ACCEPTED MANUSCRIPT

Accepted manuscripts are the articles in press that have been peer reviewed and accepted for publication by the Editorial Board of the Vojnosanitetski Pregled. They have not yet been copy edited and/or formatted in the publication house style, and the text could still be changed before final publication.

Although accepted manuscripts do not yet have all bibliographic details available, they can already be cited using the year of online publication and the DOI, as follows: article title, the author(s), publication (year), the DOI.

Please cite this article MEDICINE IN THE HIPPOCRATIC AND POST-HIPPOCRATIC AGE

Authors Tatjana Lazarevic||, Zoran Kovacevic*, Mirjana A. Janicijevic Petrovic‡, Biljana Ljubic**, Milos Glisic§ and Katarina Janicijevic†, Vojnosanitetski Pregled (2021); Online First May, 2021.

UDC:

DOI: https://doi.org/10.2298/VSP210325057L

When the final article is assigned to volumes/issues of the Journal, the Article in Press version will be removed and the final version appear in the associated published volumes/issues of the Journal. The date the article was made available online first will be carried over.
HISTORY OF MEDICINE

MEDICINE IN THE HIPPOCRATIC AND POST-HIPPOCRATIC AGE

Tatjana Lazarevic‖, Zoran Kovacevic*, Mirjana A. Janicijevic Petrovic‡, Biljana Lujic**, Milos Glisic§ and Katarina Janicijevic†

‖Department of Internal medicine, Faculty of Medical Sciences University of Kragujevac, Serbia
*Department of Internal medicine, Clinical Centre of Kragujevac, Kragujevac, Serbia
‡Department of Ophthalmology, Faculty of Medical Sciences University of Kragujevac, Serbia
**Department of Genetic, Faculty of Medical Sciences University of Kragujevac, Serbia
§Department of Physiology, Faculty of Medical Sciences University of Kragujevac, Serbia
†Department of Social medicine, Faculty of Medical Sciences University of Kragujevac, Serbia

†Corresponding author:
†Katarina Janicijevic, Ass.
Department of Social medicine, Faculty of Medical Sciences University of Kragujevac, Serbia
Svetozara Markovica 69, 34000 Kragujevac, Serbia
E-mail: kaja.andreja@yahoo.com
Tel: +381 64 2183797
Fax: +381 34 306 800
Introduction

From the historical aspect, medicine is divided into pre-Hippocratic, Hippocratic and post-Hippocratic. Hippocratic medicine represents a period in which medicine developed under the influence of Hippocrates. The Hippocratic period includes the time when he lived, but also several centuries later. People who studied and practiced medicine according to his doctrine formed a kind of direction in medicine called Hippocratic. It is not possible to precisely define the date range of the actuality of Hippocratic medicine, but its influence on medicine today is realistically immeasurable.

Hippocrates was a Greek physician, who lived from 460 to 377 BC, and who belonged to the period of the highest scope of the classical Hellenic science of medicine. His father was Heraclid. He worked within the medical school in Kos. He traveled extensively and died in Thessaly.

Figure 1. Hippocrates

Hippocrates was the first to separate medicine from superstition, which was a kind of turning point in medicine, and he became a legend of medicine. The name "father of medicine" rightly belongs to him, because it represents the prototype and ethical ideal of the doctor, who spoke about human life and the doctor's attitude towards the patient. He influenced medical practice centuries in advance. He put the patient at the center of the treatment process, and the patient's well-being, that is, the welfare of the patient, as a priority in treatment. He believed that man was a part of nature and that diseases were a natural phenomenon, and in accordance with that, they were treated with natural methods. He believed that a man was treated, not a disease. He was the first doctor to ask a person how he/she felt. There are a lot of valid terms and methods of treatment that he left us. He was the originator of the concept of humoral medicine, which marked the diagnosis and understanding of pathology until the end of the New Century. He individualized medical therapy. He was a pioneer of medical propaedeutic. With him began what we call medical ethics. He practiced surgery, orthopedics, pharmacology, diet therapy and philosophy. Hippocrates's aphorism is well known: "Human life is short, medical skill is enormous; a favorable moment passes quickly; experience is deceptive, making a decision is difficult."

