

Medicine in Ancient Egypt

Historia medycyny – Egipt

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Abstract

The history of ancient Egypt covers three millennia before the birth of the Christ. Information about medicine in that country, mainly found in papyrus, prove the occurrence of diseases known today and magic-rational therapy used by Egyptian physicians – priests.

Keywords: Ancient Egypt, ancient Egyptian medicine, papyrus, mummies, ancient Egyptian mythology

History of the Pharaohs

The name of the area on the Nile derives from the Old Egyptian language and means “black earth”, meaning silt. The river was the main communication artery, and through its outflows determined the nature of the country, dividing it into Lower Egypt, that is, Delta, and Upper Egypt from the first cataract up to the base of the delta. Writing system and calendar were developed in Egypt about 3000 BC. The founder of the first royal dynasty, Menes, a native of Tynis, unified the country, creating a strong Old Kingdom of Egypt that survived for about 800 years (2850–2050). In ancient Egypt, the king – pharaoh exercised despotic power, a form of government that spread throughout the ancient world. During the Old Kingdom, the people of Egypt believed firmly in the divinity of their monarch, which allowed the mobilization of forces of the entire society for the construction of giant pyramids, i.e. the tombs of the pharaohs. It wasn't until the 4th dynasty that a pharaoh lost his position as a god, becoming only his son.

The years 2250–2050 include the so-called a Intermediate Period, when royal power weakened considerably and the state plunged into chaos. The rulers of the 10th and 11th dynasties reunited the country, giving rise to the so-called the Middle Kingdom of Egypt (2050–1778 BC), whose capital was moved from Memphis to Thebes. The pharaohs of subsequent dynasties developed the country's economy, mainly agriculture and trade, and conquered Nubia up to the third cataract. After a short period of prosperity there was a fall of the Middle Kingdom and the so-called the Second Intermediate Period, which fell on the reign of weak rulers of the XIII and XIV dynasties (1785–1680 BC). The Hyksos took advantage of the weakness of the

state on the Nile and finally the 18th century BC of Egypt was conquered. For over 100 years, they ruled that country with their two dynasties – 15th and 16th. The Hyksos owed their victory to a better bronze weaponry, which the Egyptians quickly adopted and used in the struggle for lost independence (17th dynasty).

After the Hyksos were pushed out, successful attempts were made to strengthen the state by regaining Nubia and following a policy of expansion in the east. The kings of the 18th dynasty (1562–1308) conquered Palestine, Phoenicia and Syria up to the borders of Mesopotamia. They also won a decisive victory over the state of Mitanni. During the so-called New Kingdom of Egypt the economic and political role of the Egyptian priests rose, mainly the Theban god Amun. The religious reform of the pharaoh Amenophis IV Echnaton, who went against the cult of Amun and showed the beauty and attractiveness of Aton, caused a rapid reaction of priests, resulting in the restoration of the former faith. During the reign of the 19th and 20th dynasties (1308–1100) there were battles with the Hittites for Syria, which the culmination thereof was the unresolved battle of Kadesh (1286 BC). In 1270 BC Ramses II made peace with the Hittites, maintaining Palestine and Phoenicia under his reign. At the turn of the 11th and 12th century BC Egypt victoriously battled the so-called sea peoples. Another weakening of the position of the state was caused by the appearance of iron weapons, which the country of pharaohs did not yet have. At the beginning of the 11th century BC there was a civil war in Egypt. In 1080 during the reign of the 21st dynasty, the country broke up into two parts and in the 10th century BC it came under the reign of the Libyan rulers who ruled Egypt for over two centuries in the structures of the 12th and 13th royal dynasties. In the middle of the 8th century BC the country was dominated by Nubians, also known

