) Arturo Castiglioni, the Italian historian, wrote in his large text book: "A History of Medicine", edition of 1958, that Hippocrates wrote 72 books on 53 subjects and some authors added 76 treatises to this collection. But those certainly coming from Hippocrates himself or his pupils, who were close to him, are only 19 books.<sup>4</sup>

(F) Ibn Abi Usaibeyah, the ancient Arabic historian/physician of the 13<sup>th</sup> century, wrote in his large historical book "Classes of Physicians", that all the Hippocratic group are 30 books and these of his own writing are 12 books, while the others are attributed to him.<sup>8</sup>

(G) El-Tigani El-Mahi, a contemporary Arab historian from Sudan, wrote in his historical book "An Introduction to the History of Arabic Medicine", edition of 1959, that Hippocrates wrote about 87 books and all subjects of medicine known at his time.<sup>9</sup>

(H) Meraizen, the contemporary Arab historian in Saudi Arabia, wrote in his book "Kennash El-Kashkary", edition of 1994 that deals with the activities and works of the ancient physician "Jacob El-Kashkary" of the 9<sup>th</sup> century. He referred to the Kashkary writing about the Hippocratic books, that they were only 30, and later on 12 of them were selected by the ancient Alexandria school for medical education.<sup>10</sup>

(I) William James Durant, the American historian in his book "Our Oriental Heritage", edition of 1935, wrote that the Hippocratic collections are only four books, that can be of his own writings. Otherwise, all other books are written by different authors who lived between the 5<sup>th</sup> and 2<sup>nd</sup> century B.C. .<sup>11</sup>

(J) Scott Stevenson and Douglas Japhrie, the two contemporary British physicians wrote in their historical book: "A History of Otolaryngology", edition of 1949, that the Hippocratic collection represents the contents of the library of Hippocratic School in the Island of Cos. A school which flourished during the fourth and fifth centuries B.C..<sup>12</sup>

### Rationality

It is claimed by some historians that medicine in ancient Greek time was separated from myth and magic at the time of Hippocrates and diseases were considered as natural phenomena treated on rational bases.

However, the Encyclopedia Americana of 1982, under the heading of "Apollo" wrote that the Hippocratic School, in spite of notable ability in observation and a spirit of almost pure rationalism did not succeed in wholly diverting themselves of superstition. This observation is also confirmed by Naguib Mahfouz, the contemporary Egyptian Historians. In Greek mythology, Apollo was the greatest of

gods. He was the god of the sun and at the same time the god of agriculture, poetry, songs, healing and the patron of physicians. In time, he became identified as the father of Asclepius, the god of medicine. Temples were constructed everywhere in ancient Greece and other countries for Asclepius, aiming for its power for cure of diseases. This continued for many centuries before and after Christ (is). The Hippocratic Oath, in its present form: "I swear by Apollo the healer, invoking all the gods and goddesses to be my witnesses, that I will fulfill this oath", shows the great influence and persistence of Greek mythology in medicine even after the time of Hippocrates.<sup>2</sup>

### Origin of Medical Knowledge

There is no doubt that Greek medicine was an outcome of the earlier knowledge which arose in the previous civilizations of the Near East at least 3000 years before the age of Hippocrates (9)(13).<sup>6,13</sup> Charles Cumston, the British historian wrote in his book: "An Introduction to the History of Medicine", edition of 1926 that medicine existed as a science and as an art centuries before the advent of Hippocrates. The Greeks and Romans extolled the antiquity, wisdom and scientific knowledge of the Egyptians and even what they have written about them probably falls far short of the truth. He added that it is doubtful whether or not the first anatomists had any other means of information as neither Aristotle nor Hippocrates has ever opened a human body.<sup>14</sup>

Mr. B. Ebbell in his translation of Ebers Papyrus wrote an important historical remark, he said that Greek medicine is by no means original but has taken over very much from Egyptian medicine and can be looked upon as a further development of the latter. As the oldest medical papyrus was written 1900 B.C., that means that medical art must have been at a fairly advanced stage and a long development, probably at least 3000 years B.C. There is accordingly every reason to believe that the science of medicine has its origin in the Nile Valley. Since Egypt and not Greece must be considered the original home of medical art, we ought not to set up the Greek Asclepius as the patron genius of medicine but rather the physician whom the Egyptians and the Greeks gave this dignity, viz Imhotep.<sup>14,15</sup>

Naguib Mahfouz, the Egyptian physician, wrote in his book: "The History of Medical Education in Egypt", edition of 1935 that many of the intellectual men of Greece had, for centuries before Hippocrates, traveled and studied in Egypt. The effect of this intimate contact is visible not only in Greek medicine and science but in the whole domain of knowledge. Some of the prescriptions given in the papyri are repeated verbatim in the Hippocratic writings and the similarity between the two versions is too great even in detail to be fortuitous.<sup>13</sup>

Short and long term visits were very frequent by Greek philosophers and scientists to the Egyptian scientific centers in Sais, Memphis and On cities. Examples of these scientists are Thales of Milet(Geometry), Eudoxus (Astronomy), Pythagoras (Mathematics), Plato (Philosophy), Democritus (Astronomy), Solon (Statesman) and Herodotus (Historian ).<sup>6,15,16</sup>