After Hippocrates, medicine was marked by the Dogmatic and Alexandrian schools. The most valuable representatives of the Dogmatic school were Diocletian and Praxagoras. The Alexandrian school was marked by Herophilos and Erasistratus. Aristotle made a great
contribution to medicine in this period. Another physician who marked the Hippocratic period was Galen. Galen was a Roman physician who is claimed to have lived between 125 and 215 AD. His life expectancy is almost three times longer than expected in the Old Century, which raises doubts about the reliability of this information. Like Hippocrates, Galen developed the idea of humoral medicine, which practically meant that human health was defined by body fluids. Galen influenced medicine so much that his name bears not only the vein, but also the methods of preparing medicines in the pharmacy, and the prepared medicines are called Galena preparations.

His teaching was considered a dogma for a period of 15 centuries. Roman medicine did not leave anything original on its own, except for a few personal discoveries. It was mainly about elaborating the ideas and methods of Greek medicine. Notable Roman physicians in this period were Themison, Soranus, and Celsus.

It is important that the doctors of that time had open access to museums and other selections of archeological discoveries. The concept of pathogenic factors varied depending on the cultural context and historical period. In this sense, subdisciplines developed, such as paleopathology. Old methods and treatments that we neglected and overlooked may prove useful. Modern medicine should take into account past experiences in treatment, at least as a basis for research.

**Ancient Greek medicine of the Hippocratic period**

Greek medicine was a turning point in human treatment. The ancient Greeks separated medicine from superstition and divine manipulations and turned it towards a naturalistic concept (Truumees, 2015). This opened the way for the development of scientific medicine, and already in the 5th century BC, Greek doctors had their own association. There were permanent doctors (demiurges) and traveling doctors (periodeuts). Demiurges performed interventions in surgeries, where patients sometimes stayed in recovery, and without charge. The concept of hospitals did not exist at the time, but it can be said that this was its beginning. Periodeuts went to places where there were no doctors and charged according to the agreement. In treatment, they used herbs, examination, observation, surgery, and not prayer and spells. Nevertheless, Hippocrates made medicine a science. The most famous schools of medicine were in Kos, Kroton, Cnidus and Alexandria.

Nemesius was the first to theorize about the division of the brain in the 4th century BC. He believed that feelings and imagination were located in two lateral chambers in the frontal lobe of
the brain, and he called it the first cell. The mind was the function of the second cell, and in the posterior part of the brain was the third cell, which was in charge of remembering.

Chrysippus of Soli, who lived between 279 and 206 BC, was the first to mention cataract surgery.

Theophrastus is considered the father of botany. He wrote *Decaisisplantarum* and *Dehistoriaplantarum*, important collections of herbal medicines.

**Hippocratic teaching**

He claimed that man was nature and a part of nature. So the disease had natural causes. He believed that climate, atmosphere, pollution, miasmatic fumes, food, colds and other external influences significantly affected human health. He assessed the signs and symptoms by following human feelings, as well as objective factors. He adjusted the therapy to the patient. A significant part of his treatment was diet therapy. Many aspects of which medicine is proud today, we really owe to him. The saying "Let your food be your medicine" is attributed to him. He viewed man as a being who functioned in harmony with his environment. A person was treated as a complete being and everything related to his external and internal interactions was seen as a factor of illness. Therefore, Hippocrates is considered the originator of the concept of holistic medicine. Today, holistic medicine is seen as the ideological forerunner of complementary medicine. He laid important foundations of medical ethics. Hippocrates did not distinguish veins and arteries. All blood vessels were called phlebes, hollow tubes. He understood the brain in the same way as Alcmaeon: its function was to analyze information from the outside world, which created our thoughts and feelings.

