

## Ancient Era Hospitals “Asclepions” and their Heritage to the Day\*

### Antik Çağ Hastaneleri Asclepionlar ve Günümüze Mirası

Hayriye Dilek Akdoğan<sup>i</sup>, Yaşar Barış Turgut<sup>ii</sup>, Ali Çağlar Turgut<sup>iii,iv</sup>, Ilgaz Akdoğan<sup>v</sup>

<sup>i</sup>Assist.Prof., Bakırçay University Faculty of Medicine, Department of Medical Education, <https://orcid.org/0000-0001-6864-4839>

<sup>ii</sup>Specialist, Aydın State Hospital, <https://orcid.org/0000-0002-7028-1018>

<sup>iii</sup>Research Assist., Ege University Faculty of Medicine, Department of Radiology

<sup>iv</sup>Aydın Adnan Menderes University Health Sciences Institute, Department of Histology and Embryology  
<https://orcid.org/0000-0003-4159-2201>

<sup>v</sup>Professor, Aydın Adnan Menderes University Faculty of Medicine, Department of Anatomy  
<https://orcid.org/0000-0003-3324-4629>

#### ABSTRACT

Asclepios is the god of medicine and health in mythology. In ancient times, healing was sought in the worship of Asclepios. Ancient hospitals built in the name of Asclepios are called “Asclepion”. In ancient times, around three hundred and twenty Asclepions were built within the borders of Greece and Türkiye today. The most important of these ancient hospitals are located in Epidauros, Pergamon, Kos, Athens and Knidos. There was also a health center (an ancient hospital) in Allianoi. In this study, the most significant locations, architectural features, treatment methods, historical and cultural roles of the ancient hospitals among the Asclepions in Western Anatolia and Greece were investigated. When the treatment methods in Asclepions are examined, it is seen that holistic medical practices were applied with a biopsychosocial approach to the patients called guests. Diseases were not seen as one-dimensional but as the result of complex processes and negative environmental, social and psychological interactions. Patients were treated with respect as beings with mental, ethical, emotional, social, moral and natural characteristics. Centuries earlier in Asclepions, the first functional applications of hospital architecture and individual and holistic medical approaches are seen. We think that today's hospital architecture and treatment approaches have many features that can be learned from the heritage of ancient hospitals in history.

**Key words:** Ancient hospitals, Asclepion, Asclepios, Biopsychosocial treatment, Hospital architecture

#### ÖZ

Asklepios mitolojide tıp ve sağlık tanrısıdır. Antik çağlarda şifa Asklepios'a tapınmada aranırdı. Asklepios adına inşa edilen antik hastanelere “Asclepion” adı verilmektedir. Antik çağda, günümüzde Yunanistan ve Türkiye sınırları içerisinde üç yüz yirmi civarında Asclepion inşa edilmiştir. Bu antik hastanelerin en önemlileri Epidauros, Bergama, Kos, Atina ve Knidos'ta bulunmaktadır. Ayrıca Allianoi'de de bir sağlık merkezi (antik hastane) bulunmaktaydı. Bu çalışmada Batı Anadolu (Türkiye) ve Yunanistan'daki Asclepionlar arasında en önemli olan antik hastanelerin konumları, mimari özellikleri, tedavi yöntemleri, tarihi ve kültürel rolleri araştırılmıştır. Asclepion'larda tedavi yöntemleri incelendiğinde misafir olarak adlandırılan hastalara biyopsikososyal yaklaşımla bütünsel tıp uygulamalarının gerçekleştirildiği görülmektedir. Hastalıklar tek boyutlu olarak değil, karmaşık süreçlerin ve olumsuz çevresel, sosyal ve psikolojik etkileşimlerin sonucu olarak görülüyordu. Hastalara zihinsel, etik, duygusal, sosyal, ahlaki ve doğal özelliklere sahip varlıklar olarak saygıyla davranılırdı. Asclepion'larda yüzyıllar önce hastane mimarisinin, bireysel ve bütünsel tıp yaklaşımlarının ilk işlevsel uygulamaları görülmektedir. Günümüz hastane mimarisinin ve tedavi yaklaşımlarının, tarihteki antik hastanelerin mirasından öğreneceği pek çok özellik olduğunu düşünüyoruz.

**Anahtar kelimeler:** Antik hastaneler, Asclepion, Asklepios, Biyopsikososyal tedavi, Hastane mimarisi

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İletişim - Correspondence Author: Ilgaz Akdoğan <ilgazakdogan@yahoo.com>

## Introduction

In the ancient world, the foundations of healing were sought in mythology, in the worship of Asclepius, the god of medicine and health, the son of Apollo, one of the Olympian gods. The popularity of the worship of Asclepius increased in the 5<sup>th</sup> and 4<sup>th</sup> centuries BC, and as a result, sacred areas called "Asclepion" were built for Asclepius in the major cities of Greece and Western Anatolia (Asia Minor) during the Hellenistic period.<sup>1</sup> Although some sources say that Asclepius was born approximately in 1240 BC and lived in Trikki, the ancient city of Trikala (Western Thessaly)<sup>2</sup>, the common opinion is that the first known source providing information about Asclepius is Homer's Iliad (VIII century BC). In this work, Homer refers to Asclepius as a "perfect physician" rather than a "divine figure". Before Asclepius, Apollo, one of the mythological gods, had been seen as the source of healing, but Asclepius, as the son of Apollo, took over this mission and deification took place with the cult that formed around him over time.<sup>3,4</sup>

