
COPTIC MEDICINE AND MONASTIC HEALTH CARE SYSTEM IN THE EARLY CENTURIES OF COPTIC CHRISTIANITY

REHAB MOSTAFA SHARAFELDEAN

THE HIGHER INSTITUTE OF TOURISM AND HOTELS, KING MARIOTTE, EGYPT

ABSTRACT

Ancient Egyptians had influenced Greeks, Romans and Copts in medical and surgical skills. When the land of Egypt embraced Christian faith, early Copts had been affected by ancient Egyptian medicine with its remedies and prescriptions. Thus, Coptic medicine was considered as a continuation of medicine and healthcare of ancient Egyptians. This study discusses some Coptic medical sources such as parchments, papyri, ostraca, and graffiti which came to us and preserved now in different museums of the world. This part of Coptic literature shows different medical practices, remedies and prescriptions from the 5th to the 11th century such as Cairo medical papyrus which shows eye, ear, teeth and some women diseases in Coptic period. This papyrus shows how Coptic medical practices were a continuation of ancient Egyptian medicine. The research also focuses on some Coptic saints as healers in Coptic era. These saints were physicians treated their patients without a reward following by this the word of the god such as, saint Cosmas and Damian who were represented in a 7th Century wall painting holding some medical tools. From the early 4th century, the monastic healthcare system was clearly represented and defined in early Coptic monasteries. In Coenobitic monasticism, healthcare was delivered through two main types; inpatient and outpatient health care systems. These two main monastic healthcare systems and the monastic medical personnel in early monasteries are also discussed in the present study. Additionally, the study explores the using of magic as a protective method, and to heal some difficult diseases which were hard to be cured by rational medicine. The Descriptive analytic method has been used in this study, which was useful in discussing different aspects related to Coptic medicine and its deep roots in Ancient Egyptian civilization.

KEYWORDS :Inpatient System, Outpatient System, Healer Saints, Coptic Magic.

INTRODUCTION

Religion, magic, and medicine were and still connected in different civilizations. In Ancient Egypt, most of the diseases were handled and treated by the priests of the goddess Sekhmet; the healer goddess of sufferings and diseases. Thoth and Horus were also considered ancient Egyptian gods of healing and medicine in the Pharaonic era. In ancient Egyptian religion, Thoueris (Ta-Weret); the hippopotamus goddess, was the protector of childbirth and was considered as a good nurse. Diseases in ancient Egypt were classified into two types: visible diseases which were healed rational treatments and invisible diseases which were healed by magic and the power of deities (David 1998, 334; Majino 1975, 125). A few medical papyri from the Pharaonic era have been reached to us such as, Edwin Smith surgical papyrus and Ebers papyrus. Both papyri were discovered in 1863 in Thebes. Edwin Smith surgical Papyrus was written in 1600 BC and described 48 types of wounds and diseases. It is attributed to Imhotep who was an architect, vizier, astronomer, and physician in the Old Kingdom (Sullivan 1995, 141). It contains the first description of the pulse and blood circulation in all over the world. Ebers medical papyrus is dating back to 1555BC. It contains 876 remedies and 500 using substances. It represents a brief annotation on surgery. This papyrus is the most preserved of the medical papyri of ancient Egypt (Leake 1952, 7-14; Veiga, 2009, 13). In the third century BC, the Greek rational medicine was moved to Egypt and the Ptolemaic Alexandria achieved its greatest success in medical field. Greek physicians were encouraged to move to Alexandria and practice their medicine skills there (Longrigg 1993, 177-186). At that time, the physicians of Alexandria had been affected by ancient Egyptian medicine and took the most of their knowledge from the study of the abdominal organs that were available from the ancient Egyptian mummies. Greeks also took some treatments and remedies from ancient Egyptians. Generally, Egypt was the most developed country in the world in medicine and treatment from the 3rd century BC to the end of the 2nd century AD (Longrigg 1993, 186). Greeks venerated god Aesculapius as the Greek god of medicine and healing. On the rich background of ancient Egyptian knowledge, the scientific tradition in the Ptolemaic period grew up. The Early Greek writers such as Homer ascribed the invention of the medical art of Greeks to the ancient Egyptians. At that time, gods were considered the ones who give both the individuals and the community a good health and well being (Parker 1983, 234–56; Lloyd 2003, 12–13; Willi 2008, 159). After Christianity, the priests of the pre-

Christian gods were forced either to convert into Christianity or to deliver healing practices. Early Copts did not demolish the previous ancient religious-magical healing places, but they transformed them into Coptic churches and worshiping places. In these new Coptic churches the healing cults survived the religious change (Meinardus 2002, 39). Early Copts are considered as successors of the ancient Egyptians and the modern sons of the Pharaohs. Their religious background helped them in accept the Christian faith with its spirituality and meditation. For this reason, the ancient Egyptian culture reacted towards the new and had affected early Copts in different aspects especially medicine and spiritual healing (Malaty 1993, 8). Among the rare Coptic non-religious discovered texts is a fine papyrus discovered in 1892 at Mashaikh, near the ancient city Lepidotonpolis in Upper Egypt. This papyrus is preserved now in the French archaeological institute in Cairo and dating back to the 9th century. It measures about 2.50 m. in length and considered in a good condition except a damaged part at its beginning. The papyrus contains 237 medical prescriptions (Dawson 1924, 51). Another medical papyrus was discovered in 1887, at Deir-Al-Abiad in Asyut, and published by Bouriant. It is considered as a fragment because it has only eleven prescriptions. In the library of the Vatican, there are two leaves of parchments formed a part of a book. These parchments contain 45 medical prescriptions (Dawson 1924, 51-52). The Holy Virgin Mary for several centuries was considered as the “Supernatural Defender” and the “Guardian” of some cities. She protected Christians against different threats. Thus, she has always been considered the defender and protector against different diseases, illness, health threats and dangers (Meinardus 2002, 5). Magic occupied a secondary instead of a primary place as it used to be in the ancient Egyptian medical papyri. Bizarre elements such as the brain of a fish, the blood of a bat, the dung of a lizard or the fat of a snake could not be found commonly in Coptic medical papyri. Early Copts relied on herbal and mineral medicine prescribed by physicians more than magic or divine aids (Dawson 1924, 57). However, Coptic magic and its use in healing difficult diseases will be also discussed later in this research.

COPTIC MEDICINE IN EARLY CHRISTIANITY

Saint Clement is the first known theologian from the Christian Church of Alexandria (c.150 - 211/216). He told us about the possibility of the existence of scientific encyclopaedias such as the 42 volumes written by Thoth from the Old Kingdom. Six of these volumes were about medicine

and medical prescriptions. According to Clement, These volumes would be describing different parts of human body, abdominal organs, and some medical prescription for eye and women diseases (Osborn 2005, 2, 19). From studying the ancient medical Egyptian, Greek, and Arabic sources, it could be concluded that Coptic medicine in early times was a continuation of medical practice in ancient Egyptian era. The Pharaonic medicine had affected Coptic medical knowledge and different medical practices at that time (Veiga 2009, 4).

