

ПЕДИАТРИЯ ЕГИПТА В ДРЕВНОСТИ И СОВРЕМЕННОСТИ

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Резюме. В данной статье рассматриваются исторические аспекты развития педиатрии в Египте, описаны рациональные, мифические и умозрительные методы лечения. Проведен системный анализ развития детского здравоохранения в современном Египте. Выделены основные направления деятельности органов государственной власти в сфере охраны здоровья детей Египта, а также проводится анализ статистических показателей уровня рождаемости детского населения в данной стране.

Ключевые слова: болезни Древнего Египта, педиатрия, народная медицина, государственные органы и концепции развития детского здравоохранения в Египте, современная медицина в Египте.

PEDIATRICS IN ANCIENT AND MODERN EGYPT

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Summary. This article examines the historical aspects of the development of pediatrics in Egypt, describes the rational, mythical and speculative methods of treatment. A systematic analysis of the development of child health care in modern Egypt has been carried out. The main directions of the activities of state authorities in the field of child health care in Egypt are highlighted, and the analysis of statistical indicators of the birth rate of the child population in this country has been carried out.

Keywords: diseases of Ancient Egypt, pediatrics, folk medicine, state bodies and concepts of development of children's health care in Egypt, modern medicine in Egypt

The history of Ancient Egypt has more than three millennia: from the end of the 4th millennium BC, when the first ancient Egyptian city-states appeared in the lower reaches of the Nile River, until 395 AD, when, after the collapse of the Great Roman Empire, Ancient Egypt became part of Byzantium. In the history of Ancient Egypt, there are 4 main eras, the last of them, the period of the New Kingdom (16th -9th centuries BC), remains the heyday of ancient Egyptian culture, including the art of healing. It was at that time that most of the medical papyri were written - the

main source on the history of ancient medicine of this civilization. Today, many Egyptian doctors seek to revive the practices and historical traditions of their ancient predecessors.

The purpose of the article is to show the development of diagnostics and treatment of childhood diseases in ancient and modern Egypt, to identify the factors of maternal and child mortality in Egypt, focusing on how they were adapted to the unique context of the historical tradition of healing and the culture of Egypt.

The main method used to analyze the problems of healing in Ancient Egypt was historical ideography, which made it possible to describe the rational, speculative and mythical practices of folk and traditional healing. To analyze the current state of child health care, factors of maternal and child mortality in Egypt, literature reviews, policy documents of sectoral strategies, as well as the method of mathematical correlations of quantitative data from demographic surveys, routine data systems, and international databases were used. For the convenience of presentation, the article is divided into two parts: the first part is devoted to the peculiarities of the treatment of childhood diseases in Ancient Egypt, describes the anatomical and physiological concepts in Ancient Egypt, provides an overview of the practices of treating childhood diseases, and the second part discusses the development of child health care in modern Egypt and analyzes the current state of pediatrics in this country.

Research results and discussion. Ancient Egypt

The healing of Ancient Egypt has a long history. During this time, it did not undergo any major changes, nevertheless, it remained advanced for its time. Medical papyri remain one of the main sources on the history of healing in Ancient Egypt. Currently, science knows more than a dozen papyrus scrolls that contain medical texts and descriptions of various diseases. They also contain descriptions of treatments, with lists of prescriptions. Several medical papyri are devoted to the description of childhood diseases and contain information about helping a sick child (first of all, these are the papyri of Ebers, Hirst and Brugsch). The oldest surviving treatise on pediatrics is the Brugsch papyrus, written around the 15th century BC. It contains information about childhood diseases and sanitary measures to maintain the health of mothers and children.

The Ebers papyrus, dedicated to the treatment of internal diseases and medicines. It was discovered in 1872 in Thebes and named after the scientist Georg Ebers who studied it. This papyrus is glued together from 108 sheets of papyrus, reaches a length of 20.5 meters and is called "The Book of Preparation of Medicines for All Parts of the Body." Descriptions of diseases indicate a well-developed observation and ability to use various diagnostic techniques. This treatise also contains about 900 prescriptions of medicines for the treatment of various diseases of

the digestive system, respiratory tract, ear, throat and nose, eyes, skin, helminthic infestations and many other diseases [1].

Researchers of healing in Ancient Egypt O.A. Jarman and G.L. Mikirtichan identified several groups of diseases characteristic of childhood: ear diseases, colds, eye diseases, bronchopulmonary diseases, dental diseases, including teeth eruption in infants, urinary and stool retention, dermatological diseases and described in detail the methods of their treatment. At the same time, these researchers noted that we struggle to understand many diseases and the drugs for their treatment, since the descriptions of diseases in medical treatises do not give us a clear nosological picture. [2]

The Egyptians were well aware of the symptoms of childhood diseases: the papyri describe a prolonged cry that could accompany abdominal pain, ear pain with otitis media, cough, runny nose, redness of the eyes, etc. Children suffered from diseases of the urinary system, convulsive syndrome, skin rashes and diseases associated with food poisoning and parasitic infections. There are descriptions characteristic of the clinical picture of congenital heart defects. The same treatment was used in both adults and older children, but in smaller doses. The Egyptians attached great importance to the correctness of the ratio of the components in the medicine. Medicines were used internally and externally. The Egyptians believed that the medicine taken by a nursing mother could pass through the milk to the baby. There was also a known method when the medicine was smeared on the nipples of a nursing woman, and when sucking along with milk, it entered the child's body. Along with recommendations for treatment, spells and prayers were a necessary component of treatment [3].