By the term neura he meant fibers such as veins, nerves, tendons, ligaments, and he believed that there were also hollow neurons such as pores, which could be opened to enter fluid if necessary. He claimed that the compression of the leg caused pallor, or blue discoloration of the extremities. He described how a carotid artery injury caused contralateral hemiplegia. He introduced inspection, palpation and the primitive variant of auscultation.

**Hippocratic humoral medicine**

Hippocrates based his teaching on Empedocles's idea of four elements: water, fire, air and earth. Thus, humans were a phenomenon, a consequence of the activity of four fluids: blood, phlegm, yellow and black bile. These liquids had four properties: hot, cold, dry and wet. He
believed that these aspects were governed by the force of physis. All harmful liquids tended to be expelled from the body after cooking (pepsis), which gave a fever. All these aspects formed the disease, as well as the symptoms. He observed the appearance and behavior of the person. He considered the examination to be the main moment in the treatment.

The famous *facies hippocratica*, *digiti hippocratica* and much more, were a consequence of his observation of patients. Practically, he laid the foundations of propaedeutics, as the point of humoral medicine. Humoral means wet. In his treatment, he relied heavily on herbal medicines, as essential elements of his work 7. Not only did he base his entire doctrine on that, but he also significantly influenced his students, particularly Galen, and Galen was practically the basis of Avicenna's work. Avicenna (Ibn Sina) gave his concept of four types of persons (choleric, phlegmatic, sanguine and melancholic) based precisely on humoral medicine 7. The repercussions of this physical classification have not subsided to date, especially in psychiatry and psychology, even if they are no longer part of standardized diagnostics 7.

We learn about Hippocratic teaching from a work called the Hippocratic Corpus (*Corpus Hippocraticus*) 7, Fig. 2.

**Figure 2. Corpus Hippocraticus**

The *Hippocratic Corpus* is believed to have been compiled in the Library of Alexandria in 250 BC. It is a collection of 70 works in the ancient Greek language, which mostly deal with medical issues. In addition to medicine, there are also philosophical texts. Authorship was not identified in the Old Century as it is today. Authorship had nothing to do with the creator, but with the authority, which gave the concepts within which the work was created. If you established yourself as an authority, the work would be attributed to you.

So, when we come across something that Hippocrates said, in fact, the chances that these were really his words are not that big. Entire texts were attributed to him. However, everything that was attributed to him was completely within the framework of his doctrine 7.

The works that are known to be his are: Of the Epidemics, Prognostics, On Airs, Waters, Places, On the Sacred Disease (Epilepsy), On Ancient Medicine, Aphorisms, The Hippocratic Oath 1, 2, 7.

**Hippocrates's contribution to the understanding of specific diseases**

The Hippocratic method for manual repositioning in gleno-humeral dislocation and shoulder fractures is known, and described in the section On fractures.
The upper arm is fixed in extension and under load while the patient is sitting. After returning the humerus, unless the head is broken, the bandages are dipped in oil and the fracture is bandaged. The arm remains fixed for 40 days with diet therapy. They also pointed out the problem of poor healing. This clearly indicates that the students of the Hippocratic school understood the dynamics of articulation.7

The Hippocratic School saw diseases of the urinary tract as a problem in the swelling of the semen. It was thought that both men and women could suffer from it, and that sometimes sex could be the cause. However, they had trouble distinguishing sexually transmitted diseases from other urinary tract diseases. Interestingly, they linked urinary tract disease to decay, or spinal cord phthisis. The connection between seminal diseases and the condition of the spinal cord has survived to this day, even in popular culture and jargon. Here is an extract from the Hippocratic Corpus, which illustrates how much Hippocratic doctors actually relied on inspection. "Most often it attacks the youth and those who like intercourse (philolagnose). They do not have a fever, but still excrete something. If you ask the patient, he will say that he feels something coming from his head, down his spine, like ants. When he urinates, or has a bowel movement, watery liquid comes out. He will not make children, and at night he urinates whether he has an intercourse with a woman or not. When he walks or runs, especially uphill, he is out of breath and weak, feels dizzy, and it rings in his ears. When he finally gets a fever, he dies of it".8 In the section On joints, from the book Mohlikon, nasal injuries and the procedure of repositioning the nose were described.9 Traction therapy of scoliosis is still used today in the form in which it was proposed by the Hippocratic school.10 The treatment of lower jaw dislocation was taken over from the Hippocratic School.11 The term and description of clubbed finger tips fingers came from Hippocrates.12 Hippocrates considered urine to be a blood filtrate, that had passed through the kidneys. In the Aphorisms, he stated that bubbles in fresh urine were a sign of long-term kidney disease, and urine sediment was a sign of fever.13