THE COPTIC MEDICAL POPYRI

Coptic medical literature came to us on parchments, papyri, ostraca, papers, and on walls such as graffiti. Most of these texts have been translated and edited (Verhoogt 2013, 7; Krause 1991, 1886). The Coptic medical texts are ranging from the 6th to the 11th century. From the library of the monastery of Elias in West Thebes, as well as from the graffiti and the ostraca from other monasteries it is clear that at least the following texts came down to us from different Coptic places of Egypt. In addition, a 7th century document from the city of Idfu shows that there were several physicians there (Crum 1925, 103-111).

REMAINS OF PARCHMENT MANUSCRIPTS

The following parchments were discovered in different places in Egypt;

- Six parchment leaves from the 6th century preserved in the Egyptology Institute of the University of Copenhagen. They have been bought in Cairo at the beginning of the 1930s by C. Schmidt and perhaps deriving from St. Jeremiah monastery at Saqqara (Ericksen 1963, 23-45; Krause 1991, 1886).
- A Beginning of a parchment codex contains medical and magical texts now held in Michigan. It is dating back to the 5th and 6th centuries and deals with wounds, haemorrhages and swellings. Big part of this papyrus is damaged (Fig.1) (Krause 1991, 1886; Verhoogt 2013, 12-13).
- Two parchment fragments now in Manchester in Rylands Library (will be discussed later)
- Leaf of a parchment medical manuscript in the papyrus collection in East Berlin (Krause 1991, 1886; Dawson 1924, 54).



Figure 1: Coptic medical text in Michigan. After: Verhoogt 2013, p.13.

The piece of parchment in John Rylands Library at Manchester which is mentioned above contains a text of a remedy for dry eyes dating back to the 11th century. This parchment is one of several late Coptic medical sources. It is mentioned in this text that heated hoopoe's blood and cardamom were used as a remedy for dry eyes. The part which contains how to apply this remedy is missing from this text. Therefore, there is no information whether this remedy was directly applied to the eyes or it had to be ingested (Fig.2) (Cromwell 2017, 10). However, Cardamom was described earlier since the 5th century in Coptic medical plant book (Papyrus Carlsberg inv.500), which is a papyrus includes descriptions of plants according to their special characteristics and habitat (Fig.3) (Cromwell 2017, 10-11). The Hoopoe as a bird has a long history in Egypt from the Old Kingdom to the Islamic era. The hoopoe is a common breeding resident in Egypt. Thus, the ancient Egyptians were very familiar with this bird and its physical characteristics. From the 4th Dynasty until the 5th Dynasty, the hoopoe was represented in ancient mastabas together with children especially boys (Cromwell 2017, 11-13).



Figure 2: Medical Parchment, Rylands library, Manchester. After: Cromwell 2017, p.11

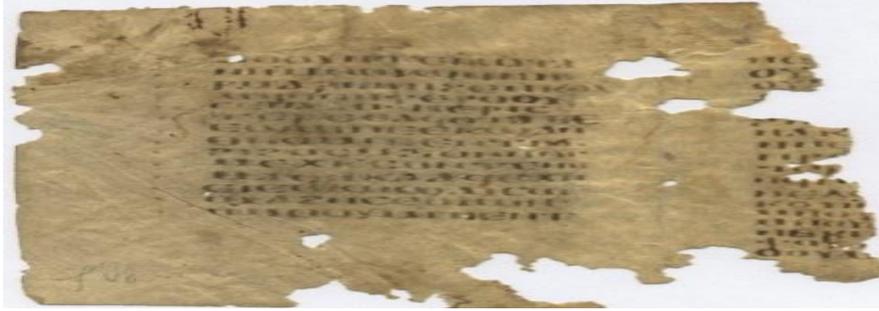


Figure 3: Papyrus inv.500, Carlsberg. After: Cromwell 2017, p.11

PAPYRI

The most important medical papyri discovered in Egypt are as follow;

- A Papyrus dating back to the 9th century preserved now in the French Archaeological Institute in Cairo. This roll has been found at Al-Mashaikh in Upper Egypt.
- Remains of a Coptic papyrus from Wadi Sarga in Upper Egypt (Krause 2009, 1887).
- Remains of a Coptic papyrus from the antiquities trade, now held in the University of Michigan (Krause 1991, 1887; Verhoogt 2013, 2-12).
- Two papyrus fragments now in Vienna papyrus collection (Krause 1991, 1887).

OSTRACA (7THCENTURY)

- A Limestone ostrakon now held in the papyrus collection in East Berlin. It has been bought in Thebes in 1859.
- A Limestone ostrakon in British Museum in London, from the excavation of the Egyptian Exploration Society in Dair al-Bahari at Thebes.
- Potsherd in the Metropolitan Museum of Art, found among the heaps of shreds at the monastery of Epiphanius in West Thebes.
- Potsherd now in Coptic Museum in Cairo, found in the monastery of Epiphanius in West Thebes.
- Limestone ostrakon preserved in the Institut Français D'archéologie Orientale in Cairo came originally from Elias monastery in West Thebes (Krause 1991, 1887).

GRAFFITI

During excavations, a graffito with a medicinal inscription was found on the plaster of the walls of the monasteries of Wadi Sarga in Upper Egypt,

and the monastery of St. Jeremiah at Saqqara. The graffito is most probably dating back to the 3rd century (Krause 1991, 1888).

CAIRO COPTIC MEDICAL POPYRUS (IFAO COPTIC POPYRUS/ 9TH CENTURY)

A Coptic medical papyrus from the 9th century has been found by a peasant at Mashaikh in Upper Egypt. Then, it was bought by Bouriant to the Institut Français D'Archéologie Orientale in Cairo in 1892-93. The text represents how the ancient Egyptian, Greek and Christian traditions were combined (Viega 2009, 18-19; Dawson 1924, 51). The papyrus contains 237 medical prescriptions; nearly half of them remedies for eyes. Most of these remedies are indicated as "Eye Ointment" and "Eye drops". It contains remedies for eye cataract (13 prescriptions), dimness of vision (18 prescriptions), inflammation (3 prescriptions) abscesses (3 prescriptions), and (13 prescriptions) for trachoma. Most of these prescriptions are very similar to those mentioned previously in the ancient Egyptian medical papyrus "Ebers". In contrast with the ancient papyri, this Coptic papyrus does not contain many treatments for other diseases such as stomach and intestines diseases (Dawson 1924, 52).

