



Summary :

The contribution of doctors coming from Asia Minor is invaluable. The most eminent physicians of Antiquity - with the exception of Hippocrates - had studied in cities of Asia Minor, forming the thought and the methodology of medical science. With their researches, experience, innumerable books and mainly their faith in the scientific approach to the physical problems they laid the foundation for the scientific treatment of diseases.

Date

Antiquity

Geographical Location

Asia Minor

1. Introduction

The development of medicine in Asia Minor is closely connected with the development of science throughout the Greek world, thus it is almost impossible to segregate particular local characteristics. The contribution of doctors from Asia Minor was invaluable. The most eminent scientists of Antiquity - with the exception of [Hippocrates](#) - were born in Asia Minor and had studied there. As a result, they formulated the ideas and methodology of medical science. With their research, experience, innumerable treatises and mainly their faith in the scientific approach to the physical problems they laid the foundation for the rational confrontation of diseases and their treatment. It is not accidental that the basis for medical science was set during the acme of [Ionian Philosophy](#), in the 6th and the 5th cent. BC.

The first Ionian philosophers speculated over biological and medical problems, which resulted in leading the Greek thought to the conclusion that the methodology applied for the research and interpretation of the natural world could also be applied to examine the phenomena of the human organism. The theories of the presocratic philosophers helped to disassociate medicine from religion and lead to the progressive effacement of magic and superstitions. However, religious medicine, expressed mainly through the cult of [Asclepius](#) in the Asclepieia, would coexist with scientific medicine, as the latter was formulated in medical schools.

2. Asclepieia

The Asclepieia were sanctuaries dedicated to Asclepius and healing centers where priests - healers (the [Asclepiadae](#)), under the enlightenment of Asclepius, cured patients who suffered mainly from psychosomatic disorders.

The large Asclepieia were impressive complexes built on locations of natural beauty and beneficial climate, in order to provide the patients with a pleasant stay and boost their psychological well-being. In Asia Minor the cult of Asclepius was spread very rapidly, due to the activity of the Asclepiads. Almost twenty Asclepieia had been recorded where visitors and patients from the entire Greek region flocked: at [Abydos](#), Alexandria, [Antandros](#), Byzantium and Gargara in [Troad](#), at [Aegai](#), at [Elaea](#), at [Cyme](#) and Pitane in [Aeolis](#), at [Erythrae](#), [Ephesus](#), [Magnesia](#), [Priene](#) and [Smyrna](#) in [Ionia](#), at [Hierapolis](#) in Phrygia, at [Tralleis](#) and [Cnidus](#) in [Caria](#), at [Pergamon](#) in [Mysia](#) and at [Prousa](#) in Bithynia.

The most famous Asclepieion was the [Asclepieion at Pergamon](#). According to tradition it was founded by Archias, son of Aristaichmus. Excavations have proved that the temple existed in the 4th cent. BC, expanded in the Hellenistic period and flourished mainly in the Roman period during the 2nd cent. AD. The sanctuary of Asclepius was a big building complex in an open area with stoas. Apart from the buildings which were used for the treatment and accommodation of the patients, there were also a library, halls for festivities and a theatre with a capacity of 3,500 spectators.

The temple of Asclepius imitated, in a smaller scale, the Pantheon of Rome. It was adorned with three gold statues: of Asclepius, Hygeia and Telesphorus.



3. The Medical School of Cnidus

Medical schools, independent from the Asclepieia, developed in the 5th cent. BC on the Greek Mainland, Sicily, south Italy and Asia Minor. The most important ones were located at Cnidus and Kos, due to the great development of philosophy and science in those regions.

The Medical School of Cnidus in south-western Asia Minor was earlier than the School of [Kos](#) and it would have remained the most important if Hippocrates did not practise medicine at Kos. These schools represented local traditions rather than conflicting views and did not reject each other's ideas as heretical or hostile. However, the scientific differences which characterized the two centres of medical practice were of paramount importance.

The main work of doctors at Cnidus was the categorization of diseases. Their interest was mainly focused on illnesses, their diagnosis and their individual characteristics, applying an analytical methodology. Their approach had been influenced by the Egyptians. Their works were strictly medical and had little theoretical interest, contrary to the Hippocratics. They treated the subjects of pathology, gynecology and embryology. The most eminent doctor of the School of Cnidus was Euryphon, its founder. He was an expert in anatomy and wrote many treatises on treatments, most of which are unfortunately lost. The most representative work of the School, 'Cnidion gnomon' is attributed to him. He might have been the original writer of certain works which are considered to have been written by Hippocrates, who preserved the medical thought of the School of Cnidus in the form of juxtapositions between the latter and the School of Cos in his collection of works.