Hippocrates coined the term chylos and in the book named Peri Adenoma he tried to explain lymphatics, calling them a branched and complex network.14 He associated sciatica with claudication and thought it was more common during summer, and prescribed rest and diet to the patient.15 He is thought to have performed abortions with a special instrument for that.16

Ancient Greek medicine after Hippocrates
Hippocrates practically defined Greek medicine after a period of his work. His work was continued by his sons and a son-in-law. After him, two important schools of medicine stood out: Dogmatic and Alexandrian.

**Dogmatic School**

The Dogmatic School of Medicine considered the Hippocratic teachings a dogma, which was, ironically, diametrically opposed to the Hippocratic principle. The main teachers of the dogmatic school were Diocles, Praxagoras and Crisipus. The Dogmatic School was the ideological and personnel predecessor of the Alexandrian school. Diocles wrote his first work on anatomy, the book *Anatomy*. He practiced embryology and believed that both mother and father participated in the creation of embryos. They called him another Hippocrates. Praxagoras was Diocles's successor. He was the first Greek physician to deal with the pulse. He was the first to distinguish between arteries and veins. As Herophilos, whose teacher he was, he thought that there was air in the arteries.

Aristotle was the son of the philosopher and mathematician Nicomachus. He was not a doctor, but he knew about medicine and wrote about it. He claimed that the basis for a human being was determined by the father, and that the mother only gave what was needed for growth. In addition to the known four elements, he added the fifth, "the principle of life". Aristotle thought that the heart was the center of emotions and intelligence. He thought that we learned from memory and with the help of feelings. In his book *Historia Animalium* he gave the first description of the lymphatic system. He believed that some of the fibers between nerves and veins contained sanies, a colorless fluid.

**Alexandrian School**

The Alexandrian School of Medicine was under the patronage of a pharaoh from the Ptolemaic dynasty. This means that they were allowed vivisections and in a short period of time even dissecting people. This influenced the accelerated development of clinical knowledge, primarily in the field of anatomy. The two most famous students were Herophilos and Erasistratus. The Alexandrian School also left vague anatomical descriptions, concerning the lymphatic system.

Herophilos of Chalcedon is considered the father of anatomy as we know it today. He was born in 325 and died in 255 BC. He was a big name of the Alexandrian School of Medicine. He
dissected human corpses, which led to comprehensive anatomical knowledge at the time. However, this practice was not allowed for a long time. He described the brain and spinal cord, as well as the seven nerves that came out of the brain. He explained the structure of the eye. He described the intestines and gave the name to the duodenum. He distinguished between porous sensory fibers and hard fibers that moved muscles. Herophilus wrote the work *On the Eyes*. He is thought to have discovered an optic nerve. He also practiced obstetrics and performed abortions with an instrument called "fetal destroyer". Demosthenes Philalethes was a student of Herophilus, who wrote the work *Ophthalmicus* in the first century.

Crisipus was at the head of the Cnidian School. He worked between 320 and 280 BC. He wrote about the importance of vegetables in medicine. He especially appreciated the cabbage compresses. He wrote the work *The Treatment of Vision*. Unfortunately, that work has been lost. His grandfather and son bore the same name, and were famous physicians.

