

The role of Christianity in the development of European and Serbian medieval medicine

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SUMMARY

Being conceived in the name of Christianity, the Church quickly mastered all of Western Europe, including medicine, which was developed in monasteries at first and at universities later on. The first hospitals were built within monasteries, and were used to treat monks and the general population in later times. With the founding of the first universities, medicine claimed its place in the world next to law, philosophy, and theology. In its early days, it was studied only as a theoretical science, but soon practical classes on cadavers were added. Universities were completely ruled by the Church, which meant that the curriculum had to be pre-approved by the Church, even the diplomas were presented by a bishop in a religious ceremony. Development of Serbian medieval medicine was under the influence of Byzantine and Italian (mainly Salernian) medicine. The greatest role in transfer of medical knowledge from the Byzantine Empire belonged to Serbian and Byzantine monks, while Italian doctors working in Serbia were responsible for the transfer of the Western medical knowledge. Serbian monarchs quickly started founding hospitals, both in and out of their domains, with the most famous ones being within monasteries such as Hilandar, Studenica, Pantokrator, Visoki Dečani, Sveti Arhangel, etc. In addition to those, there were two more hospitals not related to monasteries in Kotor and Belgrade, named after Stefan Lazarević. This contribution of Christianity to European medicine created a basis for a sudden development of medical science in the Renaissance.

Key words: History of Medicine; History, Medieval; Medicine; Christianity; Health Facilities; Europe; Serbia

INTRODUCTION

The Christian world of Western Europe, immediately after the fall of the Roman Empire, took on a historical life of its own, evolving in different historical circumstances compared to Christianity in the East. The worship of pagan deities was replaced by the cult of saints. As the Church condemned magic, astrology, and divination, the priests started using the symbol of the cross as a magical mean of casting out demons and curing diseases. Exorcisms were performed over the sick during the healing process. The Church helped widows, orphans, the sick, and the weak. Church dignitaries and wealthy believers established first hospitals. Thus, around the year 370, an archbishop Basil (later canonized as Saint Basil The Great), just outside the city walls of Caesarea (Cappadocia), founded a building complex for the accommodation of travelers and the weak, with special premises for the treatment of patients and the accommodation for the leprous. A similar hospital was established in Rome during the late 4th century by Fabiola, a patrician converted to Christianity.

Started in the name of Christianity, in the lands of the western half of the former Roman Empire, the Christian Church with its seat in Rome quickly subdued the entire Western Europe to its spiritual influence, giving the newly formed culture a full Christian character. Creating and shaping both the spiritual and cultural life of society, the clergy likewise created and shaped themselves. As the Christian Church contributed to all aspects of medieval society, so was its influence strongly felt in medicine. Guided by the principles of Christian charity and compassion, as well as by the biblical examples of helping the troubled and healing the sick, the clergy, besides the studying of medical sciences, soon turned to practical work and proceeded to treat the sick, establishing first hospitals within monasteries, initially accepting and treating monks and monastery servants, but subsequently admitting many ill laymen.

Church dogmatics assumed the superiority of soul healing to body therapy, which had a direct impact on the development and progress of medicine. The church hindered the progress of science, so it obliged monks of various orders to maintain the tradition and preserve the medical achievements of antiquity. Furthermore, the church encouraged monks to devote themselves to charity and to adopt Good Samaritan's outlook on the weak, sick, miserable, and poor, while primarily supporting curative approach to patients, thus unconsciously suppressing the fundamental principle of prevention. All of this had a major influence on the following development of medical science and organized medical institutions (hospitalia, orphanages, leprosaria, quarantines etc.).

CHRISTIAN (MONASTIC) EAST

Today, Egypt is considered the cradle of Christian monasticism. As the monastic movement spontaneously appeared, neither the church leaders nor the imperial administration were, at least in the beginning, certain of its true place and role within the Church and the society. Anchoritism is the oldest and strongest form of monastic life. When the Church stopped being just a group of devotees and became an institution gathering millions, it was prone to adopt a more yielding stance on human weakness and to tolerate it, while occasionally enjoying the worldly pleasures. A small number of Christians regarded such behavior as the betrayal of Christ. They were determined to earn their entrance into heaven with poverty, spirituality, and prayer, as well as with complete retreat to life of seclusion. From Egypt, monasticism quickly spread all over the East (1). Monks were not priests, but in their large settlements, there was a priest who conducted church services. Those settlements were called monasteries. Monasteries quickly developed into large, architecturally significant buildings, where Christians cheerfully gathered. Beside the