EYE REMEDIES

In ancient Egypt eye doctors were the most distinguished among other doctors (Stetter 1993, 47). At that time, milk was a popular treatment for eye diseases, particularly if it was the milk of a woman who just had a male child (Estes 2004, 58-63; Ebeid 1999, 100, 175,177,225,274). Eye remedies described in this text are as follow;

- An eye powder composed of Armenian borax, white lead, pepper, ginger, verdigris, and starch. It is prescribed that all these ingredients should be pounded well, strained through a fine sieve, and then could be applied to the dim eyes.
- Another powder in this papyrus for all eye diseases composed mainly of Saffron, acacia, myrrh, aloes, opium, and dried ox-gall.
- Another prescription represents the using of a mixture of goats gall and women milk for cataract and film.
- A powder for all eye affections composed of burnt bronze and schist was also mentioned in this papyrus. The two ingredients of this prescription are coming from Greek medicine. Burnt bronze and schist are commonly mentioned in Greek medical papyri.
- Ointments to prevent the growth of the eyelashes after they have been pulled out in cases of eye trachoma are several both in this and the

ancient papyri as well. In a country like Egypt, where eye problems were common, it is natural that they should occupy a prominent place in the medical aspect (Dawson 1924, 53).

EAR REMEDIES

- According to this papyrus, to treat earache a mixture of Opium, calf's fat, and milk could be milted down together and apply to the ear. It is mentioned that this prescription will stop the pain instantly. This remedy was effective and fast, thus Physicians used to collect their fees beforehand.
- There are only two other prescriptions for ear diseases in this papyrus; the first one uses hyssop, and the other uses gum ammoniac dissolved in the milk of a woman who has borne a male child recently (Dawson 1924, 53).

TEETH REMEDIES

- For tooth extraction; a preparation of the juices of some plants, including acacia and wild rue could be put on the roots of the tooth for a moment, the tooth will come out quickly.
- For tooth extraction with forceps; hellebore of good quality and gall could be applied on the cheek at the same place of the molar (Dawson 1924, 53).

WOMEN DISEASES

In Ebers and Kahun medical papyri a considerable attention was given to women diseases. However, only four prescriptions are found in the Coptic Cairo medical papyrus. Three of them deal with the womb pain, and the fourth one for closing the womb. The remedies were applied by a direct application with a piece of wool dipped in the preparation, and in another; the women had to sit over the mixture, a method which is often prescribed in the Kahun papyrus. The Deir-el-Abiad papyrus has some prescriptions for women breasts pains (Dawson 1924, 54).

SKIN AND SCALP AFFECTION

- This papyrus contains remedies for melanoderma, herpes, itch and lichen. Sycamore latex was used to treat head itch. Sycamore "milk" or latex is often employed in the ancient Egyptian papyri. Early Copts also treated head itch by applying cress seeds and mustard pounded

with vinegar. Acacia flowers and white of egg were also used for head itch.

- A remedy for purulent itch is described in this papyrus. This disease was treated by applying an ointment made of roasted fennels with bitter vinegar.

A considerable number of prescriptions are given in this Coptic papyrus without mention to any part of the body the remedy should be applied. Thus, it contains different ointments, salves, emollients, caustics and haemostatics. Some medical prescriptions for cuts, bites, scars, abscesses, boils, sores, ulcers, gangrene, and swellings are mentioned in this papyrus (Dawson 1924, 54). It is also mentioned in this papyrus how some remedies for eye and skin diseases had been influenced by of the Old Kingdom. The Coptic medical papyri are the most important evidence of the healing tradition of early Copts in Egypt. Arab rulers of medieval Egypt had much confidence in Christian doctors. The work of the Coptic physicians was translated from Coptic to Arabic language. However, not many Coptic texts of this type are known today, it might be due to material deterioration (Richter 2016, 36-37).

DIETARY THERAPY IN EARLY DAYS OF CHRISTIANITY

Dietary therapy was generally the first line of defence against illness and different types of diseases. Food was given to sick to strengthen and comfort him and to provide a good health. Egyptians since the early days had a great knowledge of the effect of healthy food and diet on health (Setter 1993, 94; Crislip 2005, 28).

Copts made a standard component of a Graeco-Roman therapy of gruel to heal several diseases. They also followed the ancient Egyptians in using fresh food such as honey, fresh bread, wine, eggs, stewed plums, and pastries. Fresh food was used to lift up the spirit of the infirm and comfort him in different monastic communities (Crislip 2005, 28).

COPTIC SAINTS AS HEALERS

Coptic Saints are dear brothers who had suffered martyrdom in early times of Christianity and departed to Paradise. They are not considered dead, but they are sleeping, as the Lord said (John 11:11) (1 Thess. 4:13) (Malaty 1993, 312). In the Roman Catholic Church there are the fourteen "Helpers in Need", while in the Byzantine Church there are the twelve "Silverless Physicians". However, The Copts have only five doctor-saints to heal

diseases and prescribe remedies. These physicians treated their patients without a reward or payment. By this, Coptic physicians followed the word of the Lord; “Heal the sick, raise the dead, clean lepers, cast out demons. You received without pay, give without pay” (Matt.10:8). These Coptic saints who answered the call of the Lord got the name of “Silverless Physicians” or “*anargyroi*” (Meinardus 2002, 40);

a. SAINTS CYRUS AND JOHN

Saints Cyrus and John lived at the end of the 3rd century at the time of Diocletian. Cyrus was from Alexandria while John was from Edessa of Mesopotamia. Cyrus had a miracle of healing any patient by only making the sign of the Cross over the sick. He was more experienced than John. John was a soldier and Cyrus fellow martyr. The story of their martyrdom is related to a woman called Athanasia. She was apprehended with her three daughters by the authorities. Cyrus and John visited them in the prison encouraging them not to deny their Christianity. They were also apprehended and suffered martyrdom with the women and her daughters in 312 AD. Their memory is celebrated on 31 January (Herzog 1939, 117-124; Lackany 1968, 15). At the beginning, the relics of the two saints were placed in the church of St. Mark at Alexandria (Fox 1986, 676; Herzog 1939, 118; Butler 1970, 368). The region of Abukir got its name from Saint Cyrus, who also taught Christianity in the 3rd century (Kamil 2002, 114). After the transforming of ancient Egyptian temples and shrines into churches the healing cults survived the religious change (Bowman 1986, 192; Meinardus 2002, 40). The Serapeum of Canopus (now Abukir) was one of the best examples of this transformation. It was destroyed in 391 by patriarch Theophilus and had been converted into a church dedicated to Saints Cyrus and John. They were two brothers of a wealthy family from a city now Damanhur who became afterwards the most popular Silverless Physicians (Meinardus 2002, 40; Butler 1970, 367) and they had some healing miracles (Fox 1986, 676). It has been reported that Saint John established hospitals for sick and used to feed about 7500 of poor people every day (Meinardus 1961, 35). Patriarch Cyrus I decided to transfer the relics of the two doctors to their new church at Canopus which built over the temple of the goddess Isis Medica. That was to replace the pagan cult with a Christian one (Kamil 2002, 144; Fox 1986, 676; Butler 1970, 368; Haas 1997, 300). Many stories of miracles related to the relics of the two Coptic physicians of Abukir have been mentioned which made this church the most popular Coptic pilgrimage place in the 9th century. It is reported