Erasistratus of Chios was born in 304 and died in 250 BC. Erasistratus relied on Herophilus's anatomy, but his personal work was more based on physiology. He described 4 chambers perhaps. He claimed that the fourth ventricle was below the third, and that it was used for communication. This was the first mention of a cerebral aqueduct in the literature. He compared the cerebral convolutions with the convolutions on the intestines, which indicated that he absolutely had seen them. He described the heart valves and thought that they moved the blood in one direction. He claimed that the heart worked on the principle of a pump. He considered the ends of the arteries to be the beginnings of the veins. He thought that there was blood in the veins only, and that the arteries contained breath. He rejected the humoral theory.

**Roman medicine**

Roman medicine was practically a continuation of Greek medicine. The Romans were often treated by Greek doctors. Ancient Rome relied on hygiene. The brothels were out of towns, and the prostitutes were strictly controlled. Cemeteries and cremation sites were also outside the cities. They introduced sewerage and public baths. Spa healing literally originated from the Romans. In ancient Rome, being a doctor was a shameful occupation. They had the status of slaves. The only hospitals were valetudinaria, and these were places for the recovery of slaves so that their value would not fall. The first significant physician was Archagathus, who received civil rights.
Asclepiades of Bithynia was a famous Roman physician of Greek origin. He rejected the humoral theory. He believed that solid parts of the body were more important than fluids in the human body. He believed that the human body was composed of pores and channels. He understood disease as the stagnation of atoms. This was called solidarity medicine. Asclepiades was among the first to advocate a naturalistic approach to healing. He strongly opposed superstition in treatment. He believed that the main medicines were heat, cold, sun and plants. He made balsams, medicines for the eyes and ears, vaginal suppositories, etc.

Themison worked in the second half of the first century. His teacher was Asclepiades. He also adhered to solidarity medicine. As with Asclepiades, solidarity medicine meant that health was determined by solid parts of the body. That was why tone was important. It was important to strengthen the tone of the organism in order not to burden the sick person. For this purpose, baths, astringents, carrying in a stretcher, massage were given. Themison relied on the systematic determination of the causes and consequences of the disease. For this reason he founded a Methodic School. The Methodic School respected the solidarity medical principle.

Aulus Cornelius Celsus was a Roman physician who lived between the ages of 25 BC and 50 AD. He wrote a collection of eight books, *De Medicina*, Fig. 3.

**Figure 3. De medicina (Celsius)**

It was the first saved manuscript in Latin. It was printed in 1478. He significantly influenced the spread of ancient, medical thought in Renaissance Europe. He based his work on Hippocratic medicine. He was the first to identify four signs of inflammation: tumor, rubor, dolor and calor.

His record of genital infections was interesting, and in the thirties of the new era he described profusio seminis. He claimed that he based his medical information on Greek sources. Here is an extract, for which he attributed the data to an anonymous Greek source: "In those who suffer from gonorrhea, we notice reluctant, constant swelling (rhein) of the semen (gonos), without pleasure. They decay, lose color and strength, get a fever with the loss of appetite and their pulse weakens." As a remedy, he cited cold compresses with vinegar, rest, and not to lie on the back. He also left records about cataracts and other eye diseases. He described the decapitation of the fetus, with a metal hook during abortion.

Soranus of Ephesus was the author of the first gynecology. He is considered to have been the greatest obstetrician of the Old Age. He wrote *The Biography of Hippocrates*. 
Aretaeus of Cappadocia wrote the work *On Acute and Chronic Diseases* in the second century. Aretaeus claimed that apoplexy was the cause of paralysis. Furthermore, if the left side of the head was injured, the right side would be paralyzed and vice versa \(^8,17\).

Rufus of Ephesus, who lived in the first and second centuries of the new era, described the mesenteric, inguinal, and axillary lymph nodes and the thymus \(^8,14,17\).

