

# Representations of Lancet or Phlebotome in Serbian Medieval Art

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## SUMMARY

The topic of this study are representations of lancet or phlebotome in frescoes and icons of Serbian medieval art. The very presence of this medical instrument in Serbian medieval art indicates its usage in Serbian medical practices of the time. Phlebotomy is one of the oldest forms of therapy, widely spread in medieval times. It is also mentioned in Serbian medical texts, such as *Chilandar Medical Codex No. 517* and *Hodoch code*, i.e. translations from Latin texts originating from Salerno–Montpellier school. Lancet or phlebotome is identified based on archaeological finds from the Roman period, while finds from the Middle Ages and especially from Byzantium have been scarce. Analyses of preserved frescoes and icons has shown that, in comparison to other medical instruments, lancet is indeed predominant in Serbian medieval art, and that it makes for over 80% of all the representations, while other instruments have been depicted to a far lesser degree. Examination of written records and art points to the conclusion that Serbian medieval medicine, both in theory and in practice, belonged entirely to European traditions of the period.

**Keywords:** medieval medicine; medical instruments; holy physicians; history of medicine; Serbian medicine

## INTRODUCTION

The relationship between art and medicine is as rich as it is dynamic and it offers a plenitude of opportunities for study in terms of topics as well as in terms of approach and methodology of research. Visual representations of various illnesses and related treatments, medical instruments and equipment constitute a distinct segment within these studies. Having been elaborated as a theme since ancient times [1], medical science and practice remained relevant in art throughout the Middle Ages [2]. Medical motifs appear in Serbian medieval painting as well, although they have only recently begun to draw attention of scholars [3, 4].

Serbian medieval art prospered together with the Serbian state, from the late 12<sup>th</sup> century until 1459, when it was discontinued after the Turkish conquest. In its history, Serbia went through a number of phases of development and its borders kept changing. Today, cultural monuments that serve as tokens of history are found in various countries in the Balkans. The degree to which they have been preserved is unequal, ranging from those relatively well kept, to monuments whose condition allows for no precise conclusions. This has had an effect on the way they have been treated, on scientific research and it has influenced relevant studies.

The primary goal of this study is to indicate the presence of medical instruments – mainly phlebotome or lancet used by physicians in Medieval Serbia – in frescoes and icons.

## SERBIAN MEDIEVAL MEDICINE

Relying on heritage of the ancient world in matters of diagnostics, methods and ways of treatment, medieval medicine developed under the strong influence of Christianity [5-8], in terms of both interpretation of symptoms and therapies. Christian medicine can indeed be canonical, based on sacred mysteries and prayers for health, and apocryphal, which consists of magic rituals [7, 8, 9]. Apart from religious aspects, medieval medicine also had its secular (official, scientific) component [7, 8, 9]. In practice, religious and scientific medicine were inseparable – prayers for health were not only read while drugs were administered, but they were also considered to be a critical factor of every therapy, and were therefore given priority over the medical procedures.

From the point of view of contemporary science, Serbian medieval medicine was a combination of folk medicine and one practiced in Byzantium and in Western Europe [8, 9]. The oldest written fonts of Serbian medieval medicine date back to the late 12<sup>th</sup> and the early 13<sup>th</sup> century in relation to St. Sava [7, 9-12] who was the founder of first hospitals at monasteries Chilandar (ca. 1199) and Studenica (after 1206/07). He structured their work based on typica of these holy places [13]. Building of hospitals and xenodocheions was considered one of the more significant undertakings of medieval rulers. Based on written sources, around 19 hospitals were identified to have existed in Medieval Serbia [12]. Majority of

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known hospitals were set up near the most important foundations, i.e. monasteries built by Serbian princes. Medieval sources also mention hospitals in cities like Kotor and Belgrade, as well as special asylums for the lepers – leprosariums [9, 11]. Moreover, historical documents state that Serbian rulers built and restored hospitals and xenodocheions in Thessaloniki, Jerusalem and Constantinople [9, 14]. *Dušan's Code* prohibited quackery, witchcraft and occult practices [15].

