

Medical Care for the Ancient Egyptian Child Through the study of John F Nunn

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Received: 06/2023, Published: 06/2023

Abstract:

John F. Nunn drew on his own experience as a physician and Egyptologist to re-study medical papyri and re-examine sources of information about ancient Egyptians' experience in medicine and healing methods, including mummies, skeletons, engravings, and frescoes.

In this research, we highlight some of the diseases to which the ancient Egyptian child was exposed, and the most important prescriptions to treat them or relieve pain, through the study of John F Nunn, as well as access to the results of a group of researchers in this field by relying on modern scientific laboratory methods, to reach the medical fields in which the ancient Egyptians excelled, and others they were unable to.

Keywords: Child, disease, treatment, papyri, ancient Egypt.

Introduction:

To detect the diseases of the ancient Egyptians, which began studies more than two centuries ago, the operation was done by removing the shroud from the mummy and then autopsy, then introducing the technique of microscopic tissue examination in 1889, and in 1898 X-rays were used to photograph mummified bodies.

With scientific progress and the emergence of modern technologies and rapid analyses that are not harmful to the mummy, very small samples of tissue were used, the most important of which is the "deoxyribonucleic acid (DNA) test and the search for the presence of "antibodies in tissues.

What are the most important diseases suffered by the ancient Egyptian child, and the therapeutic prescriptions that were followed, which the doctor and Egyptologist John F Nunn and the rest of the researchers were able to reach thanks to modern technologies?

1. The Ancient Egyptians' Love for Children

There was a clear passion on the part of the ancient Egyptians to have children due to three main factors:

- ✓ Satisfying the instinct of parenting, providing opportunities to raise and benefit from children, and achieving psychological happiness, prestige, and social dignity⁽¹⁾.
- ✓ The predominant social formation in their society, and a sense of reassurance about the living (or economic) future guaranteed by the country's environment.
- ✓ The spirit of religiosity and the connection of the happiness of the hereafter in the ancient Egyptian with the child who ensures the continuation of the performance of religious rituals and the offering of offerings in his name after his death for their belief in the second life after death⁽²⁾.
- ✓ The need for manpower, as the ancient Egyptian society is an agricultural society, in essence, it is affected by the abundance or scarcity of labor for the land. The more family members multiply, the more opportunities are created to increase their income, and thus the multiplication of children and offspring was a goal they seek, to be of help to them⁽³⁾.

In the ancient Egyptian scenes, according to Abdel Aziz Saleh, the extent to which boys benefit from fieldwork at an early age, where they help sow grain, collect grain ears during harvest or pick up what falls from them, help transport them, and protect birds from vineyards and scare them with small sticks. Not only boys were used in the fieldwork, but also girls⁽⁴⁾.

The author states that there is a depiction in two binoculars painted on either side of a model of a hermitage from the Eleventh Dynasty, of the extent to which the landowner benefited from his

family's cooperation. A family of a father, mother, two sons, three daughters, and four brothers (of the landowner) was photographed, with one of the boys recording the quantities of grain transported into the silo, while the other boy, his three brothers, and four uncles were engaged in the grain process, assisted by only two workers from outside the family. The father who owns the land sat not far from them, soft-minded playing dice with a friend, and the mother obligated her husband's side to go to him and offer him his drink, and the purpose of authorship among this group may be an eschatological purpose aimed at the happiness and blessing of the head of the family in his second life, but there is no doubt that the landscape photographer had derived his elements from the usual life of average farming families. As for the large farmers and the owners of the lost, one of the forms of benefiting from their children was to involve them in supervising the offices of their loss.

There is no need to note that the interest here in portraying the farmers' need for the efforts of their children is on the basis that they are the majority of Egyptians and that it is natural that the people of other crafts and professions wanted from their children just as the farmer wanted to help his children. Whether they belong to the poor classes such as hunters, papyrus collectors, and craftsmen, or whether they are civil servants whose eschatological calls indicate their keenness to be succeeded by their sons in their posts ⁽⁵⁾

It provided the Egyptians with the conditions of their natural environment which ensured the stability of life and the clarity of the future of living, and for this, they did not fear the consequences of reproduction and reproduction, in the sense of the natural factors that ensured the stability of the ancient Egyptians: the stability of irrigation resources, the ease of their use, and then the renewed fertility that ensured the land its permanent ability to produce with effort⁽⁶⁾.