Dioscorides was a Greek pharmacologist of the first century. He wrote the book *Materia medica*. It is considered to be the most important pharmacological book of the Old Century. It consists of five parts. It describes the procurement, preparation and application of medicines from parts of plants, seeds, oils, metals, aromas, fruits, animals, waxes, milk, cereals and minerals. He ground the ingredients in a special oven \(^7,8,14,17\).

In the first and second centuries, unsigned Egyptian papyri of medical content were created, based on the teachings of Hippocrates \(^6-8,17\).

**Galen**

He was born in Pergamon, today's Bergama in Turkey. The exact year of birth and death are unknown. He was born in 129 and died around 215 \(^17\). Fig. 4.

**Figure 4.** Portrait of Galen, George Paul Bush

He worked as a famous doctor for 50 years, and as a surgeon of a gladiator Marcus Aurelius. He studied medicine in Alexandria and Smyrna \(^17\). He considered the brain to be the center of emotions and intelligence. Since it was forbidden to dissect people in Rome, the fact that he was watching the dissection of corpses in Alexandria for four years was of undeniable importance for his knowledge \(^2,17\). Galen was a medical authority during almost 15 centuries, until the 17th century. Of the 600 texts that he wrote on over 1300 pages, only a third survived. He introduced the experimental method into medicine, as well as research. He was known for his medical ethics. He contributed a lot to pharmacology and philosophy. He was notable as a good diagnostician. He relied heavily on the pulse in his diagnosis. He began to systematize the organs. He realized that blood was carried by the body through the vessels. He was the first to mention anastomoses between arteries and veins, but he thought it was a way of communication between arteries and veins globally, but he could not know where they were. He was called the "divine Galen" \(^18\). He believed that three pneuma went through the liver, heart and brain, which were separated from the blood vessels: natural, vital and animal spirit. Natural went through the heart, animal through the liver, and vital through the brain \(^5,8,18\). He significantly influenced the
development of Persian medicine. He later advocated Islamic medicine as well. In Avicenna's *Canon of Medicine*, Galen was cited over 300 times. He believed that vital pneuma was created in the heart and carried by arteries to the brain, and then transformed into the animal one in the retiform plexus (a formation he claimed to have been localized near the pineal gland).

Pneuma is actually what we would now call a ghost. Animal pneumas were stored in the ventricles of the brain. If necessary, it was the drive for the transmission of motor and sensory information to the periphery. Galen believed that we received external information from the five senses - sight, hearing, touch, smell and taste, which processed common sense and formed perception and thought. This process, according to him, took place in the brain chambers. By "internal processing", the thought would further have gone into the processes of memory, evaluation, cognition and imagination. Practically, he laid the foundations of neuropsychiatry. But this was one of the first descriptions of what we now call the perceptual process. Galen was a proponent of humoral medicine. Here is how he described the stroke: "The phlegm is cold and moist. When the blood vessels attract the phlegm into themselves, the body must calm down. If the phlegm prevails, the blood cools and gelatinizes. Then the person dies. The accumulation of phlegm blocks the animal pneuma.

This causes dizziness, loss of consciousness, and possibly death. That's why, as we get older, there is more and more phlegm." That's why he considered cleansing from mucus or phlegm a priority, so hygiene and proper nutrition were a priority. He associated everything with stroke, because stroke mainly occurred in old age, even today. What he considered old was not the same as what we consider today, because life expectancy is getting longer.