In today's Greece and Türkiye, there are around three hundred and twenty ancient hospitals called "Asclepion" in ancient times dedicated to the cult of Asclepius. These ancient treatment structures where various diseases are treated were named Asclepion, which means "house of Asklepios", and the priest physicians working there were called "asclepiad".<sup>5</sup> The aim of this study is to investigate the features of Asclepians and the heritage they left to modern hospital architecture.

### Historical and Cultural Roles of Asclepians

Asclepians were considered the center of health care in ancient Greek society. These centers played an important role in sharing medical knowledge, focusing on healing, and increasing community health. These centers should be seen not only as treatment centers, but also as places where medical knowledge, including those related to the CNS, is shared and developed. In these places, thoughts on medical teachings, education and practices were shared.<sup>6</sup>

### Location of Asclepians

The location and architectural structures of the Asclepians show similar characteristics. Their locations were specially selected. They were established in quiet and peaceful areas with plenty of trees, airy, a bit far from residential areas. Regions with hot or cold natural spring water are generally preferred. Thus, they are suitable places for treatment and cleaning. They are generally established in sloping places that are not exposed to direct wind. This location ensures that there are fewer mosquitoes and no cases of malaria since the wind blows from up to down in the summer months.<sup>7</sup>

### Treatment Methods for Asclepians

The patient arriving at the ancient Asclepians was first taken to the patient admission department. After listening to the patient's complaints, practical treatment and/or religious ceremonies were performed for each disease. Treatment according to the disease was a very advanced practice compared to that period when healing methods were applied with similar rituals and ceremonies for each patient. There were many treatment options according to the patient's complaints. Treatment methods in Asclepians were dream and suggestion therapy, water and thermal therapy, and treatment with herbal medicines. In addition, treatment methods such as mud baths, diet, induction of vomiting, and different herbal drugs were also applied. Surgical treatment was a less common method.<sup>8</sup>

People who come to Asclepion first wash in water described as sacred and then rings, belts, etc. were given to these people. Accessories were taken away and a white garment was given. These clothes can be thought of as today's hospital gowns. The traditional treatment method was for patients to sleep in the abaton (sacred dormitory). Meanwhile, the staff would release harmless snakes among the patients, it was

thought that this would help the treatment. When the patients entered the REM (rapid eye movements) state, they would wait for God Asclepius to tell them what the treatment was or show them in some way, and the dream would be interpreted by the doctors and the disease would be diagnosed. Treatments were made according to the diagnoses in the interpretation of dreams.<sup>9</sup>

There were basically three treatment methods applied in asclepions: diet, hot and cold baths and body movements. Asclepius's doctors would give their patients mud baths, use medicines obtained from plants, and also enable them to engage in sports and music. In addition, the dreams they had at night were interpreted, patients were helped to recover through suggestion, and procedures such as surgery were performed when necessary. The sound of water was mostly used for therapy. For this reason, Asclepions became the most important health centers of their period with their medical, herbal, surgical and paramedical treatments intertwined through suggestion and belief.<sup>9,10</sup>

Treatments in Asclepions included sacrificing to God, making and praying for objects similar to the objects in the place where the disease occurred (ears, eyes, legs, etc.), encouraging the patient psychologically (socializing and having fun) for treatment (having them listen to music, watching a play, establishing dialogue with people and enabling them to socialize), apart from all these treatments, although very rare, surgical interventions were performed in later periods.<sup>9-11</sup>

The most important Asclepions located in Western Anatolia and Greece; they were Epidaurus (Epidaurus), Pergamon, Tricca, Corinth, Athens, Kos, Knidos (Cnidos, Cnidus), Gortys, Smyrna and Miletos. It was also an important medical and surgical center in Allioni, located in western Anatolia (**Figure 1**). In 293 BC, there was an uncontrolled plague epidemic in Rome, and envoys were sent to ask for help from Asclepius in Epidaurus. It is also known that a small Asclepius was established on an island in the Tiber (Rome) after the plague was brought under control.<sup>12</sup>