As for the lack of expense in raising children, the historian "Diodore de Sicile" says: The Egyptians raise their children in great ease and economy, feeding them with the threads that they cook from cheap materials available, and with papyrus stalks that are grilled on fire and eaten, and with the roots of aquatic plants that taste raw, cooked and grilled, and most of the children spend their boyhood for the good climate of the country barefoot and naked⁽⁷⁾

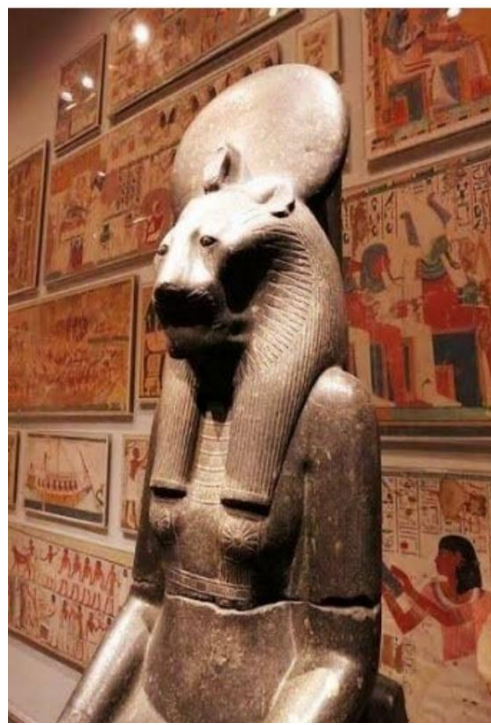
Therefore, the Egyptians have known since ancient times the keenness to have children and wish for many of them.

2. Primary Care: Newborns

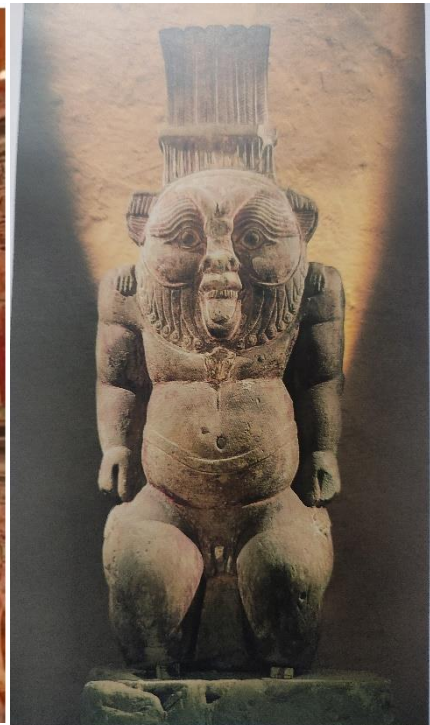
The magicians made special amulets for women for the success of pregnancy in the form of female animals characterized by the strength of offspring such as frogs, and another for the goddess (Taurt) hippopotamus characterized by the acronym of the abdomen and breast, to ensure easy birth, and the ugly dwarf to keep away the evil eye, and to repel dangers and evils. The goddess Meskht is the embodiment of the birth partner, on which the lady relies during childbirth, and she also provides luck and goodness to the child⁽⁸⁾



Statue of the goddess Taurt, goddess of pregnancy and childbirth (26th dynasty) Egyptian Museum⁽⁹⁾



The goddess Sekhmet with the head of the lion, and her priests had an important role in healing the sick, from the temple of death in Karnak during the reign of Amenhat III (Dynasty 18)



Statue of the god Yasin to keep away the eye and evil, excavations of Zahi Hawass⁽¹⁰⁾

Infant mortality was very large, ranging from 20 to 50% during the first year of life, and despite attempts to care for and protect them, some of them failed⁽¹¹⁾ Many babies are buried in the Lahun under the houses under the floors of the rooms, in boxes containing two or three children. In Deir el-Medina, there is a cemetery above the village, where more than a hundred children are buried in boxes and coffins⁽¹²⁾

"In Ebers papyrus"⁽¹³⁾ the examination of the newborn in the early hours of his birth, to predict longevity, is based on the following signs: if he cries "ny" he will live, and if he shouts "mebi", or if his voice is moaning or if he bends his head down, he will die.