that Patriarch Sophronios I of Jerusalem (830-50) was healed from an eye infection in the church of Abukir (Meinardus 2002, 40; Pattengale 2012, 8-11). In the 9th century the relics of the two doctors were moved to Old Cairo in the Coptic church of Saint Cyrus and John at Qasr al-Sham'. In eleventh century this church in Old Cairo received the relics of Saint Barbara, to her the church afterwards was dedicated. Today, some of the relics of the two doctors are still venerated in a newer church of Saints Cyrus and John in Old Cairo south of Qasr al-Sham' and in a small church in Abukir dating back to 1935 (Meinardus 2002, 40). The relics of Saints Cyrus and John are not only venerated in Egypt, but also in several monasteries in Greece (Meinardus 2002, 40; Pattenagle 2012, 8-9).

b. SAINTS COSMAS AND DAMIAN

In the 7th century the cult of the physicians Cosmas and Damian and their mother was well established in Upper Egypt. There were three pairs of brothers having the names of Cosmos and Damian. The first pair was from Asia Minor. They were sons of a wealthy mother called Theodota. She provided her sons with excellent education especially in medical arts and healing. They practiced medicine and healing arts as a charity for no reward. After their death they were venerated as healers. Their memory is celebrated in the Orthodox Church on November I along with their mother Theodota. The second pair having the same name was from Rom. They suffered martyrdom in 284, and their memory is celebrated on July I. The third pair was from Arabia and had been martyred in the time of Diocletian and Maximian. The memory of this pair is celebrated on October 17 (Festugièrre 1971, 83-200; Heinemann 1974, 255-315). The Saints Cosmas and Damian venerated in Egypt were not Egyptians. It is believed that they were from the Byzantine world as in Constantinople there was a shrine dedicated to the two saints dated to the 5th century. That is, the cult of the two saints can be traced to the fifth century (Janin 1969, 41-50; Meinardus 2002, 41). A mosaic representation of the two physicians dating back to 400 AD had been discovered in the dome of the church of Saint George in Thessaloniki, Greece (Meinardus 2002, 41). On the west bank of the Nile, between Giza and Badrashyn, in the village of Manyal Shiha, the church of the two physicians Cosmas and Damian was situated. Annually on June 27-29, many patients from all over Egypt who are suffering from nervous disorders and epilepsy visit this church to be healed from their sufferings. It is recorded that this church had been restored in 12th century. In the same century the two Saints Cosmas and Damian had other churches in Itfih and

al- Qus south of Qian..One of the oldest representations of SS. Cosmas and Damian is a wall painting from the former monastery of Wadi Sarga south at Asyut which is now preserved in British Museum in London. This wall painting represents the two physicians carrying their medical instruments in handbags. Between them three brothers are represented, and the three youths Ananias, Azarias, and Misail in the fire with an Angel are also represented in this painting (Meinardus 2002, 41) (Fig.4). The two Saints were also represented in a wall painting in the monastery of Apollo at Bawit in Dair Abu Hinnis south of Sheikh ‘Abada.In 1177, an altar dedicated to the two saints was built in the church of Saint Victor in the area of al-Habash in Old Cairo (Meinardus 2002, 41).



Figure 4: SS. Cosmas and Damian, British Museum.
After:research.britishmuseum.org

c. SAINT COLLUTHUS OR (ABU COLTA)

According to some sources, Colluthus was the son of Heralamon; a citizen from Antinoë now (Sheikh ‘Abada). He studied philosophy and medicine during his life. When he became a doctor he refused any kind of reward or payment for his services. Thus, he became known as “Silverless” physician. He was the brother in law of the Governor Arianus. However, he left his wealth and adopted the ascetic life (Meinardus 2002, 42). He was martyred in 304 during Diocletian persecution. His cult was emerged after his martyrdom in the 6th century (Meinardus 2002, 42; Raymond & Barns 1973, 11-13). From the sixth to the seventh century the cult of the Saint Colluthus centred in Antinoë. In the 11th century the cult centre was moved to Asyut by transferring his relics there (Pattenagle 2012, 4). A Cairo medical papyrus (mentioned above) includes a recipe for the treatment for Ophthalmia ascribed to Saint Colluthus. In 8th century representation at the monastery of the Syrians in the Nitrian Desert (Wadi

Al Natroun); St. Colluthus is represented making an eye surgery and holding a medical kite (Fig.5) (Meinardus 2002, 42; Starodubcev 2018, 1-4). Some late medical shrines were dedicated to the cult of this saint such as the remains of St. Colluthus shrine found in Antinoë. A cult honouring Saint Colluthus is practiced till now in the village of al- Fant between al-Fashn and Maghagha in al- Minya region. In the centre of this village there is the church of Apa Clog (Colluthus) where the villagers ascribe many healing miracles to him. The Copts of al- Fant gather in the church of Apa Clog twice a year; on Bauna 20 and Tuba 20 (June 27 and January 23). In other Coptic churches St. Colluthus is usually celebrated on Pashon 25 (May 20). According to the local tradition of the villagers their Colluthus was born in the third century in al- Fant. In the age of twelve he studied and memorized all New Testament books and he had the miracle of healing snakes and scorpions bites (Meinardus 2002, 42-43; Starodubcev 2018, 5).



Figure 5: St. Colluthus making an eye surgery. After: Starodubcev (2018), p.4

PHYSICIANS OF ALEXANDRIA

a. SAINT DIONYSIUS OF ALEXANDRIA

Saint Athanasius called Saint Dionysius "the Teacher of the Universal Church.". He was born in Alexandria around 200 of pagan parents. Dionysius was a star worshiper and a well known physician. One day he bought Saint Paul letters from an old Christian woman and after reading them, he went back to her asking for more. She led him to the church and introduced him to the church priest. Dionysius converted into Christianity and attended the Christian School. At first he became one of Origen's pupils then he succeeded Heraclas as the Head of the catechetical School of Alexandria when he was thirty years old for about sixteen years (231-246) (Malaty 1993, 45-46; Feltoe 1918, 9-12).

b. SAINT HILARIA

She was the elder daughter of the Roman Emperor Zeno. In the 4th century, Hilaria travelled to Alexandria and prayed in the churches of St. Mark the evangelist and St. Peter the Martyr. Then, she entrusted herself to the deacon Theodorus who took her to the monastery of St. Mena. Afterwards, she fled to the desert to practice asceticism in monk's clothes when she was only eighteen years old. She was called by the monks there (Hilarion the Eunuch). Then, her sister Theopiste was possessed by an evil spirit when she was at Constantinople. The elders of the wilderness advised her to go to Hillarion without knowing that she was a woman. She prayed for her all night and kissed her and slept with her on the same bed. When Theopiste was healed the emperor was shocked when he knew that the monk who prayed for his daughter kissed her. He called (him) to come to his palace and when the (monk) got a promise that the emperor would leave (him) return to (his) cell, she uncovered (her) personality. The emperor left her to go back peacefully to her monastery (Malaty 1993, 64-65; Esbroeck 1991, 1230-1231).