**Figure 1.** The most important Asclepions located in Western Anatolia (Türkiye) and Greece.

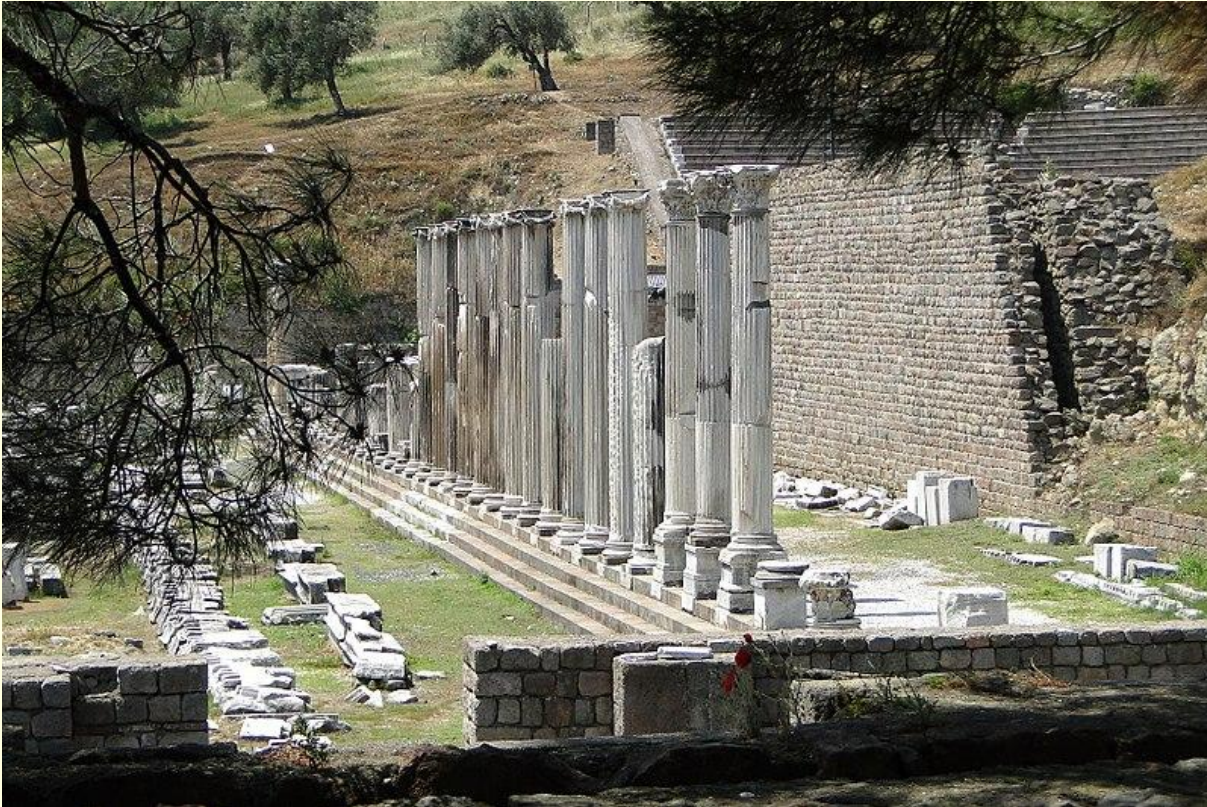


## The Most Important Among the Asclepions in Western Anatolia and Greece

### Asclepion of Pergamon

Pergamon (Bergama) Asclepion is one of the most famous locations among the Asclepions in Western Anatolia (Türkiye) and Greece. Pergamon Asclepion is also the pioneer of many medical studies. While dream interpretations and suggestion therapy form the basis of today's psychoanalysis, the therapeutic body movements given to patients are the first traces of gymnastics, physical therapy and rehabilitation. In addition, Galen (129-216 AD), one of the most famous physicians of the ancient period, was born in Pergamon and worked in Asclepion for years.<sup>13-15</sup>

Pergamon Asclepion was built in the same period as the Spartans, it was built in the mid-5th century BC in the Bergama Region, in the north of the Aegean Region (**Figure 2**). This health center also has an important place in the historical process as it was a medical school for the training of famous physicians of the period and the world's first psychiatric hospital. The healing properties of the waters in the region were discovered by people in early history and were used for health purposes for centuries. This place appears as the first place of application of physical therapy and rehabilitation and psychiatry departments in the history of medicine, with the application of hot water springs, physical therapy practices and suggestion treatment methods during the period when disabled people were excluded from society in the Ancient Age. In ancient times, when disabled people were excluded from society, a modern thought practice such as treating them and reintegrating them into society attracted attention.<sup>13-16</sup>



**Figure 2.** Pergamon Asclepion.<sup>17</sup>

The first thing required for patients entering Asclepion was cleanliness. Appearing clean before gods was the basis of faith. The patient who cleaned himself and made a vow was taken to the temple. At that time, there was a belief that sacrificing something or an animal to the gods during the initiation ceremony would