In The Ramesseum papyri⁽¹⁴⁾ (The Papyrus of Women and Child) there is a passage: Another thing to offer the child on the day of his birth (24-17,c) and unfortunately, the details in the papyrus have been damaged⁽¹⁵⁾

The mother and her assistant in giving birth reluctance certain spells with the aim of exorcism to calm the mother's anxiety and protect the infant⁽¹⁶⁾

After birth, a name is chosen for the newborn, often the prerogative of the mother, and names with divine elements⁽¹⁷⁾ are prevalent regardless of their forms or development through the ages, and the continuation of the divine element in human names in the desire of divine providence, and evidence of personal piety in all eras of the ancient Egyptian civilization. It seems that this happened in all social classes⁽¹⁸⁾.and the religious character can be in naming newborns, by linking their names to the names of the gods, or with the name of a religious occasion during which he was born, and one of these names was what links the newborn with the idol of his people with the bond of dependency, or links them to closeness and love, or the bond of thanksgiving⁽¹⁹⁾, or the bond of worship and faith, or the bond of trust... Etc. Or linguistic formations with an optimistic quality or prevent envy, such as "let God X give him a long life", or so that the god may pay him the evil eye⁽²⁰⁾, but this does not prevent the births being named after one of his grandparents or parents, or after the ruler...⁽²¹⁾

There are breastfeeding rituals, where thin metal or porcelain amulets are found depicted in the form of a breast, or the figure of the goddess Isis breastfeeding her child Horus, or in the form of the goddess Hathor in the form of a cow, or the goddess Taurt in the form of a hippo⁽²²⁾ There are spells to

exorcise evil spirits and diseases, recited on amulets and then arranged in a necklace placed around the child's neck to protect him from the evil eye. Of these, 41 beads must be placed, one of gold, along with a piece of red agate with an inscription representing a crocodile and a human hand⁽²³⁾

3. Urological Problems and First Teeth

The treatment of urinary incontinence is a medicine based on porcelain and a semi-precious stone from the seizure "tjehenet", boiled and made in the form of a small globule, chewed by the child if he is old and then swallowed and, if he is young, put mashed milk and drunk four consecutive days⁽²⁴⁾

As for the treatment of urinary retention, such as bloody urination, a prescription is used mentioned in the Ebers Papyrus 262: "Another remedy to make the child come out (wesesh) - in the sense of bloody - urine (meuyt) accumulated (retained) in his stomach: an old book is boiled in oil and anointed with the child's abdomen to regulate his urination (weseshet)⁽²⁵⁾

Another recipe in Ebers Papyrus 267 is to eat an ox's liver in case of urinary warming (hei no henau) and does not specify whether the liver is raw or cooked⁽²⁶⁾

To treat minor pain crises, a recipe is mentioned in the Ebers Papyrus 782, "A remedy to eliminate constant screaming (Ashout): Shepnen by Shepen, the feces of flies from the wall, mixed together and eaten for four days, and the screaming will disappear immediately."

John F Nunn states that researchers agree that the word "shepen poppy flower, and "shepnen" means poppy seeds, and there is no doubt that poppy seeds contain a small amount of morphine - a sedative and painkiller - and therefore have a powerful and proven effective in calming the crying baby ⁽²⁷⁾Coriander seeds appear to have been used to treat urinary tract diseases⁽²⁸⁾

To treat the problem of the appearance of the first teeth, for reasons that are not clear, the mouse had a long history in various civilizations in prescriptions. For example, to relieve the pain of protruding the first teeth, they fed the child and his mother a cooked mouse ⁽²⁹⁾. The bones of these shall be placed in his neck in a cloth of thin linen and shall be made in seven knots⁽³⁰⁾.

The drug seems to have been a success. Mouse bones appeared in the digestive canals of a number of children buried in a predynastic cemetery ⁽³¹⁾John F Nunn says it is difficult to find any medical or pharmaceutical grounds for the ancient Egyptian use of animal remains for treatment⁽³²⁾

4. Circumcision:

The dangers of the operation are most clearly visible in the famous inscription on the east side of the door of the tomb of Ankh Mahor, who was a minister and chief of all the staff of King Titi of the Sixth Dynasty of the Old Kingdom 2345 BC.