An important place in the diagnosis and treatment of childhood diseases was determined by the anatomical and physiological concepts in Ancient Egypt. Although the embalmers of Egypt knew well how the human organs are arranged and where they are located, they never examined the internal structure of the body and did not share their knowledge of anatomy with doctors. It was believed that these two professions are completely different and have nothing to do with each other. It is for this reason that the Egyptians had a poor idea of the anatomical structure of a person and did not know the functions of many organs. Despite the fact that the Egyptian doctors understood the work of the cardiovascular system, that is, they approximately understood the work of the heart. The doctors of Ancient Egypt considered this organ to be the center of emotions and intellect, the organ of thinking, and the brain was a useless organ. When the embalming process took place, the heart remained intact, while the brain was removed from the body of the deceased - pulled out through the nose [4].

The information of the ancient Egyptians about the vital activity of the organism was based on the idea of 4 basic elements of the world - water, earth, air and fire. During the period of the conquests of Alexander the Great and the spread of Greek culture in Asia Minor, a synthesis of Egyptian and Greek healing began to form rapidly, and the completed Greek Egyptian anatomical and physiological concept was formed. It should be noted that during the Hellenistic period, during the reign of the Greek dynasty of the Ptolemy in Egypt, autopsies began to be carried out in the city of Alexandria, Greek doctors laid the foundations of descriptive anatomy. This contributed to the concretization of the concept of the vital activity of the human body. In fact, Egyptian doctors adopted the Greek anatomical and physiological concept during the Hellenistic period: the humoral theory of 4 fluids, the doctrine of the elements and natures of the human body, three pneuma (special vital warmth), which dispersed throughout the body through veins, arteries and nerves. Health was defined as a balance of fluids and elements and pneuma, and illness was defined as their imbalance. The ancient Egyptians believed that the body was composed of a system of channels, or "metu". Scientists note that the Egyptians believed that bodily fluids could enter this system, including feces. This would have a negative effect, and enemas became an important method of treatment for many diseases, including malaria and smallpox. The heart was the center of 46 canals, visible as a variety of tubes. However, the Egyptians, like the Greeks, did not understand that these channels have different functions [5]. In this concept, rational, speculative and mythical moments, real and fantastic ones, merged, but it satisfied the needs of doctors and the population of that time.

These ideas also determined the nature of the treatment, which consisted in removing any liquid or element with the help of bloodletting, emetics, laxatives, diuretics or diaphoretic drugs, gastric lavage, etc. Based on the anatomical and physiological concept and demonic ideas about the causes of diseases, the treatment was carried out in a complex manner, together with empirical medicine, spells were used, which played the role of a kind of "psychotherapy". Doctors and parents referring to Isis and other gods who overcome diseases and death.

Many medical practices were effective, and doctors' advice for staying healthy included washing and shaving the body, including under the armpits, as this will help prevent infections. The pharmaceuticals of the ancient Egyptian medical priests included antacids, copper salts, turpentine, alum, astringents, alkaline laxatives, diuretics, sedatives, antispasmodics, calcium carbonate and magnesia. The dosage of drugs was prescribed with particular care in medical papyri, indicating the way in which the drug should be taken orally (for example, with wine or food) [6]. At the same time, many methods were ineffective or harmful - in particular, many drug prescriptions

contained manure, bat meat, fermentation and mold products. Some molds were bactericidal, but they also contain harmful bacteria that posed a threat of infection. [7]

Ancient Egypt developed on the synthesis of Greek and Egyptian cultures, became one of the foundations of the treatment of childhood diseases in Byzantium and the entire Arab East in the Middle Ages. And today, Egyptian doctors are striving to revive the pharmacy based on the traditional prescriptions of the ancient Egyptian papyri. Moreover, even today, many practices of treating childhood diseases of ancient Egypt are widespread in rural areas of the country and, especially, in the poor regions of southern Egypt.

Development of children's healthcare in modern Egypt.

Egypt is one of 10 low-and middle-income countries. One of the most populous countries in North Africa, Egypt is a desert plateau divided by the Nile valley. The country is formed of two distinct regions: Upper Egypt in the south is predominantly rural and has had historically poor health outcomes; Lower Egypt in the north, including cities such as Cairo and Alexandria, is more urbanized and affluent. Around half of Egypt's population of 86 million (2019) is below 15 years of age and less than 4% is above 60 years of age. The majority of young people in Egypt live in poor regions, where health outcomes and access to jobs and education are lower. The Egyptian economy relies on four main sources of income: tourism, remittances from citizens working abroad, revenues from the Suez Canal, and oil. The share of the population living below the poverty line has steadily risen since 2000, particularly among rural inhabitants. Economic growth remains stagnant and unemployment and inflation high. These trends highlight long-term economic inequality between rural [8].