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monk living quarters, cells and economy buildings, monasteries had hospitals, shelters for the old, quarters for travelers, and even spas. An absolute discipline was required in monasteries. In order for monks not to be lead astray by the dangerous fantasizing, work was recommended. Some cultivated land, while others did gardening, wove mats and baskets, made wooden shoes and a few of them transcribed old texts. In this way, many ancient works of classical antiquity were preserved by their quills. For many people, monasticism was a refuge from chaos, war, and barbarian attacks. There were no taxes, nor military service, nor marital arguments, nor tiresome work in monasteries and desert cells. Monks were not required to join the priesthood and after a few years of peace, the eternal bliss would arrive. Pilgrims that gathered from every part of the Christian world to see the monks of the East attributed to them some extraordinary miracles similar to those of Christ. They could cure diseases and expel demons with a touch or a word, tame snakes and lions with a stare or a prayer, cross the Nile on the back of a crocodile. Some of their relics have become the most precious objects in the possession of the Christian churches, where they have been kept to the present day (2).

WESTERN CLOISTER (MONASTERY) MEDICINE

Monastery medicine was founded in Southern Italy in the 6th century, in Calabria and on Sicily, which had the most doctors ever since the Roman times and where many Greek colonies existed and frequent travelers from the East arrived (3). One of its first founders was Saint Benedict (480-543), who also established one of the oldest monasteries in Italy, on the mountain of Monte Cassino in 529, as well as the Order of St Benedict (Figure 1).



Figure 1. The Monte Cassino Monastery

The monastery was a copy of a Roman camp, enclosed by high walls and away from the world, where monks had everything they needed. Besides the monastery church, there were small chapels for prayer, cells for monks, guests and the poor, various craft workshops, dormitories, a library and a scriptorium where old manuscripts were copied and books

decorated. The monastery was surrounded by orchards and gardens with vegetables or medicinal herbs. With its own pharmacy, mill and fields, every monastery was economically self-sufficient. At the same time, the other founder of the monastery medicine was Cassiodorus (Aurelius Cassiodorus, 480-573), a Roman, born in Syria, the *magister officiorum* under Theodoric the Great, the king of Ostrogoths. Cassiodorus, an erudite man, early abandoned the worldly life, joined the Benedictine order and founded a monastery on the southern shore of Italy in the vicinity of the city of Catanzaro, around which, numerous Greek colonies existed. Having gathered many monks who knew Greek, the transcription and translation of numerous Greek books started, especially of medical writings, including the works of Hippocrates, Galen, Oribasius and Caelius Aurelianus. In 511, Cassiodorus wrote his own work titled *Institutiones Divinarum et Saecularium Litterarum (Institutions of Divine and Secular Learning)*, which mostly contained medical knowledge (4). As this work was highly regarded, it was often transcribed and used in a number of other monasteries for many centuries as a textbook for medical education. Soon after it, another work in Latin was published titled *De observatione ciborum (On the Observance of Foods)*, written by exiled Greek doctor from the Byzantine Empire and a personal doctor of king Theodoric, Anthimus (5). The work discussed dietetics and had its advice followed wholeheartedly in monasteries, with frequent transcriptions and constant education of medical class within monasteries. Refuges and shelters for the wretched, poor and passing travelers were founded within monasteries, being more like xenodochia than hospitals, named *hospitalia*, where a monk was appointed to care for the stricken and sick. Each monastery was required to grow medicinal herbs. Medical knowledge was passed on through the transcription of the rough Latin translations of Greek fragments, which were mostly the collections of prescriptions and short healing instructions. There was little attention devoted to the theoretical basis of medicine and to physiological problems. At the time, until the introduction of paper and movable type printing, a monastery was considered "spiritually rich" and "intellectually strong" if it possessed 5 to 10 books!

At the Church Council of Aachen (in 817), a new plan for the organization of the St. Gall Monastery emerged, abandoning the Benedictine type (the form of Roman castrum) and establishing the closed monastery town (6). Since the beginning of the 9th century, there was the Carolingian type of the imperial monastery containing central church, cloister, quarters for pilgrims, refectories, dormitories for monks, quarters for craftsmen and workmen, library, school, some sort of hospital, quarters for the accommodation of travelers and eminent nobility, as well as baths. Initially, hospital had only six beds, a pharmacy, separate quarters for doctors and medicinal herbs from a list prescribed in 820. As the constant presence of a larger number of people was expected, the plan also specified the following: the delivery of medical equipment and medicines, the existence of buildings and equipment for agriculture, livestock breeding and raising, nurturing viticulture, gardening as well as monastery's own gardens of medicinal herbs. This kind of organization had far-reaching consequences on many constituent factors of society in general, including education, crafts, chemistry (alchemy), philosophy, linguistics, biology, botany and, obviously, medicine.