COPTIC HEALERS IN THE NINETEENTH CENTURY

ANBA SERAPAMON OF MENOFAIAH

When Mohammed Ali Pasha asked the Pope's help concerning his daughter Zahra Hanem who was possessed by an evil spirit, he sent him Anba Serapamon (was called Salib) who treated her with praying over her. Mohammed Ali offered him money as a reward, but he refused to take it and he told him that God's gifts are free. When Mohammed Ali insisted to give him a reward, the bishop asked him to reinstate the Copts to their jobs in civil service. He took a little money and gave it to the guards of the palace. Anba Salib was a monk in Saint Anthony Monastery. He used to stay a long time at the patriarchate in Cairo and converted it to a hospital for sick people who visited him asking for his prayers to be cured (Malaty 1993, 211-214). Abbas Pasha, who ordered that all magicians and astrologers must be killed, summoned the bishop. He mocked at the bishop, saying: "Did you heal Zahra Hanem? How? ". The bishop answered him that he did this by the God's power. The Pasha cried out with terror saying "Aman Ya-Baba- Aman" which means "Peace! O my father; Peace!" (Malaty 1993, 211-214).

MONASTIC MEDICINE AND HEALTH CARE

Monasteries had two main types of monasticism; Lavra monasticism and Coenobitic monasticism;

a. LAVRA MONASTICISM

It was composed of a row of houses set along a street, and monks cells were made scattered over a wide space rather than set in a row. Thus, Lavra monasticism was a development of the early monastic tradition of anchoritic monasticism or the hermit lifestyle. Hermits had frequently powers to save lives and to heal diseases. Therefore, they attracted both pilgrims and disciples to visit them. Those disciples in turn attracted other disciples of their own. Lavra monasticism thus developed naturally of anchoritic monasticism. Each cell of Lavra monasticism was organized according to a simple hierarchical structure based on a master/disciple relationship, frequently with one master and one or several disciples (Crislip 2005, 4). Female anchorites most probably also had experienced this type of monasticism (Schroeder 2014, 1-17).

b. COENOBITIC MONASTICISM

This type of monasticism was in Egypt, Asia Minor, Syria, and the Latin West. From this type, the monastic system of Pachomius was developed around 320. It takes its name from the Greek term (Koinbnia) which means, fellowship or community. In contrast to Lavra monasticism, Coenobitic monasticism was characterized by a high degree of centralized authority, a highly regulated monastic lifestyle, and high walls around the monastery to separates the monastery and its lifestyle from the outside world. Entrance into the monastic community had extensive process socialization, to which all monastics were subjected (Crislip 2005, 5-6).

HEALTH CARE SYSTEM

Monastic leaders had an obligation to keep monastics as healthy as possible by providing them with a healthy diet. Prayers for recovery were and still the central part of the monastic treatments. From the early 4th century, the monastic health care system was defined in evidence. In Coenobitic monasticism health care was delivered through two main systems; inpatient care provided in an infirmary in the monastery and outpatient care provided individually in monks cells.

a. INPATIENT CARE

The infirmary (infirmarium) was the most important part of the health care in Coenobitic monasticism. Monastic medicine offered an inpatient hospital with well trained physicians and nursing staff. The earliest reference to a monastic infirmary was that of Saint Pachomius monastery in the 3rd century about 234 AD (Crislip 2005, 10). Usually part of the church used to be converted into a sickroom. In the 4th/5th century monasteries of Egypt this medical use of the church had become common (Crislip 2005, 14). The Excavations of the monastery of Apa Jeremiah at Saqqara revealed a monastery infirmary approximately 540 square meters. By this size, it is considered the largest structure built within the monastery of Apa Jeremiah. That is, the size of the monastic infirmaries was varied according to the size of the monastery and its location as well (Crislip 2005, 9-11).

b. OUTPATIENT Care

In this system, healthcare was also provided on outpatient or ambulatory basis. That was the main way to treat minor ailments and wounds. As in Coenobitic, monasticism healthcare was the same in Lavra monasticism; healthcare in Lavra monasticism was delivered in the cells of the monastics (outpatient care), and in a central place (inpatient care) (Crislip 2005, 12). In early days the monastic infirmary was architecturally separated from the rest of the monastic buildings such as in the monastery of Pachomius, Shenout, and Basil. The reason for this separation was to avoid any kind of social disruption and to keep all activities occurred in the infirmary far from the healthy monastics. Information is few about the layout of the monastic infirmary such as the number of rooms, the monastic members inside each room, or even the exact medical facilities (Crislip 2005, 12).

MEDICAL PERSONNEL IN MONASTIC COMMUNITIES

Early monastic communities had a variety of healthcare providers including doctors, nurses, elders, and lay practitioners;

a. DOCTORS

From the fourth century, doctors stayed in both Lavra and Coenobitic monastic communities. For example, in Lavra community of Nitria Desert, a number of doctors continued to practice their profession even after joining the monastic life. Those physicians practiced medicine such as dietary therapy, application of pharmaceuticals, and even serious surgeries.

They lived the same monastic life, and their medical service was considered as a part of the monastic system of mutual aid. The situation was similar in Coenobitic communities in which doctors joined the monastery and continued to practice their medical skills within the monastery (Crislip 2005, 14).

b. NURSES

In early monastic communities, doctors had practiced most of what they were considered nursing. It includes serving sick monastics and taking care of them. In the 4th century monasteries, there were well trained healthcare providers. In these monastic communities, nurses served the sick according to an individual prescription from the elder (Crislip 2005, 15-17). The history tells us about Saint Mattheos the poor (Al-Meskin), from the monastery of Al-Fakhoury (the Potter) in Asfoun-Mataana west of Esna, who was known for his friendship with wild beasts. When he was only fourteen years old, he was admitted to the monastery to practice asceticism. At that time, he was ordained as a priest when he was eighteen by the bishop. When he felt the honour bestowed on him he escaped to St Anthony's Monastery. Once again when he felt glory following him he moved once more to Al Muharraq Monastery to carry sand, work in the kitchen, and serve sick monastics, elders and visitors. Thus, serving sick and nursing was also considered a part of the monastic system (Malaty 1993, 169).