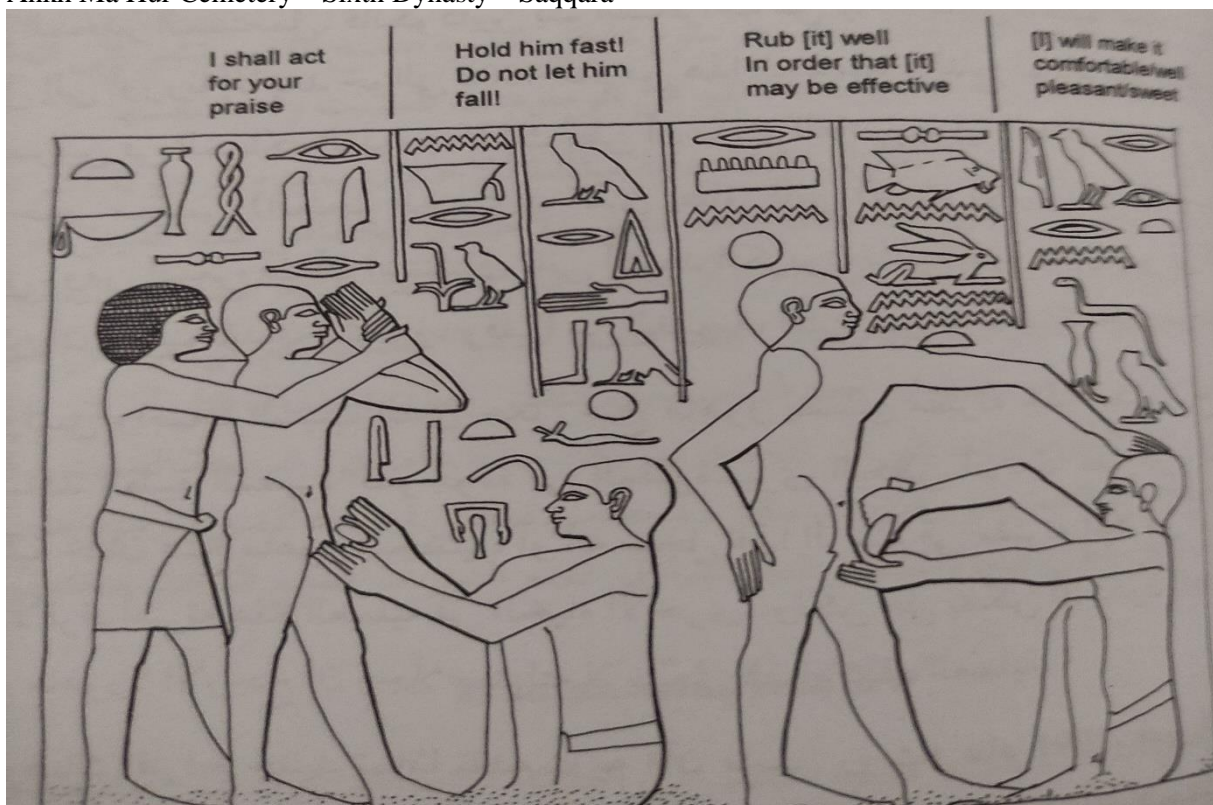
In the middle of the drawing, the funerary priest "hem-ka" appears, and it is not known whether he is the one who circumcises the owner of the cemetery, or the circumcision is done for him, and therefore he is one of the sons of the owner of the cemetery. Above the priest are the words "Hold him well" and "Don't make him fall"⁽³³⁾

On the right side of the drawing, there is the phrase «I will make it comfortable» while the patient's words «rub you well so that it is effective» and the doctor and Egyptologist John F Nunn believes that this phrase is not consistent with the process of circumcision, but suggests the use of a type of anesthesia, although it is difficult to deduce the type of drug, it is thought that what is in the hands of the circumciser is Memphis stone (limestone), which releases carbon dioxide if vinegar is added to it, and it is known that inhaling dioxide Carbon of more than 20% can cause loss of sensation, some amount of coma, but it has no effect as a local anesthetic ⁽³⁴⁾Jules Guiart also mentions the use of this method (crushing a Memphis stone and mixing it with vinegar) by applying it to the wound so that the patient does not feel amputation pains or cauterization pains⁽³⁵⁾

John F Nunn believes that circumcision was a custom to celebrate the introduction of masculinity, accompanied by the appearance of a religious collective celebration ⁽³⁶⁾and Jules Guiart saw the circumcision of priests in childhood homes as an indication that their parents assigned them to religious service ⁽³⁷⁾Rosalindem and Jack J. Janssen Circumcision spread in ancient times, and was compulsory for the boy and a condition for the recognition of his attainment of attainment from the social body, and then became optional in the following ages, except for certain groups that must be tolerated, such as boys who join the priestly service, and may be compulsory in the Middle Kingdom for everyone who joins a government job⁽³⁸⁾



Ankh Ma Hur Cemetery – Sixth Dynasty – Saqqara⁽³⁹⁾



Inscription from the tomb of Ankh Mahor - Sixth Dynasty - Saqqara, translation, and explanation of words above the drawing⁽⁴⁰⁾

5. Cough:

"Seryt" means cough. Prescription medicines for cough treatment are found in (Ebers Papyrus) 190, 305, 325, (The Berlin Papyrus)⁽⁴¹⁾ As well as Hurst Papyrus 61 (The Hearst Papyrus)⁽⁴²⁾

Prescriptions are divided into cough sedatives and expectorant drugs

Sedative cough medicines: sweetened drinks, honey, carob, and dates have used ⁽⁴³⁾ Another recipe for dry cough and whooping cough is, "Catch a mouse, kill it, put it in the oven, and grill it until it burns, take it, and then grind it until it becomes powder, add milk to it, and give it to the child to drink ⁽⁴⁴⁾