SCHOLASTIC MEDICINE AND FIRST UNIVERSITIES

First universities, arising before primary and secondary schools, were opened for the purpose of nurturing science and teaching. The name university, following the meaning of the word *universe* and the underlying concept, which expressed a desire for completeness, companionship and unity, did not signify the totality of education, but a presence of all the students and professors in one place and at one institution. Thus, the early names of high institutions included the title *Universitas magistrorum et scoliarum* (6). Usually the Church administrative authorities took the initiative in opening universities by merging monastery and bishop schools with private secular schools, having previously obtained the blessing from the Church for the curriculum. By being governed by the Church authorities, the universities had nearly the same statute as the monastery and bishop schools. In the beginning, the university administration in France was constituted of only the initiator and school founder, who was known as *scolatre* or *scolasticus*, and his lectures as *scolastica*. Students took no part in the administration. At the start of the 13th century, in one of his letters addressed to Parisian students, Pope Honorius used for the first time the word *facultas*. After that, the first four faculties were mentioned: *theologia*, *jus*, *scientia* or *medicina*, and *ars* or *lettre* in France, and *philosophia* in Germany (4). Although fostering equally all the scientific disciplines at each of the four faculties, their equal status were not achieved to the same degree, as the domineering group of faculties varied with the university. Thus, the universities in Salerno and Montpellier were better known for their faculties of medicine, the university in Bologna for the faculty of law and the university in Paris for its faculty of theology. At those faculties, lessons of medicine comprised reading and discussing the classical medical texts, while the official textbooks included works such as *Aphorisms* of Hippocrates, *Ars Parva* of Galen, *Nonus Rhasis ad Almansorem* of Rhazes and *Canon* of Avicenna (6). After the lectures, lively debates (disputations) were held, where some philosophical and professional issues, regarding the previously read quotations, were publicly discussed. Those who employed syllogisms best and who could outwit others would win. Initially, the courses were purely theoretical and only during the 13th and the 14th century, practical courses were started, though little appreciated. The passing of the entrance exam, the *baccalaureat*, was followed by lectures, practices and public lectures of individual segments of the old medical writings, which a candidate had to deliver on his own. By passing the exam, the candidate would gain the next academic degree, *licentiat*, which enabled him to set up practice and earned him the right to the title of *magister of medicine*. In Italy, from the 11th to the 12th century, the title *doctor medicinae* was introduced for the doctors who were renowned for their teaching, so the title originally indicated a teacher of medicine. Only during the late 12th and 13th century a *doctor medicinae* became a regular academic title, which allowed its holder to give lectures at the faculty of medicine. The Church had a great influence on universities, so the curriculum, as well as the election of professors, had to be approved by the Church authorities. Diplomas were presented by a bishop on behalf of the Pope, while ceremonies were held in a church. After a promoter's speech, candidates took an oath, the doctoral cap was placed on a candidate's head, a ring put on the hand, a golden belt placed around the waist, while one of the books of Hippocrates stood

open in front of the candidate. Finally, the candidate thanked the present and the ceremony concluded with a formal feast attended by all the faculty members. Such a form of ceremony was organized only when conferring the academic title of doctor of medicine (7).

SERBIAN MEDIEVAL MEDICINE

The first mention of medicine among the Serbs dates to the period when the Serbian political environment became stable, which was crucial for undisturbed growth of the Serbian culture, which took place in the early 12th century (8). Our people contributed to medicine in the similar manner as they did with the other forms of culture created on our soil. Although Serbian medicine seems identical to the canonical medicine of the Byzantine Empire, it still possesses a specific quality typical of our people. It attracts our attention, not only because of its implementation among our people, but also because it provides the data concerning the pathology in Serbian people during the Middle Ages. Serbian medicine was formed in the tradition of the Byzantine medicine, which attributed great healing powers to the remains of saints, which, as a result, were venerated and considered invaluable. Medicine originated in the first Serbian centers of culture, in Studenica and at the Hilandar monastery, while the greatest contributions to its development are considered those by Saint Sava who founded the first Serbian hospitals, wrote our oldest medical texts and fought against charlatan doctors (9) (Figure 2).