ELDERS AND STEWARDS

In the 4th coenobitic monasteries, the administrative role of the overseer was performed by stewards, housemasters, and elders. For example, the elders were responsible for providing special clothing, medical tools, and food for monastics that were not sick enough to have inpatient healthcare system. The elder was also working as a triage officer in the monastery. The monastics that were unable to eat with their colleagues in the monastery refectory had to speak to the elder who in return would decide whether the monastic really needs that permission or not. The monastics that were ill with a wound or a fever and needed a medical treatment also had to apply for a medical treatment through the elder to have a doctor consultation (Crislip 2005, 17). In Lavra monasteries, monastics basically cared for themselves and relied on the nonprofessional colleagues for health care. That was in the form of a disciple caring for his master or vice versa. This was in most cases not of a professional medical nature (Crislip 2005, 18).

COPTIC HEALING MAGIC

Magic was particularly used for protection, healing, ensuring success in business, love, reproduction and, for predicting future. Magic was used as a way to cure the long-lasting diseases or those diseases were difficult to be treated or even understood by physicians. In these cases, medical practitioners often employed magical rituals to appease angry gods, expel demons, and then describe a particular treatment for the patient (Dosoo 2016, 703; Murphy & Susalla 2016; 8-10). For a long time, magic played a very essential role in the life of ancient Egyptians. Ancient magical spells are varied from everyday magic to protective texts like rituals on the walls of the ancient Egyptian temples and other sacred places. Most of these spells are dating back from the Middle Kingdom and later. The Healing statues of ancient Egypt were also inscribed with magical spells. Other spells are found in ancient medical texts to cure some severe diseases. These spells were used to cure the evil eye and against specific demons causing some sufferings such as burns, headache, stomach diseases, blindness, women's ailments, children protection, and for having a good health as well. For evil eye, spells containing some protective instruments related to some ancient magic deities have been translated from ancient texts such as Sekhmet's arrow, the magic (Heka) of Thoth, and the lance of Horus. The two Egyptian goddesses Isis and Nephthys were also considered among the most important healing deities in ancient Egypt and commonly mentioned in ancient magical texts (Borghouts 1978, vii-xi; Veiga 2009, 14-16). In Greco Roman, Byzantine (middle 4th century to 642), and Islamic eras, the medical-magical practices of ancient Egypt persisted with more or less adaptations. Some amulets containing combine divinities from different religious beliefs were continued to be used in Greco-Roman era. According to some Ptolemaic and Roman papyri, there was a particular increase in the personal use of amulets, healing statuary and magical papyri as well (Veiga 2009; 4, 17). Spells also have been found in Demotic and Coptic texts. In Coptic time about 450 substances are mentioned as pharmacological active in spells, formulas and requests (Borghout 1978, vii; Veiga 2009, 30). Some Coptic magical manuscripts dating back to the 4th-8th centuries also contain the names of ancient Egyptian deities, especially Horus, Isis, and Osiris. These ancient deities cannot be considered as a continuation of the ancient Egyptian traditions their meaning and the motives of their use in Coptic texts did not remain the same over time but assimilated to the religious milieu of Christian Egypt and formed part of what is now known as 'Coptic magic' (Hevesi 2018,

42). In order to understand this part of the Coptic civilization it should be mentioned that Coptic Magic was magic practiced by Egyptian people converted to Christianity. According to some recent researchers, the main feature of Horus spells is that the patient is identified with Horus in ancient myth and his/ her problem will be resolved by the analogy of Horus' misery (Hevesi 2018, 43; Multari 2015, 84). There are some Coptic manuscripts preserved in Berlin include the name of Horus. For Example, one of them contains a spell for insomnia. The first part of the spell is an invocation in which a demonic entity called Afboure, literally meaning 'he dreamed' with a narrative referring to the ancient goddesses Isis and Nephthys who both dwelled in the abyss, and Horus who suffered alone. At the end of the text, there is a passage about Abrasax who, according to this source, provided a good sleep for Abimelech for 75 years. Following this analogy, the person who is troubled with insomnia, is expected to be treated and recovered. From this text, it can be concluded that different traditions were merged together in a single Coptic spell where the reference to native deities seems to be rather obscure and interrupted by the story of Abimelech without expressing the real purpose of the mentioning of Isis-Horus story. The solution of this spell is offered by the short reference to Abimelech (Hevesi, 2018, p.43). There is another spell for stomach ache based on the story of the god Horus who went up to a mountain where he felt sick because of the birds that he cut without knife, cooked without fire, and ate without salt. Horus then invoked demons to bring his mother to him. The spell ends with the words of the goddess Isis who ordered the pain to leave the patient who is the owner of the spell. Generally, ancient Egyptian deities were kept alive in Coptic magical texts to represent the ability of the new faith to assimilate the ancient traditions rather than reflecting the religious beliefs. Most of the Coptic spells based on the myth of the ancient deities Isis, Osiris, and Horus are the love spells, while other deities cover other purposes such as insomnia and childbirth (Hevesi 2018, 43, 45). Coptic magicians during the rites were also like ancient Egyptian priests, they must be in white linen. Clothes made of wool, shoes, belts and ribbons were considered impure instead vegetable objects were preferred (Mutlari 2015, 86). This mixture of pagan and Christian elements did not create any contradiction in the mind of ordinary people in early Christianity (Hevesi 2018, 49).

a. COPTIC AMULETS

Amulets are protective devices worn by people to protect them from different harms and dangers. The use of amulets was accepted as normal by most of people; secular, religious, and scientific authorities (Bohak 1996, 11; Dosoo 2016, 703). Early Christians used amulets in their daily life for protection from evils and dangers such as riders-amulets for worriers. Christians also used amulets to cure some common diseases such as amulets against hip, knee and back pains. Diseases amulets were considered among the most common amulets as the agricultural labourer's perceived immunity to hip and back pains (Bohak 1996, 10-25). Some Coptic amulets from the 4th to the 8th century for a good health and general protection were found in different places of Egypt. Some examples of Coptic amulets described in the Coptic medical papyri mentioned above are as follow;

- Linen bandages with some magical words.
- A lock of hair with four knots.
- A fish spine in a string tied with a knot. Knots had special meaning in Coptic magic; it was believed that they could bind forces. The linen Knots were temporary amulets, while the ones made of jewellery and precious substances were considered as permanent for eternal amulets (Viega 2009, 43). There were numerous amulets for different situations described in ancient Coptic medical papyri. An amulet of the 4th century was excavated in Karanis. It could be classified as Christian because it contains the words; Jesus, Michael and Gabriel. Another lead amulet was discovered in Karanis and dating back to the 3rd and 4th centuries, folded around a string with which it was worn presumably around a wrist or an ankle. The contents of this amulet still unknown (Bohak 1996, 11, 13).