Expectorant drugs: the sense of provoking the secretion of mucus from the wall of the airways, so the cough becomes soft, which helps to get rid of phlegm, and if the dose used is increased, the effect of the drug was emetic, such as the ipecac plant, absinth or wormwood ⁽⁴⁵⁾ As for the medicine for colds, the milk of a nursing woman (born a male) and gum ... (Ebers Papyrus 109) ⁽⁴⁶⁾

Garlic was also widely used to treat bronchial problems and colds ⁽⁴⁷⁾ and used cumin inhalation to relieve cough ⁽⁴⁸⁾

6. Burns and Open Wounds:

The ancient Egyptians used honey topically to treat open wounds ⁽⁴⁹⁾ It has been proven that it speeds up the healing process of wounds, burns, and ulcers. So that the strong osmotic effect of honey (because of its high concentrations of sugars) draws water out and reduces tissue swelling. What's more, high osmotic pressure does not allow bacteria and fungi to grow ⁽⁵⁰⁾

They also used castor oil to heal wounds with pus ⁽⁵¹⁾ and raw meat was used as a topical wound recipe on the first day. Meat can supply clotting factors to the blood, especially if the bleeding is a runny nose that does not emanate from a severed artery ⁽⁵²⁾, and tannic acid derived from acacia seeds has also helped to treat burns ⁽⁵³⁾

7. Malnutrition and Anemia:

John F. Nunn argues that some bone changes may indicate malnutrition, such as fragility, and also "Harris lines" which mean bone growth has stopped. The study of radioisotope ratios of elements in bones, skin, and hair reveals the important components of food, helping to get to the cause of malnutrition. The study of radioisotopes also helps to discover lead, which is among the food toxins that can be detected in the mummy. and skeletons ⁽⁵⁴⁾

21 ancient Egyptian mummies of children from European museums (12 males, 07 females, and 02 unclear sexes) were studied, and the estimated age at death ranged from about one year to 12-14 years. CT scans of the structural effects of anemia were evaluated using a clinical radiological approach, and one case found a radiological marker of thalassemia (low hemoglobin and low red blood cell count), as well as macroglossia. macroglossia (enlarged tongue), the presence of pathological hyperplasia in the anterior skull vault is an indicator of chronic iron deficiency anemia ⁽⁵⁵⁾

Another study of half the mummy of an infant from ancient Egypt that showed micromorphological signs of chronic anemia, obtained a sterile sample from the metatarsal bone to extract ancient bacterial DNA, indicated that the infant was already infected with chronic anemia and vitamin C paralysis, and was therefore susceptible to infectious diseases with terminal bacteremia and septicemia, which led to death. This condition determines the likelihood of the spread of sepsis bacteria in ancient Egypt ⁽⁵⁶⁾

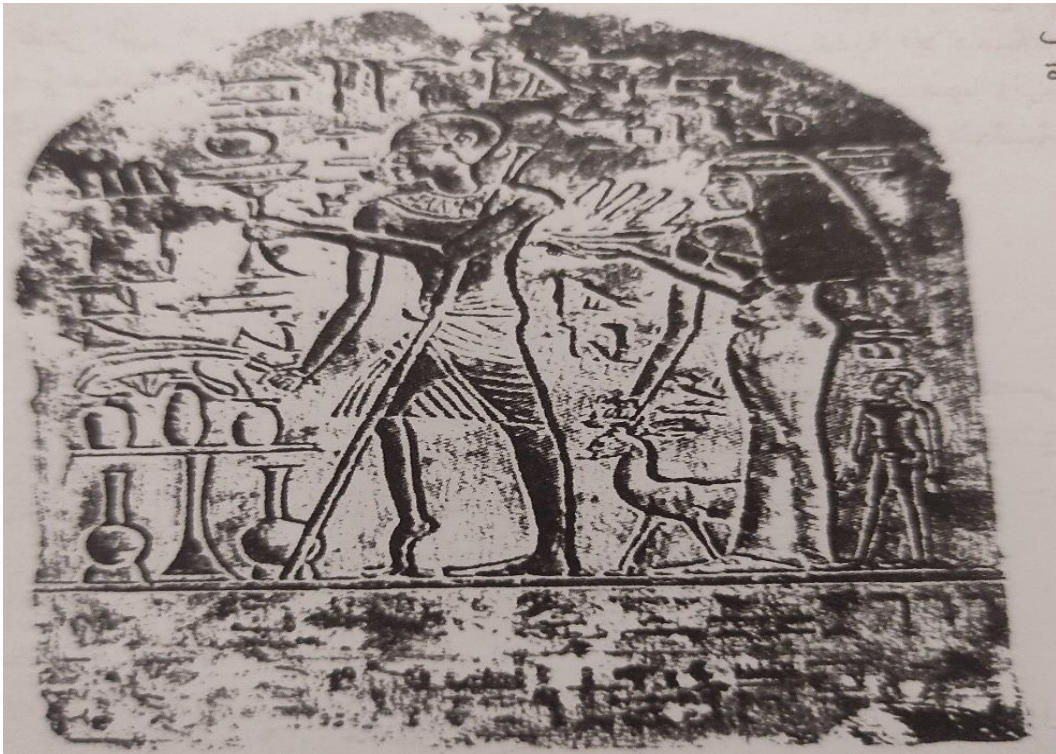
It seems that the ancient Egyptians did not find a cure for anemia, but it appeared **to treat anorexia:** "Date flour mixed with (old) beer syrup you will then find that his appetite for eating has returned"