Names that appear in historical records of the time point to a conclusion that the majority of court physicians in Medieval Serbia came from the Adriatic Littoral and were of Italian origin. This is the reasoning behind the assumption that these physicians were educated in the traditions of schools in Salerno and Montpellier. In addition, there have been mentions in the records, although rare, of domestic physicians [7, 8, 9]. Documents from the time provide general information about methods of treatment. As the foremost medical text, *Chilandar Medical Codex No. 517* (*Hilandarski medicinski kodeks br. 517*) is an absolutely unique item in Serbian history. It is in fact a collection of texts composed in the sixth decade of the 16<sup>th</sup> century and it consists of treatises and a variety of texts, mostly of the Salerno–Montpellier origin, that were translated into Serbian from the 13<sup>th</sup> to the 15<sup>th</sup> century [16, 17]. Translators of the texts are believed to have had medical knowledge. The fact that parts of the *Codex* were not translated is clearly because Latin was at the time seen as the language of the profession and inherent part of medical education [17]. This is indirectly supported by a record from the 14<sup>th</sup> century, originating from an unknown book, which states that “Nikola the Physician” translated a book from Latin into Serbian [17].

Practical value was also attributed to iatrosophia (*lekaruše*), manuals consisting of medical advice and prescriptions, included in collections of various texts. The most widely known iatrosophion in the history of Serbian medicine is the so called *Hodoč code* (*Hodoški zbornik*), dating from 1400–1430, an intricate manuscript one part of which is dedicated to medical practice [17, 18]. Just as known is *The Science of Treating Diseases* (*Jatrosofija o vsakoj vešti*) from the late 14<sup>th</sup> century, in essence a collection of prescriptions probably originating from Byzantium [7, 17]. Iatrosophia remained the primary source of medical knowledge all the way to the 19<sup>th</sup> century, even though they gradually receded into folklore texts. The fact that over 400 copies of iatrosophia are known to have survived to this day further testifies to their popularity [7, 17]. Other, shorter texts also delve in medical theory and interpretation of diseases, such as the *Fifth Letter* from the 15<sup>th</sup> century, the chapter of *Dioptra* (*The Mirror*), written by Philippos Monotropos, wrongly interpreted as *A Study of Nature* (*Jestestvoslovije*) in the early literature [7, 17], and many others.

Metal artifacts excavated at the locality of St. George of Dabar Monastery near Priboj, known as Orahovica Monastery in Mažići, was considered to be the most significant find of medical equipment in Serbia. The finds were identified as surgical instruments dating back to 16<sup>th</sup>–17<sup>th</sup> cen-

tury, while the building in the north-western part of the complex was identified as the monastery hospital [19, 20]. Research results such as these caused opposing opinions in our scientific community. There have been arguments against the identified purpose of both the instruments and the hospital building [21]. Likewise, the purpose of a box found at the archeological site Novo Brdo, initially identified as a medicine box, is also questionable because such a box could have been used for various purposes [22]. Frescoes and icons of the time provide further and important proof of the existence of medical instruments and equipment. They were painted quite realistically, which becomes obvious after comparison with not only archeological finds but also with modern medical instruments that have not changed much (such as spatulas and so on).

### LANCET OR PHLEBOTOME IN SERBIAN MEDIEVAL ART

When it comes to medical instruments and equipment in Serbian art, majority is found in paintings of saintly physicians. Saintly physicians were also known as Holy Unmercenaries (*thaumatourgoi anargyroi*), because they would not accept payment for treating diseases [23]. Most frequently depicted with medical instruments and equipment are the twin brothers, Saints Cosmas and Damian (the Orthodox Church celebrates three pairs of twins with these names – the Roman, the Asian and the Arabic) [23, 24], then St. Panteleimon and St. Hermolaus, St. Cyrus and St. John, St. Sampson and St. Diomedes, as well as a physician and a healer St. Anastasia Pharmacolytria [25].

This research has been conducted based on representations of saints physicians preserved in monumental art and icons from the 13<sup>th</sup> century until 1459, which is a period throughout which Serbian medieval art was flourishing, since there are no surviving examples of these motifs from earlier times. In reference to the overall number of monuments, it would be safe to assume that motifs of medical equipment and instruments are preserved in one third of these monuments. Approximately 85% have been visited, while relevant literature has been consulted in relation to the remaining ones.