b. RECIPE -BOOKS

Magic Practitioners had their own private handbooks, where their secrets were preserved. Collections of recipes, hints, notes, and ideas whether borrowed or adapted from others or independently developed were described. Each recipe was tested and in most cases, was moved to disciples, or successors. In fact, such kinds of books were sometimes the target of suppression but not exclusively by Christians. However, the discovering of a collection of these books written in Greek, Demotic and Coptic languages in the Egyptian desert attests to the importance of the

role of such recipe-books in various forms throughout the middle Ages. Moreover, because they were for their owners' private use they often contain such brief instructions such as (repeat this) three times or before sleeping at late night, etc. These recipe books never mention their owners' names. However, the identity of the owner can be identified from the papyrus place. In some cases, the book's owner mentions where a specific recipe came from such as "This is a recipe of a physician in the Oxyrhynchite Nome". These books are dating from the 1st to the 6th centuries (Bohak 1996, 5; Dosoo 2016, 708-709). Some of these discovered books can be summarised as follow;

- A spell against the fear of punishment dating back to 3rd or 4th century AD preserved in Cairo.
- Pages 18 and 19 of a well preserved, 20-page codex (booklet, not scroll) written in Coptic. This codex is an interesting example of one text being copied and used by several different magicians since there is a change on p. 19, line 3, with a different handwriting and different word divisions. The text itself begins with a spell, including an invocation of God and of the seven archangels, after which the practitioner introduces himself as Seth, the son of Adam, and performs a purification ritual. Next, comes a long list of the various ways to use the spell; to cure reptile bites recite it over some water and have him drink it, to cure a headache recite it over oil and anoint his temples; to treat insomnia recite it over water and wash the area around the patient's bed, to cure impotence recite it over wine and drink it, to protect a house recite it over water and sprinkle this water throughout the house, to protect a ship at sea write it on a clean papyrus sheet and tie it to the tip of the mast, and to help a woman whose milk does not flow recite it over something sweet and have her eat it when she comes out of a bath; etc. Then, the scroll contains a second spell, which begins with a prayer to God, after which the spell and the text as a whole come to an end.

Although this text is a Christian, it incorporates many practices and motifs of pre Christian magical traditions, such as the practitioner's self presentation as someone else; "Seth the son of Adam" (Bohak 1996, 5-10).

c. COPTIC MAGICAL PAPYRI IN MICHIGAN UNIVERSITY

Within the large collection of ancient manuscripts preserved in Michigan University is a group of Coptic magical papyri. This collection was

brought from Egypt to the British museum by Sir A. Wallis Budge in February 1921 for restoration. It was later forwarded to the University of Michigan. In 1930, Williams H. Worrell published a description of this collection and assumed that it is a complete collection consists of eleven manuscripts (Mirecki 1994, 435,444). These papyri contain spells must be recited over specific elements such as oil or water. Then, this water or oil should be applied in various forms such as anointing, washing, or drinking. The papyri include treatments of physical and spiritual diseases and also grantee success of different types of social relationships and business. Several of these healing prescriptions include concoctions of some elements either ingested or applied as ointments. In fact, some of these applications may be rituals anointing without a medical benefit, while others may represent a scientific approach to application of healing balms and medicaments. Thus, these texts evince little knowledge of healing remedies and methods such as the following prescriptions (Mirecki 1994, 453);

- For the one who suffers from beast's bites, it is described in this texts that he needs to recite specific secret spells over some water and drink it (Mirecki 1994, 444).
- For ribs pain, it is mentioned that magical spells should be recited over some figs.
- For headache, the magical spells should be recited on oil and anoint the forehead with this oil.
- For the one who is gouty in joints, he needs to recite the spell over some ibis blood and some wine and smear in it.
- For a woman with a blood problem, recited vinegar should be poured over her head.
- For a woman whose milk does not flow, she should recite the spells over something sweet and eat it after a bath.

Different other diseases are mentioned in these papyri with their magical-medical prescriptions such as vertigo, fever, burns, insomnia, and fear of night (Mirecki 1994, 444-449). Magicians in Coptic times had to know laws and the ways to employ the world energy and the use of different substances such as vegetables, animals, and minerals that are in a relationship with the divinity that he calls for help (Mutlari 2015, 84).

CONCLUSION

Early Copts as the successors of the ancient Egyptians and the sons of the pharaohs have been affected by ancient Egyptian civilization especially the ancient Egyptian medicine and their spiritual healing. For this reason, Coptic medicine with its remedies and recipes was considered a continuation of ancient Egyptian medicine. In fact, Early Copts paid a great attention to different sciences especially medicine, healing, dietary thereby, and health care systems. They had great medical knowledge and effective remedies. From the fourth century, monastic leaders had to keep a healthy life for the monastics. Thus, monasteries had a well organized health care system, which was considered a very essential part of monastic lives. However, prayers for recovery were and still the first way to treat illnesses in monastic communities. Early monastic communities had a variety of healthcare providers including doctors, nurses, elders, and lay practitioners. Using Magic and sacred spells occupied the second place after scientific medicine. Magicians had recorded their secrets in handbooks, which were considered as manuals for magic practice. Some of these recipe books have been discovered during the excavations, telling us some magic secrets and the instructions of different spells at that time. Coptic medicine came to us through different medical sources such as Papyri, papers, ostraca, and graffiti containing different medical prescriptions for physical and psychological diseases. These medical texts are the earliest records of medical and surgical skills in Coptic Egypt.

REFERENCES LIST

- Bohak, G. 1996. *Traditions of Magic in Late Antiquity*, Michigan, Ann Arbor,
- Borghouts, J. 1978. *Ancient Egyptian Magical Texts*, Nisaba, Religious Texts Translation, vol. 9. Leiden, E. J. Brill.
- Bowman, A. 1986. *Egypt after the Pharaohs, 332 BC – AD 642, From Alexander to Arab Conquest*, London, British Museum.
- Butler, A. 1970. *Ancient Coptic Churches of Egypt*, Vol. II, Oxford, Oxford University Press.
- Crislip, A. 2005. *From Monastery to Hospital, Christian Monasticism and the Transformation of Health Care in Late Antiquity*, Michigan, The University of Michigan.
- Cromwell, J. 2017. "Warm Hoopoe's Blood and Cardamom; A Coptic Medical Text", *Egyptian Archaeology*, No. 17, 10-13.
- Crum, W. 1925. "Koptische Zünfte und das Pfeffer-Monopol," *Zeitschrift für Ägyptische Sprache und Altertumskunde* (60), pp.103-111.