Riad, the French writer, wrote in his historical book:" La Medicine au Temp des Pharaohs", edition of 1955, that Hippocrates is reputed to have traveled to Egypt at the age of 19 and stayed for 3 years.<sup>17</sup> This statement is also mentioned by Arturo Castiglioni, the Italian historian. He assured that Hippocrates traveled to Egypt, Libya and Scythia and he had never been in Athens.<sup>4</sup>

A detailed scientific study of the continuation of the Egyptian sciences in Greek medicine was done by the British physician Ahmes Pahor in 1996 and presented to the 35<sup>th</sup> International Congress on history of medicine, showing the survival of the Egyptian medicine ill~ the Greeks writings.<sup>6</sup>

The main scientific knowledge of the Egyptian medical papyri was exactly copied by the Greek scientists Aristo, Hippocrates, Dioscorides and Galen.<sup>18</sup> This is quite evident in the following subjects:

### **Anatomy**

Some anatomical terms of Ancient Egypt are used in the Greek medical writings, e.g.: The maiden of the eye is the name given to the eye pupil in ancient Egypt. It was used as it is in Hippocratic writings. The openings of the heart was the name given to the stomach and hence to Greek name "Cardia", Meeto is the Egyptian given name to the bundle of tissues containing arteries, nerves and tendons together and the same used by the Greeks.<sup>6</sup>

### **Diseases**

Hemi-cranism was the term given to migraine and also used by the Greeks. Ascending water was the Egyptian name given to cataract and used also by the Greeks. The gossiping one was the name given to those possessed by evil spirits, was also used by the Greeks and called Diabolos.<sup>6</sup>

Severe emaciation in cases of advanced cancer esophagus was described in Ebers Papyrus (42,206) and the same case was described by Hippocrates and given the term Hippocratic faces.<sup>6</sup>

### **Methods of Diagnosis**

For the diagnosis of women diseases and fertility, the diagnostic methods were copied by the Greeks and repeated verbatim in the, Hippocratic writings. To test women fertility, a handful of barley is placed in a pot and irrigated by the woman's urine for several days. If the seeds

grow, the lady is fruitful, and if not, then she is barren.<sup>6,13</sup> The same method was used in a modified way and strangely attributed to Aristotle. Five wheat corns and seven beans put into an earthen pot let the party make urine therein. Let this stand seven days and if in that time they begin to sprout, then the party is fruitful, but if they sprout not, the party is barren.<sup>13</sup>

To diagnose women sterility, the Kahon papyrus describes the placing of an onion per vagina. If the onion smell emanates from her mouth the following day, then she is fertile (denoting patent fallopian tubes). If no smell emanates, the lady is sterile. This was exactly described by Hippocrates.<sup>6</sup> Another testing method was described in Kahun, Berlin and Calsberg papyri. They advised fumigation beneath the woman and if the smell appears in the mouth, it is an indication of fertility. This method was exactly described by Hippocrates.<sup>6</sup> Calsberg papyrus describes examination of the eyes to know if a woman is pregnant and the same was described by Hippocrates.

Kahun papyrus attributed eye aches and disturbances in different organs to diseases and displacement of the uterus and the same is found in Hippocratic writings.<sup>6</sup>

To predict the sex of the coming infant, they described irrigating two pots by urine of the pregnant lady, one containing wheat corns and other barley. If the wheat corn sprouts, it means that the infant will be a boy. If the barley sprouts, it means a girl. If both sprout not, it means she is not pregnant. The same test was described by Hippocrates.<sup>18,19</sup>

A wide eye pupil has a diagnostic significant in ancient Egyptian medicine and also described by the Greeks.<sup>6</sup>

### **Treatment**

Some commonly used drugs in ancient Egyptian medicine were used for the same purpose in Greek medicine. Milk and honey were frequently used as medicaments by ancient Egyptians in the treatment of many diseases. Although the Assyrians and Babylonians considered milk harmful, the Greeks followed the Egyptian therapy and used it frequently.<sup>6</sup>

The Greeks also used Ammonia (derived from the name of the Egyptian god Amon), Nitron from Neterji and Gum from Gemy.<sup>6</sup>

Venisection and thermocautery were described in Eber's medical papyrus in the treatment of soft swellings, hernias and vessel expansion, and the same was described by Hippocrates.<sup>18</sup>

### **Head Injuries**

The Edwin Smith papyrus described 9 cases of head injuries and Hippocrates described similar cases in his books on head injuries. The Edwin Smith papyrus also

described drying up and bandaging with honey for the treatment of head injuries, and the same was described by Hippocrates. Ancient Egyptians did trephining of the skull and Hippocrates described it in the same way.<sup>6</sup>

### ***Fractures***

Fracture of the clavicle received the same treatment in the Hippocratic writings as described in the Edwin Smith papyrus. Dislocation of the jaw was given the same management by Hippocrates as in the Edwin Smith papyrus.<sup>6</sup>