accelerate the healing process. After this, the patients would pray in front of the statues of the gods (Asclepius and Telephorus) and ask for healing. Lamps were lit and incense was burned on the roads they passed. This ceremony, which was carried out from the entrance to the patient rooms, was accompanied by music, light and sound games, and water sounds. At that time, a kind of religious and divine music was performed using existing instruments. One of the most important components that strengthened suggestion, which was the main element of the treatment, was music. It was very important to believe and trust priest doctors. Because it was believed that the more the patient believed that he would recover, the more resilient his body would be and the faster he would recover. It was music, as well as the deep and impressive voices of the priests coming from afar, that enabled the patients who were put to sleep and dream with the help of opium to go into a hypnosis-like emotional state. Water played a big role in Asclepion. It was a sacred duty for those who came to Asclepion to bathe in the sacred pools and drink from the sacred fountain. Water was an important healing tool, whether washed or drunk.<sup>16</sup> The most important treatment applied in Asclepion was the treatment through suggestion. This treatment method played an important role in helping patients regain their health. On the first days of their stay in Asclepion, guests were asked to dream and catch clues about their treatment in their dreams. Patients believed that they would get better in the dreams they had as a result of suggestions, and as a result, they made efforts to get better hopefully. It is understood that physicians from Pergamon conducted psychotherapy sessions with creative dream interpretations centuries before Freud. Additionally, the library of Pergamon in Asclepion contained more than five hundred books on theatre, fine arts and music. Guests would receive reading therapies in this library, which had no medical books. Bathing in healing and holy waters, drinking these waters, sports and exercise were among the other treatment methods. At the same time, strong suggestions, theater and music treatment had an important place in the treatment.<sup>9</sup>

Comedies were performed and concerts were held in the theater inside the Asclepion (**Figure-3**) This theater, with a capacity of four thousand people, played an important role in treating the souls of patients (guests) and connecting them to life, as much as other treatment methods, with its games, entertainment, instruments, words and sounds.<sup>16</sup> Just as the recovery of a patient increased the morale of other patients, patients were also entertained and connected to life with music and shows. When a patient recovered and left the Asclepion, a festival was made and it was considered a duty to send him off with a big ceremony. The opinions of the patients who recovered were taken and written on tablets and bronze plates and hung on the most visited places of the temples. Those who came to Asclepion would read these and witness the healing power of the temple. In this way, Asclepion's propaganda would be made in a sense. Patients who were sick from one of their organs and thereby healed would give bronze, marble or mud models of their healthy organs as an offering to Asclepion, the god of health. Treatment methods were not limited with those. During the excavations, tools made of bronze, bone and silver were found out and they are thought to have been used in minor surgical interventions such as opening fistulas and corrugate.<sup>18</sup>

There were many shops on the road lined with columns on both sides followed on foot after the entrance gate. Gifts and offerings to the gods were sold in this bazaar established to meet the needs of patients and visitors coming from far away. Many small hands, feet, ears and many other statues and statue parts have been unearthed during archaeological excavations. These are thought to be gifts offered for the healing of the organ they represent.<sup>18</sup>





**Figure 3.** Pergamon Asclepion general view and theatre.<sup>19</sup>

Galen, one of the most mentioned physicians in the field of medicine for approximately 1500 years until the Renaissance, was born in Pergamon in the 2<sup>nd</sup> century AD. He studied medicine, philosophy and mathematics there. He increased his knowledge, manners and professional experience by going to important medical centers of ancient times. When he returned to Pergamon, he was appointed as the doctor of the gladiators. This job gave him the opportunity to increase his experience in the field of orthopedics and surgical diseases and enrich his knowledge of anatomy. Galen, who served later as a physician to three Roman emperors including Marcus Aurelius, was interested in almost all fields related to medicine and wrote articles about the fields he was interested in. Galen, considered the founder of experimental physiology and sports medicine, used herbal mixtures that he had prepared from herbal drugs growing around Pergamon in his treatment. He can be considered one of the first practitioners of natural nutrition and the founders of pharmacology. Galen, who prioritized surgery in treatment, supported the idea that surgery should be resorted to in cases where there was no response to diet and pharmaceutical treatment. He introduced the necessity of ligating the vessels in cases of arterial bleeding, amputation and its principles, and emphasized the necessity of a radical surgery if surgery was necessary in cancerous cases. Galen, who influenced Western medicine for centuries, worked in Pergamon, Rome and Alliano, and was known as the physician of emperors and gladiators.<sup>20,21</sup>

### **Asclepion of Epidauros**

In ancient times, Epidauros' Asclepion's reputation at that time can be described as worldwide, especially in the Mediterranean, Asia Minor and northern African regions. Epidauros' Asclepion was the most favourite place for people seeking for remedy from the god and was considered the center of the Asclepius cult (**Figure 4 and 5**). There were three most important reasons for this; (1) The first worship of the Asclepius cult was here; (2) It is believed that Asclepius was born here (Pausanias, one of the ancient writers, wrote this, but there were also those who believed that he was born in Trikka) and the traditional burial site was there; and (3) both Asclepion and Apollo were believed to be there.<sup>1,3</sup> The Asclepiions built after him, in a sense, took the Epidauros Asclepion as an exemplary model and were established as branches of this place. It was important to visit this place and take a model for the Asclepiions to be built. In this sense, it was not only a health center but also a cultural and economic center.<sup>7,21</sup>



Figure 4. Epidauros Asclepion.<sup>22</sup>



Figure 5. Votive relief for the healing organ at the Asclepion of Epidauros.<sup>22</sup>