8. Polio: Poliomyelitis

An inscription of a priest named Rome from the eighteenth or nineteenth dynasty on the walls of his tomb shows that he had a pronounced atrophy with a short leg and a bone deformity of the foot ⁽⁵⁷⁾

Medical opinions differ on the diagnosis of their condition, some believe that it is due to polio, which he contracted during childhood before the leg bones were completed, and the other opinion is that it is a condition of the club foot) with secondary atrophy and shortening of the leg. A diagnosis of polio is more likely because the epiphytic foot does not cause this obvious shortening of the leg. What is striking in the inscriptions is that Rome held a stick that he used as a gaze, and disability did not prevent him from assuming a prestigious position, nor did it prevent him from marrying and having a child At least one stands on the far right of the painting ⁽⁵⁸⁾

It seems that there was no intervention or treatment for this condition.

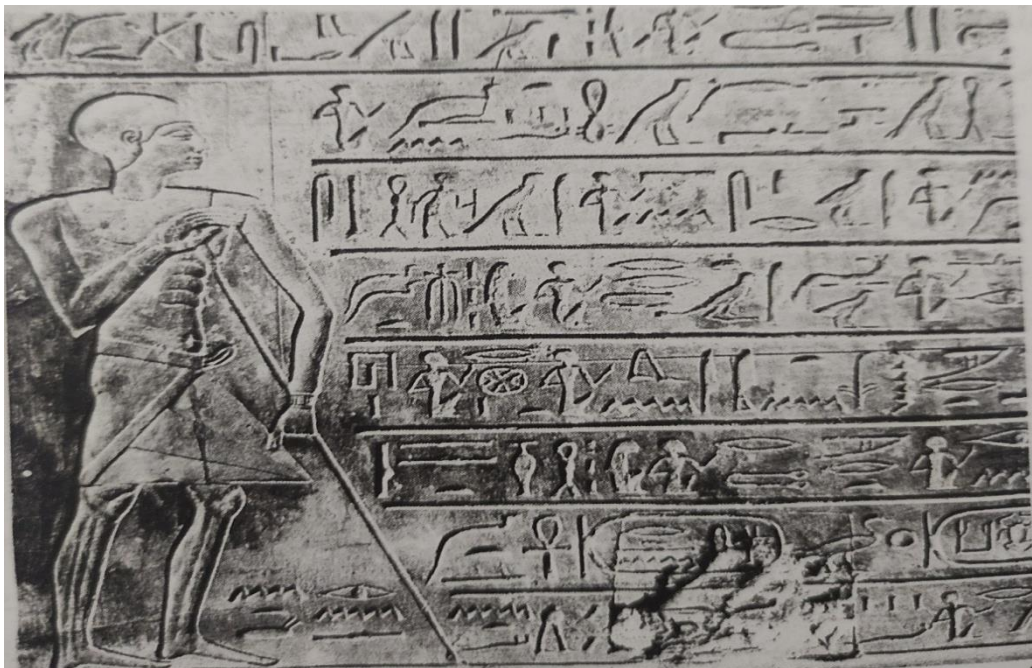


The atrophied and short leg of the Roman priest of the 18th dynasty,19, (Carlsberg, Copenhagen)⁽⁵⁹⁾

9. Hydrocephalus:

These arise due to high cerebrospinal fluid pressure (CSF) in newborns, before complete ossification of the skull occurs, in this case, the size of the skull increases while maintaining the size and shape of the facial bones

Through a stone inscription observing the circumference of the skull more than the normal rate, but the bones of the face remained the same, the disability of the left leg appears, and there seems to be an enlargement of the right arm, perhaps for the continuous use of the stick as a gaze to maintain its balance, the end of which is gripped with his right hand, and holding the middle of it with the left hand⁽⁶⁰⁾