as Ethiopians (24th and 25th dynasties). In 671, Assyrians occupied Egypt for several decades, expelling Ethiopians from there. The pharaoh Psametych (663–609) of the 26th dynasty of Sais succeeded in freeing and unifying the country. Successive rulers of the Saite dynasty sought to raise the position of the country, and King Nechon (609–599) tried to regain Syria. In 525 BC Egypt was attacked and conquered by the Persians who ruled over the Nile until the invasion in Asia Minor by Alexander the Great. In 332, the Greeks entered Egypt as liberators, and their leader and king Alexander founded a city over the western arm of the Nile, which he called with his own name. After the king's death, one of his commanders – Ptolemy – took power in Egypt, giving rise to the reign of the last pharaohs (330–30 BC). Cleopatra tried, unsuccessfully though, to revive the former splendor of the state. After her tragic death, Egypt became one of the Roman provinces – (30 BC). It was the end of the history of the Ancient Egypt [1].

Medicine of Ancient Egypt

To understand ancient Egyptian medicine, one must know the pantheon of Egyptian gods associated in various aspects with elements of health and disease. Although the sun god Ra was located highest in the hierarchy of faith, the prayers for health most often referred to the grace of Horus, son of the goddess Isis, who was believed to invent medicines. Her brother Osiris was a victim of a fratricide at the hands of Seth, but Isis brought Osiris back to life and had a son Horus with him. Evil Seth blinded Horus, but Thot, the doctor of the gods and an expert on all knowledge, healed the blind and restored his eyesight. The goddess Hathor, who cares for women giving birth, also dealt with the art of healing. One of the gods of a lower rank was Bes, a bizarre dwarf with a tongue hanging out, who, along with the goddess Thoeris, kept watch over the health of pregnant women. The goddess Heqet guarded fertility, while the god with a ram head – Khnum equipped children who were born with the soul. The cult of the god-doctor Serapis, who was regarded as the Greek analogy of Asclepius, became popular in Egypt during the reign of pharaohs of the Ptolemaic dynasty.

Thoth, depicted with the head of an ibis or baboon, due to the restoration of eyesight to Horus was considered in Egypt as the patron of doctors dealing with the treatment of eye diseases.

Imhotep, the architect of the 3rd dynasty of the Pharaoh Djoser (2660–2590), creator of the step pyramid in Saqqara, who had the honor to be proclaimed god after death, also served other functions and state dignities: first priest, ritual guide, writer, astrologer, diviner, scholar and minister. During the reign of the 26th dynasty, and especially during the reign of the Ptolemy rulers, he was recognized as the god of medicine, who was asked in prayers to restore health [2]. According to the Egyptians, the unbridled malice of the gods exposed people to disease and suffering. Some deities could only be appeased by priests, e.g. the

fearful Sekhmet, who was imagined with the head of a lion.

Magic was closely associated with religion, which was used to treat the sick in the form of various practices. In the early periods of Ancient Egypt's history, magic-based treatment and many years of experience were treated equally. Over time, the idea of magic therapy began to permeate all ways to help patients. Rational methods of treatment were still practiced, but divination forms and rituals were abandoned less frequently. After all, the material side of the medications was replaced by spells and orders, which became therapies in themselves. The Egyptians mainly turned to magic, whose guiding principle was the belief that "similar requires a similar". According to the above principle, a woman suffering from advanced cervical cancer, whose vaginal discharge had the smell of burning meat, should be treated with smoke generated during burning meat.

There were many magical practices. In the first place, numerous spell and order formulas were used, in which they wanted to force the disease and its symptoms to leave the patient's body. Some formulas were called out by the patient itself or its family members, others by a doctor. An important prerequisite of therapy was the time of performing magical activities, e.g. morning or the end of the day, when the sun was rising or setting. Formulas were recited most often many times, usually seven times, because following the example of the Mesopotamian peoples, there were health properties in this number. Sometimes the casting of spells was accompanied by the preparation of a material healing agent.