Galen made a huge contribution to pharmacology. He acquired part of his knowledge from Dioscurides's book *De Materia Medica*. He wrote *On the Mixtures and Powers of Simple Drugs*, *On the Composition of Drugs According to Kind* and *On the Composition of Drugs According to Places*. He considered that breast cancer was a consequence of the accumulation of black bile and treated it with opium. He took it from Hippocrates. In the books *De usu partium* and *De Anatomicis administrationibus*, Galen described mesenteric lymph nodes, thymus and pancreas. He distinguished between the milky and clear contents of the lymph nodes. He thought that Hippocrates's chyle was transmitted from the intestine to the liver through small branches of the portal vein, in order to turn it into blood, which went to all tissues. He called this process anadosis. He thought, relying on Herophilos, that the pancreas and mesenteric lymph nodes fed the intestines. He discovered that there was blood in the veins. He was the first to notice a
double pulsus biseriens and used it to diagnose. Interestingly, he called polyuria urine diarrhea. Galen considered inflammation to be a struggle with the disease, and as a fifth sign he added reduced function (functio laesa). He put a lot of effort into experimental work in medicine. He tied *n. laryngeus recurrens* to prove the assumption that it had a role in a pig’s squealing. Due to such research in the creation of the voice, in his honor, the nerve loop between the posterior branch of *n. laryngeus recurrens* and the internal branch of *n. laryngeus superior* was called the *Ansæ Galeni*. In fact, the scale of his work on dissecting animals instead of humans throughout his career led him to warn students of the potential differences in anatomy. This also led to his errors in anatomical descriptions, unprovoked until the New Century. There was also a medical scholar named Pseudo-Galen. He lived around the time when he did, too, and got his name in that way. He wrote *Introductio Sive Medicus*.

Medicine today, after Hippocrates, is becoming a complex science and the "art of healing" (*ars medicina*), based on scientific principles, biomedical research, contemporary medical technologies for modern diagnostics and actual treatment.

**Conclusion**

The history of medicine is a science, which deals with the traces of the past, which exist in the present. The history of Hippocratic medicine is not exact. A lot of works have been lost, we learn about a lot of authors by being mentioned by other authors, so we have to take their word for it. Doctors of that time, for the most part, were not allowed to dissect corpses. That is why there are a lot of anatomical errors. Even Galen's mistakes were widely discussed in world literature. However, due to the lack of imaging methods and limitations in dissection, the doctors of Hippocratic medicine left us extraordinary anatomical records. If it hadn’t been for Hippocrates, for example, we wouldn't have propaedeutic today, because he was the one who laid the foundations of what is the essence of medical science today: rationalism, nature, ethics, patient care, observation skills and clinical experience. For centuries, Hippocrates and Galen’s knowledge was considered the absolute truth. We learned a lot that allowed us to refute them. Precisely, constant suspicion and constant improvement of knowledge are the key to the progress of medicine. That is why it is important to know the history of medicine, especially the entire Hippocratic and post-Hippocratic period. The skill of observing the physicians of the Hippocratic period points us to things that today, perhaps due to reliance on image and laboratory methods, we professionally miss. Also, there is forgotten information, which we can use again, or at least research further. It is enough to understand even why mistakes were made sometimes. Today,
malicious people are abusing the concept of holistic medicine and healthy eating, in order to
disavow the achievements of evidence-based medicine in order to promote pseudoscience and
financial gain. In that way, people are deterred from visiting doctors and trust in the medical
profession and science is being actively destroyed. The duty of medicine as a science in the
coming period dictates that we protect Hippocrates's legacy. We must not allow Hippocrates's
teaching to be tarnished by someone's lucrative motives, even to the detriment of the patients’
existence. The oath is the least that Hippocrates left us and intended in post-Hippocratic
medicine.