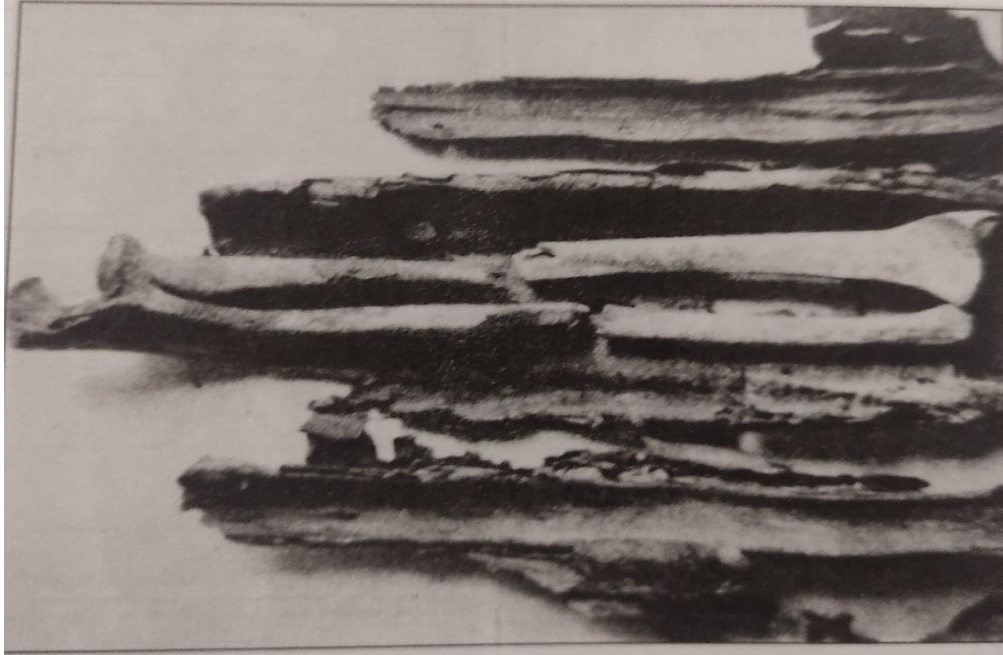


A stone inscription from the 12th dynasty, showing the use of a stick as a crutch and representing the case of hydrocephalus (British Museum)⁽⁶¹⁾

10. Treatment of Children's Fractures:

The Hurst expedition from the University of California found two sets of splints, the splints were fixed in the bodies place found in rock-cut tombs from the Fifth Dynasty of the Old Kingdom (2400 BC). The splints were composite for a fragmented fracture in the middle of the femur of a girl about 14 years old, and they consisted of four wooden slats lined with pieces of linen cloth, all surrounded by rolls and bandages and fixed with a rope, and the splints extended from the top of the fracture area to below the knee, and blood spots were found indicating that the fracture was double, and there were no signs indicating that the fracture had healed before the patient's death.

The other set of splints, placed for a double fracture of the forearm bones (ulna and radius), was three pieces of acacia tree bark wrapped in linen rolls to stabilize it, and the wound was filled with plant fibers, perhaps to prevent bleeding, but the young girl died before any healing occurred in the broken bones, although the splint was effective in stabilizing the bones⁽⁶²⁾



A fracture of the ulna and radius bones of the forearm, with a splint, from a corpse belonging to the fifth family, and death occurred before the fractures healed ⁽⁶³⁾

Conclusion:

It seems through the study of John F Nunn and the rest of the researchers that the ancient Egyptians developed effective prescriptions for some diseases such as crushing the Memphis stone and mixing it with vinegar to use it as an anesthetic, and the use some plants treat some respiratory and urinary diseases, but did not understand the use of some animals or their remains in prescriptions such as the mouse, for example. There are other cases, although the prescriptions were effective, they did not lead to the desired result, such as the death of the two girls, despite the splinting of fractures they suffered. And other cases that were unable to reach for treatment such as paralysis, anemia, and infant disease. He then resorts to magical solutions in the hope of healing the gods.

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(13) Edwin Smith acquired this papyrus in Luxor in 1862, it is not known where it was found exactly, it remained in his possession until 1869, when he announced that it was a huge papyrus, and it was sold to George Ebers in 1872, and attributed to himself in 1873, and the exact term of it is published in German in the fourth volume of

the encyclopedia The main lines of medicine among the ancient Egyptians The Grundriss der Medizin der alten Ägypten and Paul Glionji translated it from the encyclopedia into English in 1987. It is now preserved in the library of the University of Leipzig, the subject of which is general and internal medicine, see John F. Nunn, Ancient Egyptian Medicine, translated by Amr Sharif - Adel Wadiah Palestine, Al-Shorouk International Library, Cairo 20, p. 85 et seq.