Magic features were also attributed to amulets that took various shapes: crosses, statuettes, pendants, cords with knots made of flowers or mouse bones, worn in bouts of headaches. However, the most peculiar remedy was the statues of the gods: Horus or Bes, covered with hieroglyphic inscriptions. Inscriptions considered sacred were poured with water, believing that the wet figure absorbs the supernatural power of the texts carved on it, becoming useful for the treatment of scorpion, snake and crocodile bites. Another magic agent was being prepared from water, oil, milk and beer. The mixture was supposedly gaining a wonderful strength from the magic words written on the papyrus, which seemed to "dissolve" in the prepared mixture [3].

The entry on one of the papyri informs about the use of healing excrements of donkeys, hippos, crocodiles, pelicans, lizards and other animals which magical properties were associated with, having an impact on the functioning of the human body. Silt from the Nile and swamps, as well as a special soil called "btj", was also used for treatment. Egyptian eye doctors mixed powdered feces with honey and used the ointment thus obtained for trachoma or conjunctivitis. Silt and soil were used to dress wounds. It is believed that the soil "btj" was a particularly favorable nutrient for the development of fungus characterized by germicidal properties.

Sources of knowledge on medicine of Ancient Egypt include papyrus, mummies, inscriptions and sculptures on the walls of

various buildings, grave paintings, narratives of the Greeks who visited Egypt, e.g. Herodotus, Diodorus of Sicily and Strabo, records in the Old Testament and archaeological excavations [4–6]. The inscription from the fifth dynasty (2470–2320) that has survived to our times, mentions papyrus with a description of medical expertise at the disposal of Egyptian doctors. The most valuable medical papyrus, probably from a looted tomb, is the papyrus acquired in 1873 by Georg Ebers for the Leipzig museum. Its creation dates back to the beginning of the 17th dynasty (1650–1552). The length of the papyrus is 20.23 m. The text was divided into 108 episodes with prescriptions and short entries. A large part of the information contained on the papyrus is a copy of works from the Old Kingdom (1660–2160) and 3rd, 4th, 5th, 6th dynasties. Some parts of the text are titles of internal chapters, e.g. *Basis of medical secret: knowledge of heartbeat and work of the heart and knowledge of the heart itself* (title of the treatise on anatomy and physiology of the heart). Another example: *Tips for caring for someone who suffers from stomach pain* or *Basic medicines that should be prepared for women*.

The papyrus, which in 1862 became a valuable acquisition of a young Egyptologist, Edwin Smith, and was named after him, is an ancient precursor of the traumatological treatise. Its length is 4.68 m. The papyrus, probably a copy of an earlier text that was much older than Ebers' papyrus, dates back to the 17th dynasty. The work was primarily devoted to wound healing. Each of the 48 chapters, written in red ink, presents various soft tissue wounds as well as fractures and dislocations of the cranial, humeral bones and cervical vertebrae. Apart from the spell formulas against plague, most of the content has no magic, only facts based on "clinical" observations. There are no deliberations about mysterious diseases and miraculous spells as treatment agents and methods. There are natural injuries and natural treatments listed, e.g. tips for dressing wounds: *When you sew a wound, you should apply fresh meat to it the first day. Do not wrap dressing around the wound. The patient should remain in one place until the wound heals. You have to treat them with fat, honey and lint every day*. The construction of each chapter looked similar, containing a description of the injury, advice regarding the examination of the patient, including regarding anamnesis and the next diagnostic procedure, i.e. observing the skin, assessing the appearance of the eyes, testing joint mobility, nasal secretions, and diagnosing the disease, which determined one of the three prognosis made by the doctor: a disease they could cure, a disease they had to face, and a disease they were powerless against.