In terms of its location, it was built on the slope of a mountain, in an open and wooded area where fresh air could be breathed, six miles away from the sea and close to water resources. In the architecture of the temple hospital complex, in addition to the temple of Asclepius and Apollo, there were patient rooms called abaton, where patients slept and rested, bathrooms, a library, a stadium, a theater, an odeion, a stoa, a gymnasium, a gym, and guest rooms for visiting priests. This is one of the interesting buildings in the



area. It is called as a group of hotel-guesthouses, and these buildings must have been used for the first accommodation of patients coming to the complex. According to what Pausinas wrote, there were also sports fields and wrestling fields, racetracks, temples of Artemis and Aphrodite, baths and cisterns. Almost all of these architectural features would be found in the Asclepions that would be built after him.<sup>7</sup>

### Asclepion of Kos

Asclepion of Kos was both a very important health center and medical school of its time and a center where one of the most important figures in the history of medicine, Hippocrates, trained and practiced medicine. The Kos Asclepion was built on the 5<sup>th</sup> century BC and functioned till the 4<sup>th</sup> century AD (**Figure 6**). It is understood from the ruins that the mosaic painting showing Asclepios' arrival in Kos was in the Ionic order. It is stated that there are statues of Asclepios, Hygieia and Machaon in the cella (sacred room). A plan layout emerged in the sections built in various periods, consisting of terraces and connected to each other by stairs. The social complex is located on the slope of a hill. Such a terracing scheme made the entire building compatible with the topography.<sup>23</sup>



**Figure 6.** Asclepion of Kos.<sup>24</sup>

The sanctuary of Kos Asklepios consists of three consecutive courtyards defined by galleries and located on three consecutively rising terraces during the Hellenistic period. The lowest terrace, developed in the late fourth century where the terraces rise and follow each other, consists of a simple temple entrance, a U-shaped gallery and a simple fountain structure. Most likely, this is the area where Asclepios patients performed their cleansing rituals and purified themselves with holy water before moving on to the next stage. On the middle terrace, there is an altar structure that resembles the Pergamon Zeus altar and there is the temple of Asklepios, built in the Ionian style, dating back to the third century (around two hundred and eighty BC) opposite it. From here, healing travellers reached the temple of Asklepios, built in Doric style in one hundred and sixty years before Christ, via monumental steps. This group of structures, shaped in the Hellenistic period, today bears the impression of a Roman monument due to the visibility of the dominant arched elements.<sup>25,26</sup>



Hippocrates, who practiced medicine in the Asclepion of Kos, was an innovative physician who brought the scientific understanding of medicine. Hippocrates, whose father was also a priest and physician, first studied medicine at the Asclepion of Kos. Later, he worked as a physician and trained students at the Asclepion of Kos. Kos Asclepion transitioned from the method of healing by worshiping only Asclepius during the Hippocratic period to the Hippocratic medicine based on observation and cause-effect relationship, which is called scientific medicine today. It is undeniable that Asclepion, built in an airy and green environment, also contributed to the treatment methods in this process. The use of herbs growing in the natural environment on the island of Kos as herbal drugs has been used in dietary treatment.<sup>27</sup> Asclepion's influence has a great place in the implementation of treatment options.

### **Asclepion of Smyrna**

The most important information about the temples of Asclepius in the city comes from Pausanias, who wrote works in the 2<sup>nd</sup> century AD, and the famous orator Aelius Aristides (118-180 AD), who lived in Smyrna in the second half of the same century. From Pausanias' statements that "Asclepion by the sea was brought to Smyrna from Pergamon in my time" and "In my time, the people of Smyrna were building a temple of Asklepios in the place between the Koryphe hill and a sea recess into which no other water flows", we find out that the cult was brought from Pergamon in 2<sup>nd</sup> century AD and the construction of an Asklepion started on the shore near Değirmen Tepe in today's İzmir, Türkiye. Aelius Aristides, the famous orator of the ancient period, also mentions the temple of Asclepius, one of the gods he most frequently referred to, in Smyrna. Indeed, if we look at both ancient sources and epigraphic findings, it is known that one of the important cults in the city is the cult of Asclepius, the god of medicine and health.<sup>28</sup>

Smyrna's health-related institutions were established in the Hellenistic period. Due to the connection between doctors and Asklepios, it is possible to talk about the existence of a local Asclepius cult in Smyrna during the Hellenistic period. The medical school founded by the physician Hikesios was one of the important educational centers of its period. In his book "Geographica", Strabon describes the school of Hikesios that as the Erasistratosian school founded by Hikesios in Smyrna in the time of our fathers. It is estimated that the school was founded around 140 BC.<sup>28</sup> As a matter of fact, the famous Pergamon physician Galen studied medicine in Smyrna.<sup>29</sup>

As can be seen, Smyrna has attracted attention with both its educational institutions and famous doctors since the Hellenistic Period. Especially, the period when the Asclepius cult was brought to the city from Pergamon, in other words, the 2<sup>nd</sup> century AD seems to be the city's most vibrant period in the field of health. Numismatic data show that during this period, Hygieia and Telesphoros (the god of convalescence or healing), the children of Asklepios, who were also gods related to medicine, began to gain importance in the city. The depictions of Hygieia appear on coins minted in the city during the periods of Marcus Aurelius and Albinus. Perhaps the cult of the goddess came into prominence in the city during the period when her father's cult became widespread in Smyrna. In the same period, it seems that the cult of Telesphoros, who had a temple in Pergamon, was also known in Smyrna. The city's there is a depiction of Telesphoros standing among the bronze coins minted in the 2<sup>nd</sup> century AD On the other hand, Telesphoros is depicted next to his father, Asklepios in a small-sized relief unearthed during the excavations in the agora in the 2000s.<sup>28,30</sup>