4. Hellenistic period

In the Hellenistic period, the traditions tracing back to the works of Hippocrates persisted, but an impressive progress also took place. Physicians of a later date, such as Celsus, Rufus, [Soranus](#), [Galen](#) and [Oribasius](#) mention in their works the doctors of the period and their advances. Their ideas reveal scientists of a high standard with original ideas. The characteristics of medicine during the Hellenistic period are greater specialization and division of scientific research into individual fields, as well as a successful implementation of scientific knowledge on practical matters. At the same time, a divergence in views becomes present, especially on methodological issues. Even the value of scientific research is questioned as an efficient method of healing. Medical schools developed emphasizing different elements. Despite the theoretical divergence, the physicians were eclectic in practical application. These tendencies for unification became clear later in the theories of Rufus and Galen in the 2nd cent. AD.

During the Hellenistic Period various research centres were established. The most important were at Alexandria and at Pergamon. Some kings supported scientific research, especially when this could have had practical applications, or broaden their own interests and ensure greater reputation. However, only a small number of scientists were benefited by royal generosity, either by donations or access to libraries, provision of tools and laboratories.

The most eminent medical personality of the Hellenistic era was [Herophilus](#), who was from [Chalcedon](#) in Bithynia. Herophilus studied at Cnidus and Kos and lived in Alexandria, where he was particularly favoured by the [Ptolemies](#). He founded along with Erasistratus the medical school of Alexandria, which was later renamed Herophilos. He was particularly interested in physiology and anatomy. With the support of the Ptolemies he performed dissection on corpses for the first time and he became the most prominent anatomist of Antiquity. This resulted in an amazing progress in anatomy, physiology and surgery.

5. Roman period

In the following period, the various theoretical disagreements led to the decline of the practice of anatomy. Another decisive factor was the lack of support to those anatomists who wanted to continue the tradition. Most scientists had to support their own research. Moreover, there was no social recognition and the deficiency of a stable and permanent organization influenced the course of the medical science. The general tendencies reflect the insecurity felt by doctors for their position in the society, which was aggravated by



philosophical skepticism concerning the acquisition of knowledge and dealing with charlatanism. Nevertheless, the cities of Asia Minor were the birthplace of some of the most important doctors. Famous medical schools had been established in many cities. The most important were at Bithynia, Ephesus, [Caesarea](#), Cnidus, [Miletus](#), Pergamon, Smyrna and Tralleis. It is characteristic that an inscription of the 2nd cent. AD records that the school of Ephesus¹ was part of an academy of sciences similar to the Museum of Alexandria and its graduates participated in regular competitions on medical issues, while there were awards for achievement on surgery and the invention of new tools.²

Another famous school was that of Smyrna, where Galen had studied. It was founded by Hicesius, student of Erasistratus, in the 1st cent. BC. Many of its students practised their profession in Rome, such as [Heras of Cappadocia](#), the personal doctor of [Nero](#), [Athenaeus of Attaleia](#), founder of the School of Pneumatists, Soranus of Ephesus, the famous gynecologist, [Magnus of Ephesus](#), chief doctor of the imperial court, Rufus of Ephesus, the most important doctor and writer after Galen, and Galen himself from Pergamon, the greatest doctor of all after Hippocrates. Nevertheless, the way for the Greek medicine to Rome and the recognition of the value of Greek doctors had been already opened by [Asclepiades](#), who was born at Prousa in Bithynia in the 1st cent. BC.

In the Imperial Rome the deviating approaches of the Hellenistic period resulted in schools - sects. Each 'school' had its own principles, methods and theoretical background, while deepest disagreements occurred in the approach of diseases and their causes. The most important were the Dogmatic, the Empiric, the Methodical and of the Pneumatists. Most physicians supported the doctrines of their school, although some of them were critical towards specific theories and preferred to differentiate themselves according to their own personal experiences. The most brilliant example of a critical mind is Soranus of Ephesus, basically a Methodist, who reformed that specific school and became the most important doctor in Rome. His contemporaries [Aretaeus of Cappadocia](#) and Rufus of Ephesus restored the Hippocratic thought. [Dioscorides Pedanius](#) of [Cilician Anazarbus](#), the last great representative of pharmacology, summarized the medical and pharmaceutical knowledge of his time; there would be no essential scientific progress after him.

The developments of medicine in the Roman period included a particular flourishing of obstetrics, mainly due to the work of Soranus, the wider acceptance of women physicians, who were no longer limited to gynecology and obstetrics, as well as the progress of surgery, particularly in traumatology practised in military hospitals. Special mention should be made to the eminent doctor from Pergamon Galen. His work comprises the medicine of all those centuries. As the last eminent physician from Antiquity, Galen sealed the course of medicine for at least a thousand years. He occupied himself with all fields of medical science and wrote an impressive number of treatises. He was critical to all medical schools, accepting every important contribution they had to make and composing his own theory on the Hippocratic background. The compilation work of Galen, product of his long personal experience, had as a consequence the weakening of the sects. The medicine of Late Antiquity would be divided into the philosophical enquiries of the general causes and the clinical therapeutics as practised in the Byzantine period.

1. Heracleides, Rufus and Soranus were students at the School of Ephesus.

2. Orib. *CMG* VI 2,2, p. 9.

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