Other medical papyrus has lower learning significance. Hearst's papyrus at the University of California is a collection of 260 prescriptions, of which 100 are also found in Ebers' papyrus. They relate to the treatment of heart disease, bladder disease, dental abscesses, parasitic diseases and bites of crocodile and other wild animals. The Brugsch papyrus, i.e. the great Berlin papyrus, dates back to the 19th dynasty (1306–1186) and is

probably a copy of the record from the Middle Kingdom (2040–1650). This is proved by one of the prescriptions signed by the writer and literary Neferhotep, whose name appears during the reign of 11th and 12th dynasties. The papyrus contains recipes of methods and means used against intestinal parasites, old prescriptions for diseases of female breasts, prescriptions against the symptoms of hematuria, coughing and pain in the lower limbs. It also provides tips for preventing pregnancy. Small Berlin papyrus from the 1st century BC. is a collection of spells and orders to protect the health of mothers and children. The London papyrus, developed around 1350 BC, which is located in the British Museum, contains magical forms of behavior aimed at combating women's diseases, eye diseases and burns. The papyrus also contains prescriptions for skin and vascular conditions. The Kahun papyrus found by an English Egyptologist, dating back to around 2000 BC, is a copy of a much older text. Part of the papyrus content is devoted to veterinary issues, the remaining text is a gynecological treatise. Chester Beatty's papyrus is a treatise on anal diseases. Its development is estimated at 1250 BC. It contains a collection of prescriptions for internal diseases, especially the anus and intestines. Carlsberg papyrus from around 1200 BC is a copy of the text from the time of reign of the 12th dynasty (1991–1786) and collects a set of ophthalmic and gynecological prescriptions, as well as recipes and prognosis regarding the course of birth delivery. The Ramesseum III, IV, V papyri stored in London, developed during the reign of the 12th dynasty (around 1900 BC), were devoted to children's diseases, women's diseases, lymph node, tendons, muscles, nerves and fasciae medical conditions [7–9].

Inscriptions, sculptures, paintings on the walls of the building speak about the health situation of the Egyptians. There are well-known images of people with lipodystrophy (queen of Puntu), blind people (a sculpture representing a harper), or victims of cerebral palsy. However, it was only the examination of mummified corpses centuries ago that revealed the lesions of people of those times: smallpox, nephrolithiasis and cholelithiasis, pneumonia, schistosomiasis, joint and bone damage, oral and dental diseases.

Despite the mummification of the corpses, the Egyptians had only minimal anatomical knowledge. Only ordinary craftsmen took part in the embalming process, who approached the construction of the human body with complete indifference. In the Ancient Egyptian language, there were many concepts related to individual organs and other anatomical elements. For example, the heart in its natural place was called *haty*, and in literary and religious texts it was called *ib*. The Egyptians were the first to describe the relationship between heartbeat and pulse rate. Ebers' papyrus spoke of blood vessels and the heart as the seat of the soul. The author of one of the medical papyri advised the doctor, priest, goddess Sekhmet to put their hands on the patient's head, then to the area where the heart is and on the arms and legs. If the heart is working properly, the body particles are

sensed in the blood vessels. This description of the organ as a pump resulted only from speculative deliberations, not from knowledge based on anatomy and physiology. It was also associated with the belief that breathing air, saliva, nasal mucus and sperm pass through the heart and vessels. The vessels were supposed to transport these substances because in the concept of the Egyptians there was no difference between the circulatory system and excretory system. Ebers' papyrus contained the first treatise on the heart, a centrally located organ, which, according to the description, shifted slightly to the left because of its work. This phenomenon was termed "heart dance". In addition, the papyrus mentioned 46 vessels. Vessels – the channels were of two types: some of them transported blood, air and water, while others transported saliva, sperm, urine and excrement. This dichotomous division of arteries – channels was seen as a guarantee of safety for human health. The Egyptians were convinced that excessive amounts of faeces in the vessels lead to disease by spreading impurities in all organs and parts of the body. Another genesis of diseases was based on the invasion of imaginary worms that had nothing to do with gastrointestinal parasites. An example can be a record being a doctor's report, found on one of the papyri: *A writer is next to me. Every muscle in his body is tense, the disease ushetat develops in his eyes, the worm comes out of his mouth. I cannot leave him at the mercy of fate.* In descriptions of Egyptians, you can see blood vessel diseases in the form of aneurysms and varicose veins. Also, examining mummies, nodal thickness of the vessels and atherosclerotic lesions were found.