⁽¹⁴⁾ In 1896, Koppel found 17 papyrus in a wooden box at the bottom of a tomb under a warehouse behind the Great Ramissum at Thebes, which Sir Allen Gardner believed at the time of its writing was the Thirteenth Dynasty. Gardner published the papyrus in the original hieratic (rhimesum 3,4) in 1955, the hieroglyphic papyrus rhimesum 5 and commentaries in English in 1956, and the German encyclopedia The Grundriss der Medizin der alten Ägypten contains the latest translation in German. Reserved in Oxford, it houses ophthalmology, gynecology and paediatrics. See John F. Nunn, op. cit., p. 102.

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⁽³⁷⁾ Julius Gyar-Louis Ritter, op. cit., p. 44.

⁽³⁸⁾ Rosalindem - Jacques J. Jansen, op. cit., p. 94

⁽³⁹⁾ Zahi Hawass, op. cit., p. 127

⁽⁴⁰⁾ John F. Nunn, op. cit., p. 339

⁽⁴¹⁾ Discovered by Josie Basa Laka in the Saqqara region, then sold in 1827 to Frederick Wilhelm IV of Prussia, and has been deposited in the Berlin Museum preserved until now, the full translation of German was done by Fresinski in 1909, and is found in the German encyclopedia The Grundriss der Medizin der alten Ägypten. Includes general medicine, see John F. Nunn, op. cit., p. 98.

⁽⁴²⁾ In 1901 a peasant brought a papyrus roll for members of the Hurst excavation camp, named in honor of Phoebe Hurst, mother of William Randolph Hurst, as she funded many of the activities of the University of California in Egypt, it is believed that the papyrus dates back to the eighteenth dynasty of the reign of Thutmose III, preserved at the University of California, and the last translation of German is in the German encyclopedia The Grundriss der Medizin der alten Ägypten, includes general medicine, see John F. Nunn, op. cit., p. 94

⁽⁴³⁾ Sheldon G. Cohen, M.D, "Asthma in antiquity; The Ebers papyrus", Allergy and Asthma proceedings, Vol 13, No 3, OceanSide Publications, Inc, 1992, p152

⁽⁴⁴⁾ John F. Nunn, op. cit., p. 305.

⁽⁴⁵⁾ John F. Nunn, op. cit., pp. 322-323.

⁽⁴⁶⁾ Paul Glionji, op. cit., p. 90.

⁽⁴⁷⁾ Neveen H Aboelsoud, op cit, p 83

⁽⁴⁸⁾ Bernoy Albois, op. cit., p. 106.

- ⁽⁴⁹⁾ Jerzy Supady, op cit, p4
- ⁽⁵⁰⁾ John F. Nunn, himself, p. 301
- ⁽⁵¹⁾ Julius Géar-Louis Ritter, op. cit., p. 75.
- ⁽⁵²⁾ Paul Gliungi, op. cit., p. 72
- ⁽⁵³⁾ Neveen H Aboelsoud, op cit, p 83
- ⁽⁵⁴⁾ John F. Nunn, op. cit., p. 188.
- ⁽⁵⁵⁾ S Panzer, Ko Schneider, S Zesch..., "Anemias in ancient Egyptian child mummies: Computed tomography investigations in European museums", International journal of Osteoarchaeology published by John and Sons Ltd, 2023, Wiley Online Library, p12
- ⁽⁵⁶⁾ Albert Zink, PhD, Udo Reischl , et al, "Molecular evidence of bacteremia by gastrointestinal pathogenic bacteria in an infant mummy from ancient Egypt", Archives of pathology and laboratory medicine 124.11 (2000); p 1617-1618.
- ⁽⁵⁷⁾ Francesco M Galassi, Michael E Habicht, Frenk J Ruhli, "Poliomyelitis in ancient Egypt?", Neurological Sciences 38, 2017, p 375
- ⁽⁵⁸⁾ John F. Nunn, op. cit., pp. 177-178
- ⁽⁵⁹⁾ John F. Nunn, himself, p. 177
- ⁽⁶⁰⁾ John F. Nunn, op. cit., p. 182.
- ⁽⁶¹⁾ John F. Nunn, op. cit., p. 183.
- ⁽⁶²⁾ John F. Nunn, op. cit., p. 351.
- ⁽⁶³⁾ John F. Nunn, op. cit., p. 351.