### ***Theory of disease***

The concept of diseases in Greek medicine is based on the idea: that all matter consists of earth, air, fire and water; that there are four humours, blood, phlegm, white bile and black bile and thus people might be grouped into sanguine, phlegmatic, choleric and melancholic temperaments. This theory developed over centuries in Greece and lasted for about 2000 years. The concept was developed first by philosophers some of whom traveled to Egypt and owed a great deal to Pythagoras, who stayed in Egypt for 20 years.<sup>6</sup>

The Greeks concept of the four elements of nature: earth, air, fire and water is derived from the ancient Egyptian religious beliefs that god "Seb" is concerned with earth, god "Shoe" for air, god "Ra" for fire and god "Osiris" for water.<sup>18</sup> The ancient Egyptians attributed disease to plethora of blood. They also believed in the Akhdo and Steet circulatig in the body, the latest according to Grapow and Elbell is "Phlegm" from which the Greeks took the same idea. The same also applies to bile.<sup>6</sup> This was referred to several times in both Eber's and Chester beatty medical papyri.<sup>18</sup>

The Hippocratic principle~ of cure was to leave patients for nature, depending on the power of the body to heal itself. This was also recognized and highly regarded by ancient Egyptian physicians.<sup>6</sup> It was mentioned several times in the management of some cases in Edwin Smith medical papyrus.<sup>18</sup>

There are several examples of the continuation of the Egyptian medicine in Greek writings. The medical book on "Herbs" written by Dioscorides contains the names of many drugs and descriptions similar to those in the medical papyri. The descriptions 23 up to 36 in Eber's papyrus concerning the stomach cardia troubles are similarly written by the Greek physician Alexander Trallianos. The surgical descriptions No. 106 to 110 in Eber's papyrus on swellings was exactly copied by Galen in his book on abnormal swellings.<sup>18</sup> Many other examples of the Egyptian medical terms are found in Greek writings as Evolution of experience, Oracles, Cosmology, Immortality of the souls, Esoteric doctrine, Hypnotism, Diet and Prophylaxis.<sup>6</sup> Pharmacy is also originally an Egyptian term derived from Phar-ma-ca which means the healer.<sup>20</sup>

### **The Noble Hippocratic Oath**

The noble ethical code of Hippocrates, claimed to be a great contribution to medicine, is subjected to argument and criticizing discussions.

Charles Singer and Ashworth Underwood, the British historians, wrote in their book: "A short History of Medicine", edition of 1962 that the Hippocratic Oath in its present form is perhaps of later date than Hippocrates. Yet, parts of it may be even earlier than him and some suggestions of it is perhaps to be traced in the teaching of Pythagoras, 530 B.C..<sup>2</sup>

Edelstein, the American writer, presented a well-known work in 1943, proving that the Hippocratic Oath, the code for physicians, in spirit and in letter, in form and content is a Pythagorean manifesto. Thus, he undoubtedly revealed that the oath is indeed a Pythagorean document and did not reflect the ethical principles commonly accepted in classical times.<sup>20</sup>

Dr. Saunders wrote under the heading of "Hippocrates" in the Encyclopedia Americana, edition of 1982, that the authorship and historical origin of the Hippocratic Oath are so obscure that even the date of its composition is placed variously from the 6<sup>th</sup> to the 1<sup>st</sup> century B.C. Much of the oath shows the influence of Pythagorean ethics of the post-Hippocratic period.<sup>5</sup>

As Pythagoras stayed in Egypt for more than 20 years, at his early life, he was very much impressed by the Egyptian medical ethics and quoted a lot of them.<sup>6,17</sup> Dr. El-Gammal, a contemporary Egyptian historian, wrote in his historical book: "History of Egyptian Medicine and Pharmacy in Pharonic period", edited in 1994 in Arabic, that the Hippocratic Oath has been fully copied from the Egyptian Thoth oath.

It was sworn by physicians at their graduation during the ceremonial graduation celebration. The new physicians, in their special form dress, swear by the holy gods to give their patients their utmost care, to treat the poor free of charge and to keep their privacy and not to misuse their medical work. These were the first words of the Toth oath, that was mentioned in Hearst medical papyrus written in 1550 B.C., more than a 1000 years before the advent of Hippocrates.<sup>18</sup>

### **Conclusion**

The early beginning of medicine appeared in ancient Egypt. It was practiced on rational bases and written on the medical papyri, more than a thousand years before Greek time. The Greeks and Romans extolled the antiquity, wisdom and scientific knowledge of the Egyptians and added their own experience.

Hippocrates history, activities and writings are obscuring and available information is much doubted. Writ-

ings attributed to Hippocrates and his followers are full of quotations from the ancient Egyptian medicine. Hence, Egypt and not Greece is the original home of medical science. The most genius ancient figure of medicine in ancient Egypt is Imhotep, whom the Egyptians and the Greeks identified as the god of medicine, long time before the advent of Asclepius, and should be considered the father of medicine.

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**Geliş Tarihi:** 15.06.2004

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