In addition to the fact that some of the instruments have not changed their morphology to this day, numerous and well-published finds from the late Roman period serve as main comparative material for identification of instruments [26]. In contrast, medieval and especially Byzantine finds have been very limited [27]. As to written sources, ancient and medieval records mention quite a number of medical instruments, although without detailed descriptions, which makes it difficult to connect them to archeological remains. This is the reason why the written sources have not contributed significantly to the identification of instruments in this study.

The study includes the majority of medical motifs originating from Serbian medieval art, along with unavoidable limitations imposed by the degree of preservation of certain monuments. Comparison to archaeological finds from

the Roman period lead to a conclusion that only a very limited number of medical instruments were illustrated in painting. An instrument that most frequently appears as an attribute of holy physicians in Serbian art has a thin handle, sometimes ornamented, ending with a blade in a shape of a triangle (lance). On the basis of finds from antiquity, this instrument is identified to be a lancet (lancettas), also called a phlebotome (phlebotomum), since it was predominantly used for blood-letting, or phlebotomy [26-29]. In Serbian medieval frescoes, lancet is most often depicted together with an étui and only rarely with instrument boxes of various shapes. The research has shown that lancet makes for 80% of surviving representations, while all other medical instruments (probes, pincers, small spoons and in one case an unidentified instrument) are depicted to a far lesser degree. Analysis of Byzantine and Western medieval painting and art produced similar results, with lancet being among most commonly presented objects [23, 24].

As one of the oldest known methods of treatment, phlebotomy dates as far back as Greek and Roman tradition and was widely utilized in the Middle Ages. This practice was closely connected to humoral theory which medieval authors adopted from ancient writers and according to which excretion of bodily fluids is balanced by blood-letting. Phlebotomy was used both for treatment and prevention of diseases. Treatises about blood-letting which deal with theory but also provide practical advice were present in Western Europe from the Early Middle Ages and were also known in Byzantine medicine [5, 30]. Prevalence of phlebotomy is further illustrated by yet another document, the 11<sup>th</sup> tome of the *Lex visigothorum* (*Liber Iudicorum*) compendium of laws which was assembled in the mid-seventh century and had a commanding presence throughout centuries to come in what is now Spain, in which this method was mentioned twice along with instructions on administering procedures. Special treatises on phlebotomy originated from systematization of medical knowledge in famous schools of Salerno and Montpellier during the 12<sup>th</sup> and 13<sup>th</sup> centuries [31, 32]. It is likewise mentioned in the *Chilandar Medical Codex No. 517* in relation to treatment of various internal illnesses, but also in a separate section titled *On blood-letting* [8, 16]. These are translations of studies probably originating from the Salerno–Montpellier school. The practice is mentioned in *Hodoche code* as well [8, 18].

It is interesting to note how scientific literature often states that the instrument depicted in art is in fact a scalpel. The scalpel (scalpellus, scalpellum, scalprum) was considered to be a symbol of physicians, especially surgeons. Finds from the Roman period suggest that the scalpel's handle ended with an oval or triangular scoop on one side and a sharp blade on the other. In some cases the blade would fold into the handle [27, 28, 33]. Scalpels were very rarely depicted in medieval art [23, 24] and it is not possible to identify this type of knife in Serbian medieval frescoes with any degree of certainty.

Visual representations of a lancet in the 13<sup>th</sup> century are as follows: one in the fresco of St. Cosmas on the western



**Figure 1.** St. Cosmas with a lancet and a medical box (late 13<sup>th</sup> century), Church of the Holy Apostles Peter and Paul near Novi Pazar (photo by Sanja Pajić)

wall of the church in Mileševa (1228–1234); five in frescoes of Saints Cosmas and Damian in Sopoćani Monastery, on the western wall in the southern choir, in medallions under the windows of the southern and northern choir, as well as in the waist-up painting of Damian under the window of the western wall in the St. Simeon Nemanja's Chapel (1272–1276); one in the western conch of the Church of the Holy Apostles Peter and Paul near Novi Pazar, in a fresco depicting one of the holy twin healers (from the end of the 13<sup>th</sup> century) (Figure 1); four in the Arilje church in frescoes presenting Saints Cosmas and Damian on the north-western and south-western pilasters of the nave, and St. Diomedes and St. Sampson, in medallions on the south wall under the dome (1295) [4].