References
1. Janjić M, Timotić B. Razvoj medicinske misli i prakse sa osnovama biomedicinske naučne
informatike (Uvod u medicinu). Medicinski fakultet Univerziteta u Kragujevcu, Kragujevac; 1994. (Serbian)
2. Brorson S. Management of fractures of the humerus in Ancient Egypt, Greece, and Rome: an
historical review. Clin Orthop Relat Res 2009; 467(7): 1907-14.
3. Iorio S, Badino P, Gorini I, Aliverti M. Osteoarchaeology and the History of Medicine in our
experience. Acta Biomed 2019; 90(2): 353-54.
4. Stranding S. A brief history of topographical anatomy. J Anat 2016; 229(1): 32-62.
5. Khuda I, Al-Shamrani F. Stroke medicine in antiquity: The Greek and Muslim contribution. J
Family Community Med 2018; 25(3): 143-47.
6. Leffler CT, Klebanov A, Samara WA, Grzybowski A. The history of cataract surgery: from
couching to phacoemulsification. Ann Transl Med 2020; 8(22): 1551.
7. Zunić L, Skrbo A, Dobrača A. Historical Contribution of Pharmaceutics to Botany and
Pharmacognosy Development. Mater Sociomed 2017; 29(4): 291-300.
8. Flemming R. The Wrong Kind of Gonorrhea in Antiquity. In: Szreter S, editor. The Hidden
Affliction: Sexually Transmitted Infections and Infertility in History. Rochester (NY): University
of Rochester Press. Chapter One; 2019.
9. Lascaratos JG, Segas JV, Trompoukis CC, Assimakopoulos DA. From the roots of rhinology: the reconstruction of nasal injuries by Hippocrates. Ann Otol Rhinol Laryngol 2003; 112(2): 159-62.

10. Shin JH, Jun SL. Lee YJ, Kim JH, Hwang SY, Ahn S. Effects of intermittent traction therapy in an experimental spinal column model. J Acupunct Meridian Stud 2014; 7(2): 83-91.

11. Thomaidis V, Tsoucalas G, Fiska A. The Hippocratic Method for the Reduction of the Mandibular Dislocation, an Ancient Greek Procedure Still in Use in Maxillofacial Surgery. Acta Med Acad 2018; 47(1): 139-43.

12. Krugh M, Vaidya PN. Osteoarthropathy Hypertrophic. 2020 Jun 4. In: StatPearls [Internet]. Treasure Island (FL): StatPearls Publishing; 2021.

13. Queremel Milani DA, Jialal I. Urinalysis. 2020 May 30. In: StatPearls [Internet]. Treasure Island (FL): StatPearls Publishing; 2021.

14. Natale G, Bocci G, Ribatti D. Scholars and scientists in the history of the lymphatic system. J Anat 2017; 231(3): 417-29.

15. Truumees E. A history of lumbar disc herniation from Hippocrates to the 1990s. Clin Orthop Relat Res 2015; 473(6): 1885-95.

16. Minelli S, Minelli P, Montinari MR. Reflections on Atherosclerosis: Lesson from the Past and Future Research Directions. J Multidiscip Healthc 2020; 13: 621-33.

17. Karenberg A. Historic review: select chapters of a history of stroke. Neurol Res Pract. 2020;2:34.

18. Pasipoularides A. Galen, father of systematic medicine. An essay on the evolution of modern medicine and cardiology. Int J Cardiol 2014; 172(1): 47-58.

19. Sadeghi S, Ghaffari F, Heydarirad G, Alizadeh M. Galen's place in Avicenna's The Canon of Medicine: Respect, confirmation and criticism. J Integr Med 2020; 18(1): 21-25.

20. Roxo MR, Franceschini PR, Zubaran C, Kleber FD, Sander JW. The limbic system conception and its historical evolution. ScientificWorldJournal 2011; 11: 2428-41.

21. Lukong KE. Understanding breast cancer - The long and winding road. BBA Clin 2017; 7(1): 64-77.

22. Goudar RB, ElBebawy B. Pulsus bisferiens. 2020 Oct 10. In: StatPearls [Internet]. Treasure Island (FL): StatPearls Publishing; 2021.
Appendices

Figure 1. Hippocrates

https://schoolhistory.co.uk/early-modern/hippocrates/

Figure 2. Corpus Hippocraticus
Figure 3. *De medicina*, Celsus
Figure 4. Portrait of Galen by George Paul Bush

https://www.historyofinformation.com/detail.php?id=1765
Galen of Pergamum: An Eighteenth-Century Portrait by George Paul Bush (Public Domain)

Received on March 25, 2021.
Accepted May 14, 2021.
Online First May, 2021.