### **Athens Asclepion**

Asclepion, located in Athens, served as an important health center during the ancient Greek period. The Asclepion forms part of the architectural complex on the southern slope of the Acropolis, to the west of the Theater of Dionysus. It is very close to the Odeia of Pericles and Herodus Atticus. This Asclepion was used to

serve the medical needs of the city and treat the sick. This Asklepieion was not an independent and self-sufficient entity like that of Epidauros, but rather a health center within the city. The Asclepion of Athens is another example of a healing temple performing artistic and theatrical activities.<sup>8</sup>

### **Tricca (Tricci, Tricala) Asclepion**

Tricca was an Asclepion center located in ancient Thessaly. This Asclepion, it was built in the 5<sup>th</sup> century BC and played an important role in meeting the medical needs of the region. Asclepion was a healing place where medical care was provided by priests with drinking and swimming water facilities, exercise, diet, medicinal plants and dream therapy. Tricca, in particular, was a place where patients reported their dreams to priest doctors and then it was recognized as a center where treatments based on the interpretation of dreams were recommended. According to the historian Strabon, the Asclepion of Tricci (Tricca) was the most famous and important during his time. In addition, innovative neurosurgical techniques (trepanation) for that period were applied in Thessaly by Asklepios and his followers. Despite the dominant influence of religion and superstition on Asclepios medicine in Asclepion, Tricca Asclepion stands out to us as the place where an embryonic form of the holistic medical approach emerged.<sup>2</sup>

### **Gortys (Arcadia) Asclepion**

The ancient city of Gortys (now Gortyna), located in the Arcadia region of Greece, was located in the Lousios river valley (Ancient Gortys, Arcadia, Peloponnese, Greece) ([https://en.wikipedia.org/wiki/Gortyna,\\_Arcadia](https://en.wikipedia.org/wiki/Gortyna,_Arcadia)).<sup>31</sup> The town is said to have been founded by Gortys, the son of Stymphalos, and although it used to be an important city, it was declared a ruin by Pausanias in his time. It is defined as a village.

It is said to have been founded by Gortys, the son of Stymphalus, the legendary king of Arcadia. When Megalopolis was founded in the 4<sup>th</sup> century BC, many residents moved to the new city, but Gortys was still a village belonging to Megalopolis in the 2<sup>nd</sup> century AD. Ancient Gortys was known for its Temple of Asclepios and Asclepion. The ruins of Gortys were excavated between 1940 and 1956. Remains of several fortifications, temples and baths belonging to the cult of Asclepios were found in this area.<sup>32</sup>

### **Allianoi Asclepion (Health and Surgical Center)**

Allianoi, located close to Bergama, was in a suitable location for a health center with hot water springs, providing climatologically rich oxygen and very clean air circulation, in the strait where the Ilya River passes. Ancient roads can still be followed in the immediate vicinity of Allianoi, which is located on the ancient highway route between Cyzicus and Pergamon. A lot of research has been done on the hot water in Allianoi and it is known that it is drinkable.<sup>28</sup>

The most important source about Allianoi; Rhetorist Aelius Aristides from Mysia. Aristides mentions Allianoi and writes that the hot water here is good for rheumatism. In his work, 2<sup>nd</sup> century AD, he gives information on the medical methods applied in the first quarter of the century and when he was sick, he said, "I stayed in Allianoi because God sent me here".<sup>33,34</sup>

The second important ancient source about Allianoi is Galen of Pergamon. Galen is contemporary with the archaeological finds at Allianoi. Galen also mentions Allianoi in his works. It is not known where Galen treated his patients in Pergamon, but he may have served as a gladiator physician in Allianoi, albeit for a short time. Considering that he served in the Allianoi Hospital in the first half of the 2<sup>nd</sup> century AD and that many surgical instruments were found in this structure, it comes to mind that Galen healed gladiators in this hospital structure.<sup>33,34</sup>

Among the epigraphic findings unearthed as a result of the excavations; Votive inscriptions presented to Asklepios and Hygeia, as well as small altars with or without inscriptions dedicated to Asklepios, are of great importance for the identity of Allianoi. On the Inscribed Votive Altar found in 2000, "The Savior offered (this) offering to Asclepios and Hygieia." Gaius Iulius Stre..." phrases are included. The altars are associated with the cult of Asclepios. Along with other finds and data, these mentioned works are the most important epigraphic finds that suggest that Allianoi was a health center. The depiction of a pair of eyes on the inscribed votive stele is a religious motif in which patients make vows to the god for healing or after recovery, and as it is known, it has an important place in the cult of Asclepios. Similar ones have been found in Asclepios cult centres in Anatolia, Greece and the Aegean islands. Silver rings or gemmas depicting Asclepios are among the other small artifacts found in Allianoi. Among the sculptural works related to the cult of Asclepios; two marble heads of Asklepios, a bronze statuette of Asklepios, and a piece of a staff wrapped in a snake belonging to the statue of Asklepios were found.<sup>33,34</sup>