However, over the past 5 years, Egypt has recorded important achievements in improving child and maternal survival and health in to achieve Millennium Development Goals (MDGs): reduce child mortality (UMR) and to reduce maternal mortality (MMR).

In 2014, Egypt hosted the International Conference on Population and Development in Cairo. Reducing maternal mortality has also been a key goal of the national five-year plans of the Ministry of Health and Population (MoHP) and women's and children's right to health is enshrined in Egypt's new constitution.

Between 2014 and 2019, the under-5 mortality rate declined from 108 to 27 child deaths per 1,000 live births; slightly more than half of these deaths occurred in the first month of the child life [9].

In 2019, around 90 percent of mothers underwent antenatal care checks during pregnancy, 83 percent of them having had antenatal care on a regular basis. Among all births, 92 percent

were attended by a skilled birth attendant and 87 per cent took place in a health facility. As for the immunization rate, 92 per cent of children aged 18-29 months were fully immunized in 2019; the children had received complete vaccination against tuberculosis, measles, diphtheria, pertussis, tetanus and polio. Key accomplishments include a dramatic reduction in rates of chronic malnutrition, the elimination of polio in 2016, and the establishment of a national community health worker program. Impressive declines in MMR and UMR in Egypt may also be due in part to rapid improvements in sectors outside of health such as better access to running water and sanitation [10].

Although Egypt has a sufficient number of health providers, the health workforce is distributed unequally, with a particularly low level of providers in rural Upper Egypt. Overall coverage of births attended by skilled health workers is around 80%, compared to just over 40% between 2014 and 2019. However, the poorest rural residents still have just over 60% of births attended by skilled staff, compared to over 90% in wealthy urban parts of the country. Poor quality obstetric care has also been a major bottleneck to reducing the number of maternal deaths. For example, maternal hemorrhage remains a leading cause of death among women in Egypt, despite significant achievements over the past 20 years. Management of maternal hemorrhage requires appropriately equipped facilities with the correct blood type, supplies and equipment as well as a skilled birth attendant. Although institutional deliveries in Egypt increased by more than 80% between 2014 and 2019, blood shortages in 2019 were still among the most frequent avoidable health facility factors, contributing to 16% of maternal deaths and playing an especially important role in deaths from hemorrhage [11].

This resulted in a number of efforts to improve the quality of delivery care, including the National Child Survival Project (2002-2006), the Mother Care project (2006-2008), the Healthy Mother/Healthy Child Project (2014-2019) and the UNICEF project (2019 to present). These have successfully reduced maternal mortality, particularly in poorer Upper Egypt. The UNICEF project is establishing perinatal care centres in Upper Egypt, targeting two million children under 5 and their mothers. The project supports the national integrated management of neonatal and childhood illnesses and includes training for nurses, paediatricians and obstetricians on clean delivery and neonatal resuscitation. The MoHP implemented an integrated set of interventions as a part of the Healthy Mother/Healthy Child Project (2014–2019) to improve the quality of obstetric and emergency care; for instance, competency-based training was conducted to improve skills of health personnel and to train nurses in midwifery skills.

Political and economic crises may also have an impact on the relative costs and access to essential care, thus the current period of political transition in Egypt may create further challenges to reducing mortality among women in children in the near future. However, compared with other middle-income countries in the Middle East and North Africa, Egypt had the highest financial share of health expenses borne by households and the lowest share borne by government.

As a result of an increase in the total population, those between 0 to 19 years have increased further from 13.5 million in 1960 to 38.2 million in 2019, which is expected to increase to 50.9 million in 2050, the accumulative effect creates demand for healthcare facilities and services relating to mother and childcare (obstetrics, gynaecology, paediatrics, etc.), alongside the common prevailing communicable and some non-communicable diseases. Consequently by 2050, around 85 million will be born in Egypt, increasing demand for mother and childcare related services and facilities [12].

Results:

Despite demonstrable success to date, Egypt faces a number of constraints and ongoing challenges that if addressed, could help to of that have contributed to reductions in maternal and child mortality in Egypt. These include: reducing socioeconomic disparities, particularly between Upper and Lower Egypt; strengthening gender equality; improving the nutritional status of children; increasing financing for the health sector to reduce out of pocket expenditure and expand health insurance.

Effective governance improves health outcomes and, conversely, poor governance contributes to poor health outcomes. Some improvements in Egypt's governance indicators were noted between 1996 and 2014, however, recent dramatic changes in the political landscape have led to deterioration across all three indicators of governance between 2014 and 2019 – control of corruption, rule of law and political stability, and absence of violence. However the new constitution commits the state to guaranteeing a sufficient allocation of public spending to health, and the provision of improved health care and education services to be free for those who are unable to pay. New institutions and accountability mechanisms for health will be needed.

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