Already in ancient times cardiac arrhythmias were observed in the form of extrasystoles, arrhythmias and a feeling of heart-beat. The papyrus gave an amazing description of the symptoms of a heart attack: *If you are examining a patient who is hurting because of stomach and who also has shoulder and chest pain as well as has sensitive stomach on one side, it is Uadj disease. You should tell the patient: someone penetrated your body through your mouth. You are at risk of death.*

Both the Ebers and Smith papyri describe the airflow through the airways. In the opinion of the Egyptians, the cough concerned lung disease, which Ebers' papyrus prepared 21 prescriptions for combating it. Half of them were based on honey as the basic medicine. The medications were of liquid form, but inhalations from a mixture of myrrh, resin and dates were also recommended. Runny nose was treated with a rinse of palm wine or application of crushed dates and various herbs to the nasal passages. Magic formulas were called out against runny nose.

Ebers' papyrus describes four stomach diseases, but due to their inaccurate and brief presentation, they are difficult to identify today. Intestinal diseases were also modestly treated, for the therapy of which only 12 prescriptions were provided, most of them combating constipation. The problem of obstruction also occurs in Chester Beatty's papyrus, talking about anal itching

and hemorrhoids treated with suppositories made of a mixture of grape juice, figs and fresh bread. Diarrhea was a common gastrointestinal disease.

Intestinal parasites were known in ancient Egypt, e.g. human roundworm and hookworm. In the case of tapeworms, doctors gave patients juniper berries. Other parasites were fought with the pomegranate bark and roots. A special anal ointment was recommended for pinworms. The most common parasitic disease in Egypt was schistosomiasis, which was manifested by hematuria. Her occurrence was explained by the malice of the god or soul of a deceased person.

Ebers' papyrus contained prescriptions for liver and gall-bladder disease. Urinary system disorders were also included in this source, including anuria, which is supported by the sentence: *Apply the medication to remove urinary retention and associated pain in the lower abdomen.* Urinary incontinence and cystitis were also mentioned, giving prescriptions for these medical conditions [10]. Infectious diseases predominated in the Nile Valley. The Bible describes smallpox and leprosy epidemic. Traces of these diseases were also found on mummies. The most accurate description of tetanus was found in Smith's papyrus. The disease was a consequence of an injury and an open fracture of the cranial bone. The patient's condition worsened over time. There was a fever with intense sweating and seizures. Finally, there was trismus and tension in the muscles of the face and neck. The papyrus has a dramatic prognosis: "a disease that we can do nothing about". There was also cerebral palsy over the Nile. This is evidenced by a stela from the 18th dynasty with a sculpture of a doorman from the temple of Isis, whose right leg is completely atrophic.

The tragedy of the Egyptians was trachoma, called *nehat* in their language. In Ebers' papyrus, 100 prescriptions were devoted to eye diseases that were attributed to uterus influences; its secretion was supposed to penetrate the eyes and cause rainbow changes on the skin. In the case of cataracts and glaucoma, which was explained by "water entering the eye," no surgery was performed. Ebers' papyrus paid little attention to glaucoma. Treatment of night blindness caused by vitamin A deficiency consisted in lubricating the pupil of the eyes with fat of an ox or a donkey. Blind people tried to restore their eyes ("open the sight") through magic and witchcraft, including transferring disability to the pig's eyes.

The Egyptians, especially the upper casts of society, attached great importance to the aesthetics of personal appearance. Regardless of the activities of doctors treating various skin lesions and the accompanying itching, cosmetics developed, whose main task was to mask age changes. Attention was also paid to the muscularity of the body, which is mentioned in the Ramesseum's V papyrus, recommending to build and stretch muscles to make it elastic. The advice given was often accompanied with medications made from various parts of animals that were naturally fat, e.g. a hippo or crocodile.