The in-situ medical instruments and bronze medical tools found at Allianoi indicate that this place was used for medical purposes or that a surgeon used this place. In addition, 356 bronze medical instruments, bronze and silver forceps, crossed bronze forceps, bronze catheters, bronze forceps, bronze stylets, bronze spoon-tipped spatulas, silver medical instruments and bone catheters, whose functions are not yet fully understood, were also found in Allianoi. The artifacts are of different sizes and types, and it is extremely important to find so many medical instruments together outside the necropolis. Used in making medicine; Marble mortars, and crushing stones were found in situ, as well as many mixing tables and bone artifacts thought to be used in medicine.<sup>33,34</sup>

Allianoi experienced its most popular period during the time of Roman Emperor Hadrian (117-138 AD). It has become an extremely spectacular centre with its wide columned avenues, streets, bridges, peristyle structures, fountains, latrines and cult structure. However, due to the earthquakes and subsequent floods in ancient times, Allianoi could only remain on the stage of history for 70-80 years at most.<sup>33,34</sup>

### **Asclepion of Corinth**

An Asclepion was also established in Corinth in ancient times. Similar to other examples, the Asklepion in Corinth was built next to the Gymnasium, close to the Theater and Agora Odeion. The Asklepion forms a combined complex with the Theater and Stadium.<sup>8</sup>

### **Knidos Health Center and Ancient Medical School**

It is known that in ancient times there was a health centre and medical school in Knidos, in the south of Western Anatolia, near Datça today (**Figure 7**). Euryphon (5<sup>th</sup> century BC) founded the first important medical school in Knidos before Hippocrates and started a medical tradition that separated it from magic and mythology here. Euryphon is known as the first physician to point out the important role of diet in health. According to Euryphon, after inadequate digestion, feces from the abdomen spread throughout the body, eventually reaching the brain and resulting in disease. It is thought that Euryphon also applied percussion to the lungs as an important tool in physical examination to distinguish tympanic sounds from edema. In one of his books, Galen referred to physicians from Knidos and mentioned physicians from Knidos regarding kidney diseases. It is also known that Hippocrates was familiar with the work of Knidos physicians and was a rival of Euryphon.<sup>35</sup>

Another important physician of Knidos was Herodicus, who was a sports medicine doctor at the Knidos medical school of the period. Perhaps for the first time, he combined physical exercise and diet in his recommendations to patients. He or she may be the first doctor to recommend that patients start moving



regularly after an injury. Herodicus has gained an important place in the history of medicine by recommending the use of diet, training and physical activity.<sup>6,35,36</sup>



**Figure 7.** A snake column from the ancient Medical School of Knidos (Photograph: Ilgaz Akdoğan).

In addition to all the Asclepions mentioned, the Health Centre in Ephesus, within the borders of today's Türkiye, was famous throughout the Mediterranean region during the Roman Empire. Rufus of Ephesus and Soranus are known as two distinguished physicians of this school. No remains of this centre have been found yet. However, evidence about the names and studies of physicians from writings found in the digs of the Church of Virgin Mary (near Ephesus) suggest that the place had been a health centre in earlier times.<sup>14</sup>

Strabo, a famous geographer and historian born in Amaseia, Pontos, in 64 BC, while giving information about Troy, mentions Lysimachus (360 BC - 281 BC), a Thessalian general and administrator who served as one of Alexander's governors in the Kingdom of Macedonia during the reign of Alexander the Great. He mentions an Asclepion he founded in 281 BC. Additionally, Vitruvius (c. 90-20 BC), a famous architect and author of *De Architectura*, a book on architecture dedicated to the Roman Emperor Augustus, mentioned books written by architects who lived before him. Vitruvius mentioned the existence of an Ionian Asclepion in Aydin (Tralles).<sup>14</sup>

Steps encountered by the patient coming to Asclepion interestingly, Asclepions were places where efforts were made to heal the patient not only biologically but also biopsychosocially in ancient times. How does? Before a patient ever came to Asclepion, he would have heard of its healing power. When he approached Asclepion, he would encounter a quiet, peaceful environment surrounded by greenery, close to hot and cold water sources. When he arrived at his door, the sign saying "death cannot enter here" affected the patient psychologically, revealing his belief that he would recover. When he entered, the officers, mostly dressed in white, would greet him, take him by the arm and take him to a room that we would call a polyclinic today. Here, the patient was greeted with a smiling face, his complaints were asked and guidance was given. Priest physicians would accompany the patient and ensure that he or she was cleaned. The patient, wearing clean hospital clothes, was taken to the sleeping room. The dream he had at night would be interpreted by priest doctors and his treatment would begin. Thus, the patient would have been