Lancet appears in the following icons and frescoes of the 14<sup>th</sup> century: the icon of St. Panteleimon in Chilandar Monastery (beginning of the 14<sup>th</sup> century); twice in frescoes depicting Saints Cosmas and Damian on the western wall of the Žiča Monastery's nave (first decade of the 14<sup>th</sup> century); twice on the western wall of the narthex in the church in Staro Nagoričino, in presentations of Saints Cosmas and Damian (1315–1317/18); twice in the hands of Saints Cosmas and Damian on the southern wall of the King's Church in Studenica Monastery (1318/19); twice on the western wall of the nave in the church in Gračanica Monastery, again in the hands of the same pair of saints (ca. 1320); twice in the Church of Saint Demetrius in



**Figure 2.** St. Cosmas with a lancet and a medical box (1334/5–1337), Church of Virgin Hodegetria in the Patriarchate of Peć (photo by Svetlana Pejić)



**Figure 3.** St. Damian with a lancet and a medical box (1334/5–1337), Church of Virgin Hodegetria in the Patriarchate of Peć (photo by Svetlana Pejić)

the Patriarchate of Peć, in frescoes of Saints Cosmas and Damian on the northern wall of the western bay (1322–1324); in the Church of Holy Apostles in Patriarchate of Peć, twin-physicians were depicted two times, facing one another, next to iconostasis (1324–1337); three times in the Church of Virgin Hodegetria in the Patriarchate of Peć in the north-western bay in frescoes of Saints Cosmas and Damian (Figures 2 and 3) and St. Hermolaus in the north-western corner (1334/35–1337); three times in the frescoes of Saints Cosmas, Damian and Panteleimon on the southern wall of the nave in the Church of Saint Nikola Bolnički in Ohrid (1330–1340); four times in frescoes of Saints Cosmas and Damian, both Roman and Arabic twins, in the northern parecclesion in the church of Dečani Monastery (before 1343); twice in the hands of the holy physicians in the north-western corner of the nave in the church in Lesnovo Monastery (1346/47); twice in frescoes of Saints Cosmas and Damian in the western bay of the church in Psača, on the southern and northern pilasters of

the western wall (1358–1360) [4]. The catalogue of monuments does not end here.

Analysis and scientific investigation of representations of medieval medical instruments in frescoes and icons point to the conclusion that the apparatus used for phlebotomy and surgical procedures and treatment of patients were widely spread in Medieval Serbia. Serbian medieval medicine kept abreast of the times in all related matters and was an integral part of medicine that was developing in the West, but shared strong links with the Byzantine tradition at the same time.

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## Ланцета или флеботом на ликовним представама у уметности средњовековне Србије

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### КРАТАК САДРЖАЈ

Тема рада су представе ланцете или флеботома на фрескама и иконама у српској средњовековној уметности. Постојање овог медицинског инструмента у уметности која се развијала у средњем веку у Србији упућује на његово коришћење у оновременој српској медицини. Флеботомија је једна од најстаријих метода лечења, широко распрострањена током средњег века. Помиње се и у медицинским текстовима на српском језику, заправо преводима латинских текстова насталих у оквиру салернско-монпељеске школе, као што су „Хиландарски медицински кодекс бр. 517“ и „Ходошки зборник“. Ланцета или флеботом је препозната на основу

римских археолошких налаза, док су средњовековни, а посебно византијски налази ретки. Анализа сачуваних фресака и икона показала је да је ланцета далеко најчешћа у односу на остале медицинске инструменте у српском средњовековном сликарству, те да је насликана у више од 80% случајева, док су остали инструменти знато ређе сликани. Узевши у обзир писане текстове и ликовни материјал, закључује се да је српска средњовековна медицина у теорији и пракси потпуно припадала европским токовима тадашњег времена. **Кључне речи:** средњовековна медицина; медицински инструменти; свети лекари; историја медицине; српска медицина