The Ebers' papyrus lists 60 prescriptions for rheumatism therapy, e.g. *What must we do if the knee is sick? – Fruit (chacha), mash and mix with water (mesta). Wrap this knee with bandage and wear it until it becomes healthy.* "Twisted vertebrae" described in Smith's papyrus refers to torticollis and rheumatoid arthritis. There is relatively little information about bone and joint disease, although based on iconographic studies and mummified corpses, it is known that scoliosis of the spine, knee and hip arthritis, and Pott's disease were very common in Egypt [11].

Much attention in papyrus has been devoted to nervous and mental diseases. Magic was used in their treatment, e.g. for migraine, fish was applied to the most aching part of the head. Cephalgia was also treated with turpentine oil. For Parkinson's disease, Ebers' papyrus suggested treatment for hand tremor. Epilepsy was another common condition. People suffering from it were forbidden to enter some Egyptian temples. Noteworthy is the description of the brain in Smith's papyrus. Its author certainly knew the structure of the spinal cord and the symptoms of damage to the central nervous system. The study to confirm the sciatica was significant. Lifting and lowering of the straight legs of the sick back then is also used in modern neurology.

The Berlin Papyrus and Ebers' Papyrus contain descriptions of the symptoms of otitis media: stinging pain, leakage of pus from the ear. The disease was treated with ointments and healing balls introduced into the external auditory meatus. Magical incense was also used. There is a record about tongue disease in the Ebers' papyrus: *Apply the medication so that the tongue disease disappears.* The papyrus does not provide any details of the pathological changes that accompany this disease.

The population of ancient Egypt suffered from numerous dental diseases. Study of the mummies shows that even the pharaohs were not free from these medical condition. Coarse food contaminated with silica is considered to be the main cause of dental diseases; when grinding grain with rough stone, small particles got into the flour. The proximity of the desert meant that the food often contained sand. Due to this, the chewing surfaces of the teeth quickly wore off, which in turn resulted in devitalization of the pulp and formation of cysts and periodontal abscesses. In the case of pain, tooth extraction was practiced, and escape of periodontal abscesses was executed by drilling a hole in the outer surface of the maxilla or mandible. Caries played a minor role in the life of the Egyptians. The first great Egyptian dentist was Hesi-Ra, who lived in the time of Pharaoh Djoser [12, 13].

The issues of women's diseases were reflected in various medical papyrus. This is proved by the following passage contained in the Kahoun papyrus: *Use a medication that should have been prepared for women.* The Ebers' papyrus contains prescriptions for menstrual disorders, vaginal and labia diseases, and cases of uterine prolapse. A lot of information related to the intravaginal administration of drugs, which was probably done with the help of animal horns. The Carlsberg papyrus describes a method for

testing female fertility. To this end, garlic was inserted into the vagina. If its odor appeared after some time in the mouth, then the assessed woman was able to become a mother. This papyrus passed on a method of the process of incensing female genitals with smoke from the burnt feces of a hippopotamus. *If wind appears from her back, she will be able to have children,* wrote the author of the papyrus. Old Egyptian records also include ways to prevent pregnancy. Ebers' papyrus advised women, determined not to have children for several years, to soak a tampon in a mixture of acacia, cucumbers and dates, and to place the tampon in the vagina [14, 15]. A way to determine fetal sex was also given. In this case, the pregnant woman interested in the examination should moisten a bag with barley and bag with wheat with her urine. Germination of barley grains was to prove the male fetus, germination of wheat grains boded for the birth of a girl. Kahaun Papyrus instructed women before giving birth: *If the vessels in your breasts swell and the delivery goes smoothly, but you are still exhausted, the delivery was associated with complications then* [16].