psychoanalyzed centuries before Freud. The priority for the patient, who was isolated from the environment that could be the source of his disease and taken to the hospital room environment, was diet or herbal treatment. Then, herbal or mixtures were given to relieve the pain. In addition to biological treatment, the patient was made to listen to music to improve his psychology. The patient would be taken through a tunnel with holes at the top, with priests and doctors on either side, and through the holes at the top, the doctors would say the patient's name and give suggestions that he would recover. The sound of water flowing from one end of the tunnel to the other, the sound of music coming from the holes at the top, and the light provided the patient who entered the tunnel to find peace and morale. The patient's hygiene was taken into consideration, he was allowed to enter the toilets located in a separate place, and he was allowed to bathe in hot water regularly. In addition to the worship and rituals performed in the temple in Asclepion, seeing the votive statues that healed patients left or hung in various parts of Asclepion had a positive effect on the patient's psychology. The social support of the patient in Asclepion was provided by the theatre and library in Asclepion. Plays and musical entertainments were held in the theatre periodically. The library contained many works other than medical books. Additionally, patients had the opportunity to socialize as well as shop for their daily needs in a market-like area inside Asclepion. Patients who were in an environment where they were called guests instead of patients, whose daily needs were met, whose nutrition was regulated biologically, whose pain was tried to be relieved, who were supported psychologically by suggestion, and who were in a social environment, would attain their health, which is defined as a state of biopsychosocial well-being.

### **The Heritage of Asclepions to the Present Day**

In all these respects, Asclepions were health campuses that provided a kind of holistic health service with the understanding of treatment of diseases resulting from the interaction of physical, psychological, social and environmental factors for approximately 12 centuries in ancient times.<sup>2,37</sup> Centuries ago, Asclepions was equipped with mythological and philosophical elements and provided holistic health services to its patients regarding the well-being of our ancestors. In Asclepions, a person (patient and supplicant) was treated with serious respect as a complete being with mental, moral, emotional, social, moral and natural characteristics as an integral whole. Disease was not seen as one-dimensional but as a result of complex processes and negative environmental, social and psychological interactions. Spiritual, emotional, natural factors and health services and medical intervention, surgery or pharmacy as additional help seemed to aim to resolve and restore these contradictions.<sup>5</sup> ("Asclepions" were equipped with mythological, ideological and philosophical perceptions of the well-being of our ancestors, offered holistic health care to their patients. A person (patient and supplicant) was treated with solemn respect, as a complete entity with inseparable spiritual, mental, emotional, social, moral and natural characteristics. Illness was viewed as the outcome of complex, negative interactions of environmental, social, psychological, spiritual, emotional and natural factors, and health care seemed to aim at resolving these conflicts and restoring balance among the above-mentioned by having as supplementary aid medical intervention, either surgical or pharmaceutical).

The striking fact is that Asclepions has adopted a holistic approach in the treatment of patients. In Asclepions, the aim was to activate the therapeutic qualities of the natural environment as well as the factors in the psychological and emotional healing procedure and the activation of each person's innate healing mechanisms. In Asclepions, in addition to physical activities, complementary and applied treatments such as hydrotherapy, music and games were offered for each patient.<sup>8</sup> The missing practices in Asclepions were that not every patient had the right to access treatment in terms of patient rights that we encounter in modern medicine. After preliminary examination, terminally ill patients were not admitted to Asclepion. Again, pregnant women were forbidden to enter Asclepion and give birth. However, it should

not be forgotten that the restoration of health in the Asclepians was achieved by taking into account the physical, psychological, mental, spiritual, social and environmental factors as a whole.<sup>38</sup>

The architectural structures of Asclepians are highly functional structures. Because patients go through the treatment steps in stages, from the welcoming stage until they are brought to the patient rooms, from being cleaned to receiving herbal and natural treatment, and even their discharge involves a ritual and enthusiasm (making offerings, sending off other patients in a morale-boosting way, etc.).

Today, instead of a health complex with a holistic medical approach, the approach of hospitals that focuses only on the patient and the disease and reduces the human being to a living creature whose functioning mechanism is broken instead of a biopsychosocial being emerges as a significant obstacle to achieving health. Designing the architectural structures of hospitals in a clean, natural and quiet environment, human-oriented and ergonomic, and re-evaluating the existing ones from this perspective will contribute to the improvement of health. Healing and healing processes are not only about the recovery of biological mechanisms, but also include the patient's psychological, mental, social and environmental recovery. Hospital architecture must have an understanding that takes into account all stages of the patient's holistic treatment and biopsychosocial recovery, and traces of all of these can be found in Asclepians, ancient hospitals in history.

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### Author Contributions

Hayriye Dilek Akdoğan: Idea/concept, design, data collection and/or processing, analysis and/or interpretation, literature review, writing the article.

Yaşar Barış Turgut: Design, data collection and/or processing, analysis and/or interpretation, literature review, writing the article.

Ali Çağlar Turgut: Design, data collection and/or processing, analysis and/or interpretation, literature review, writing the article.

İlgaz Akdoğan: Idea/concept, design, data collection and/or processing, analysis and/or interpretation, literature review, writing the article, critical review.

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