- David, R. 1998. *Handbook to the Life in Ancient Egypt*, Cairo, American University of Cairo Press.
- Dawson, W. 1924. "Egyptian Medicine Under the Copts in the Early Centuries of the Christian Era", *proceeding of the Royal Society of Medicine* 17, (Sect_Hist_Med), 51-57, Arnold, C. (Pr.)
- Dosoo, K. 2016. "Magical Discourses, Ritual Collections: Cultural Trends and Private Interests in Egyptian Handbooks and Archives", *Proceedings of the 27th International Congress of Papyrology*, Tomasz, D., Adam, L., Jakup, U. (eds.), Warsaw, (28) pp. 699–716,
- Ebeid, N. 1999. *Egyptian Medicine in the Days of the Pharaohs*, Cairo, General Egyptian Book Organization
- Erichsen, W. 1963. "Aus einem koptischen Arzneibuch" in *Acta Orientalia*, (27) , pp.23-45.
- Esbroeck, M. 1991. *HILARIA, SAINT, the Coptic Encyclopaedia*, Vol. IV, Aziz, S. A. (ed.), New York, Toronto, Macmillan.
- Estes, J. 2004. *The Medical Skills in Ancient Egypt*, Watson, Sagamore Beach, MA: Science History Publ.
- Feltoe, C. 1918. *St. Dionysius of Alexandria, Letters and Treatises, Translations of Christian Literature, Series I, Greek Texts*, New York, the Macmillan Company.
- Festugière, A. 1971. *Sainte Thècle, Saints Côme et Damien, Saints Cyr et Jean, Saint George*. Paris.
- Fox, R. 1986. *Pagans and Christians, in the Mediterranean world from the second century AD to the conversion of the Constantine*, Alfred A. Knopf Inc.
- Haas, C. 1997. *Alexandria in Late Antiquities, Topography and Social Conflict*, Baltimore, Johns Hopkins University Press.
- Heinemann, K. 1974. "Die Ärzteheiligen Kosmas und Damian", *Ihre Wunderheilungen im Lichte alter und neuer Medizin*. *Medizinhistorisches Journal* (9) 255–317
- Herzog, R. 1939. "Der Kampf um den Kult von Menuthis" in: *Pisciculi Festschrift F. J. Dölger Münster (Antike und Christentum. Erg.-Band 1)*.
- Hevesi, K. 2018. A few remarks on the persistence of native Egyptian historiolae in Coptic magical texts. In M. Hlouchova, D. Belohoubkova, J. Honzl, & V. Novakova (eds.), *proceedings of the Nineteenth Annual Symposium*, Czech Institute of Egyptology, Faculty of Arts, Charles University (pp.42-54), Prague.

- Janin, R. 1969. "La Géographie Ecclésiastique de l' Empire byzantin Première partie": Le siège de Constantinople et le Patriarcat Oecuménique, Paris, Les églises et les monasteries (3), pp.41–50.
- Kamil, J. 2002. Christianity in the Land of the Pharaohs, Cairo, the Coptic Orthodox Church.
- Krause, M. 1991. "Papyri, Coptic Medical", The Coptic Encyclopaedia, Vol. VI, pp.1886-1888, Aziz, S., Atiya (Ed.), New York, Macmillan Publishing Company.
- Lackany, R. 1968. Quelques Notes de Toponymie Alexandria, Alexandria, La Société archéologique d'Alexandrie.
- Leake, C. 1952. The Old Egyptian Medical Papyri, Kansas, University Of Kansas Press.
- Lloyd, G. 2003. In the Grip of Disease. Studies in the Greek Imagination, Oxford.
- Longrigg, J. 1993. Greek Rational Medicine, Philosophy and Medicine from Alcmaeon to the Alexandrians, London, Routledge. .
- Majino, G. 1975. The Healing Hand Man and Wounds in the Ancient World, Cambridge, Harvard University Press.
- Malaty, T. 1993. Introduction to the Coptic Orthodox Church, Alexandria, St. George Coptic Orthodox Church.
- Meinardus, O. 1961. Monks and Monasteries of the Egyptian Desert, Cairo, American University in Cairo Press
- Meinardus, O. 2002. Coptic Saints and Pilgrimage, Cairo, American University in Cairo Press.
- Mirecki, P. 1994. 'The Coptic Wizard's Hoard', Harvard Theological Review, 87(4), pp.435-60.
- Multari, A. 2015. ' Coptic Magic and its phases' In T. Minniyakhmetova & K. Velkoborska (eds.), The Ritual Year 10 , Magic In Rituals And Rituals In Magic (pp.83-90), Innsbruck, Tartu.
- Murphy, K. & Susalla, C. 2016. "Secrets of Ancient Magic, The Power of Spells, Cures & Omens", Expedition Magazine, Penn Museum, 58 (1) , pp.7-15.
- Osborn, E. 2005. Clement Of Alexandria, Cambridge, Cambridge University Press.
- Parker, R. 1983. Miasma, Oxford.
- Pattengale, J. 2012. Christian Physicians in the Roman Empire, Benevolence and Sacrifice in Proclaiming the Gospels, Charlotte, Green Scholars initiatives.
- Raymond, E. & Barns, J. 1973. Four Martyrdoms from the Pierpont Morgan Coptic Codices, Oxford, Clarendon Press.

- Richter, T. 2016. "Toward a Socio-historical Approach to the corpus of Coptic Medical Texts", in *Studies in Coptic Culture, transmission and Interaction*, Mariam, A., (ed.), Cairo, American University in Cairo Press.
- Schroeder, C. 2014. *Women in Anchoritic and Semi Anchoritic Monasticism in Egypt, Rethinking the Landscape*, Church History, 83 (1), 1-17.
- Starodubcev, T. 2018. "Between Iconographic Patterns and Motifs from Rveryday life. The Scene of an Eye Surgery Performed by Saint Colluthos", *Belgrad, Zograf* (42), 1-24
- Stetter, C. 1993. *The Secret Medicine of the Pharaohs, Ancient Egyptian Healing*, Berlin, Edition Q.
- Sullivan, R. 1995. "A Brief Journey into Medicine care and Diseases in Ancient Egypt", *Journal of the Royal Society of Medicine* (8).
- Verhoogt, A. 2013. *Ancient Medical Texts in the University of Michigan, Papyrology Collection*, Michigan, M Library.
- Viega, P. 2009. *Health and Medicine in Ancient Egypt: Magic and Science*, Oxford, Bar Archaeopress.
- Willi, A. 2008. 'νόσος and όσίη etymological and socio-cultural observations on the concepts of disease and divine (dis)favour in Ancient Greece', *Journal of Hellenic Studies* 128,pp. 153–71.