Egyptian women took a squatting position over the mat during childbirth, which was laid on a stone or brick floor. The role of midwives or grandmothers was to deliver the child. The women of the pharaohs, as the sculptures indicate, gave birth in special delivery rooms lined with wood or marble. There were also complicated births, so Ebers' papyrus collected 20 prescriptions dedicated to facilitating labor. Born children were breastfed, even for a period of 3 years. Deficiency or total loss of breast milk caused various irrational behaviors, e.g. rubbing the back of a feeding woman with fish bones (catfish). In the absence of the expected response from the mammary glands, the help of a wet nurse was sought. Many fragments of Ebers' papyrus mention "sick breast". The large Berlin papyrus mentions the treatment of breast abscess. Many fragments of written passages speak of children's illness, e.g., urinary incontinence and coughing. The latter symptom was recommended to be treated with milk mixed with a paste of crushed dates. Magical methods were often used, e.g. a bag with mouse bones was hung on the neck of a sick child [17].

People in Egypt, bitten by animals and cut by thorns were often treated. Crocodile and pig or hippo bites were treated with mulberry leaf and fresh beer compresses. Bites by a dog with rabies were attempted to heal by reciting various spells over the wound. Action against snake bites and scorpions was also coming down to magical procedures. The author of the papyrus, very rational in his recommendations, advised all wounds to be laid with fresh meat, which – as we know – has hemostatic properties. Stab wounds caused by plant thorns were covered with donkey's droppings. In the case of burns, various medications and dressings were used for many days, but for deep, penetrating burns, the help of the goddess Isis was sought, who, according to Egyptian mythology, healed Horus's burn wound with milk.

The author of Smith's papyrus brilliantly described the symptoms of fractures of the base of the skull in the form of nervous disorders, bloody ear and nose leakage and unilateral paralysis. There was only one prognosis: *A disease that we can do nothing about*. He also mentioned the case of cervical dislocation or sprain, resulting in tetraplegia and urogenital disorders: *It's about a man who was characterized by a dislocation of one vertebra. He lost control of his arms and legs and urinated unknowingly*. This papyrus describes a method of treating jaw dislocation that was no different from the method used today. Similarly, the technique of removing clavicle dislocations, healing fractures of the limbs and ribs resembles modern therapy.

Many examples of sprains and fractures occur in mummy skeletons. Some of these injuries arose post mortem as a result of the activities of mummifiers. However, some fractures show traces of ossification. Fractures most often concerned forearm bones, including as a result of intentional injuries that occurred during corporal punishment. In the event of a bone fracture, the doctor immobilized the affected limb by using a splint made of acacia bark and wrapping it tightly with a resin-soaked bandage. The Egyptian dressing from several thousand years ago, with its pragmatic quality and effectiveness, can be safely compared with the dressings used in modern medicine [18].

In addition to the Egyptian *samu*, that is, a doctor for all diseases, there were specialists over the Nile assigned to various organs and parts of the human body, e.g. doctors for eye diseases, lower abdomen diseases and others. Some adorned their names with a bizarre title, such as "anal caretaker," "hidden disease doctor," etc. dentists also had the title of doctor. Sources indicate that the doctors were priests of the goddess Sekhmet. The medical state represented a hierarchical structure, which was associated with the functions performed by doctors, e.g. caretaker doctors, supervisors, presiding doctors, mine doctors, mortuary temple doctors, doctors for stone breaking persons. Training of doctors took place in the so-called life homes, that is, places where there was also a school in the library. A scholar, who was also a writer, patiently copied old texts and the students did the same under his direction. This static knowledge acquisition explains the observed unproductivity and stagnation in ancient Egyptian medicine.

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Streszczenie

Historia starożytnego Egiptu obejmuje trzy tysiąclecia przed narodzeniem Chrystusa. Informacje na temat medycyny w tym kraju, znajdujące się przede wszystkim w papirusach, świadczą o występowaniu chorób znanych współcześnie oraz o terapii magiczno-racjonalnej stosowanej przez egipskich lekarzy – kapłanów.

Słowa kluczowe: Egipt starożytny, medycyna staroegipska, papirusy, mumie, mitologia staroegipska