Figure 2. The Hilandar Monastery

Byzantine medicine was not the sole influence, since Italy also had a significant impact. Monks from Serbian or Byzantine monastic colonies on Mount Athos had a major role in the transfer of medical knowledge from the Byzantine Empire. Their work mainly consisted of translating Byzantine church texts to Serbian. Texts about practical medicine and pharmacotherapy originated from the West and they were actually the works of authors from Salernian and Montpellier medical schools. In the transfer of the European contemporary medicine, the main part was played by doctors of Italian origin, who lived and worked in Serbia. Maritime regions of the Serbian state, which were under the constant influence of Italian medicine, also played an important part in this process.

First Serbian hospitals did not evolve from orphanages like in the West, but were from their beginning founded as institutions intended for treating

patients. This is further confirmed by the fact that those were monastery hospitals devoted to treating monastery brothers, people having equal rights and responsibilities, who had a secure life and did not need orphanages to support them. From the typikons and charters of their founders, it is evident they were founded in the tradition of the Byzantine hospitals. If they were considered as the institutions dedicated exclusively to patient treatment, they would be among the oldest hospitals of Europe.

The oldest Serbian hospital was founded in 1199-1200 at the Hilandar monastery by Saint Sava and it was intended for, firstly and foremost, the treatment of monks. However, the hospital at Hilandar did not only treat the acute and chronic diseases among the members of the monastery brotherhood, but also attended the epileptic, blind and leprous patients. At the same time, the hospital was a hospice for incurable patients. In the beginning, it had only eight hospital beds, but the number increased to twelve during the reign of Czar Dušan (8).

The first hospital founded on the territory of Serbia was the hospital at Studenica, also founded by Saint Sava between 1208 and 1216, when he, as the archimandrite, lived at the monastery of Studenica, to which, for safety reasons, he moved the remains of his father from the Hilandar monastery. This hospital only treated the sick members of the monastery brotherhood (9).

The hospital of King Milutin was established in Constantinople within the Pantokrator Monastery. King Milutin did not only found this hospital, but also provided funds for its support, as well as for the support of doctors and hospitaliers. The hospital had 50 beds, most of which were at the gynecological department (12 beds), followed by the surgical department (10 beds), while the other departments had 8 beds each. The treatment at the specialized departments was conducted by two doctors (primarii), and by two female doctors and a midwife at the department for women's diseases. High reputation of the monastery and the good financial situation of the hospital of King Milutin contributed to the rise of the existing medical school, established at the beginning of the 15th century, to a higher rank (10). The hospital of Stefan Uroš III Nemanjić at the monastery of Visoki Dečani ranked as one of our larger hospitals. The immediate cause for its construction could have been the seven years of imprisonment stay of Stefan Uroš III Nemanjić and his family at the Pantokrator Monastery in Constantinople, where one of his children had died. At this hospital there were patients suffering from epilepsy, those whose face was eaten away and whose fingers were falling off from the phalanges, others whose back was so bent that they were incapable of work and patients affected by lung diseases. The hospital was built for those suffering from incurable diseases (11).

In addition to restoring and expanding the hospital at Hilandar, Dušan also constructed a hospital at his endowment, the Saint Archangels Monastery near Prizren, in 1342. It only served for the treatment of monks, while the treatment of the weak and chronically ill was forbidden. This clearly implies that this was exclusively a health-care institution and not a shelter for the poor and lame. This rarely happened in the West, where hospitals were initially founded as shelters for the poor.

The city hospital of Stefan Lazarević, named *Xenodochium for the sick at the sweetest water*, was not built at a monastery, nor was it a hospital for monks, but for the citizens of Belgrade (11).

CONCLUSION

There is a common misconception that the Middle Ages, popularly called the Dark Ages, hindered scientific and cultural progress of humanity. The Middle Ages have not actually contributed anything original to development of scientific medicine, but the fact is that owing to the transcriptions of medieval monks, the ancient medical works of Hippocrates, Galen and other medical authors have been preserved. As a matter of fact, the first ideas of social medicine were conceived in the Middle Ages under the influence of Christian thought (almshouses, orphanages, shelters for the old). The first true hospitals were established within the Christian monasteries of the East and West. All the contributions of the Christianity to European medicine represented a foundation, without which, a sudden development of medical science during the Renaissance would have been impossible.

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Conflict of interest

We declare no conflicts of interest.

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