



THE HISTORY OF DENTAL MEDICINE IN OSIJEK

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SUMMARY – Throughout history, Osijek and Slavonia were parts of numerous empires and states. In this paper, the authors depict dental health care of the inhabitants of Osijek and Slavonia throughout their history, since the ancient prehistoric times when dental medicine and medicine in general were ‘in the hands’ of gods and medicine men, throughout the period of the Roman Empire and Middle Ages, as well as the Turkish sovereignty, all the way to the modern era when Osijek and Slavonia became part of the Austrian Empire and many novelties were introduced in the society, among other things, and for those times, modern procedures of medicine and dental protection. Those were the true beginnings of medicine and dental protection. The authors illustrate the work of various ‘dentists’ who worked in Osijek, from military and town surgeons, barbers, and especially the work of doctors that needed to have formal school and specialist education after the reforms implemented in the 19th century. Thanks to the reforms of the Austrian, and later the Austrian-Hungarian authorities, the practice and work of people who were allowed to perform dental procedures started being regulated, prices were established, and punishments introduced for those who performed dental procedures without having the proper qualifications.

Key words: History of dentistry; Dentists; Slavonia; Osijek; Austrian Empire

The History of Dental Medicine in Osijek

Dental health is largely connected to the general condition of humans and can definitely affect their everyday activities and quality of life profoundly. Diseases of the teeth, jaw and oral cavity have existed since human beginnings and have been recorded since the earliest times on osteological remains and in early written sources. Therefore, even in ancient times, there was a need for certain procedures to be carried out on

teeth and in the oral cavity^{1,2}. The bones of Neanderthals indicated severe injuries including bone fractures, blindness, amputation, tooth loss, osteoarthritis, etc., and proved that they lived for a long time after those bones had healed. That included care and treatment of this individual by the rest of the community.

We collect data on such procedures in prehistoric times from osteological remains at numerous archaeological sites. Such a research has only been conducted in more recent times, so data on dental procedures in prehistoric cultures in Slavonia are scarce.

In ancient times, medical practices were tightly connected to religion and were mostly performed by notable individuals called shamans. Everyday medical practices included the application of medicinal

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Received December 13, 2021, accepted February 21, 2022

plants and preparations along with rudimentary procedures of opening abscesses, immobilization, tooth extractions, etc.

There is clear distinction between developed prehistoric cultures of Mesopotamia, Egypt, India, China, Central and South America, and prehistoric groups in Europe. The former had an organized life, administration, legislation, literature, architecture, and of course medicine, meaning every aspect of daily life was at an incomparably higher level than the life in prehistoric settlements in Europe. Osteological remains show that these cultures executed some surgical procedures, even more complex ones such as trepanning of the skull, therefore it is almost certain that they performed dental procedures in everyday life too³.

During prehistory, there were several groups (cultures) in the area of Slavonia that were at a far less developed level than the before mentioned. Nonetheless, they represent the beginnings of organized life in our region and should therefore be acknowledged.

Due to the insignificant examination of osteological remains at numerous Slavonian prehistoric sites, the analysis of medical care during those times is based on assumptions. However, it is almost certain that the application of medicinal plants and healing procedures was customary. The prehistoric groups in Slavonia lived of agriculture, knew of pottery, and some knew of metallurgy or even of the calendar, so they must have known of the rudimentary medical methods. It should also be noted that the lithic technology was widespread and that a wide range of extremely sharp stone tools were produced, which meant that the inhabitants of Slavonia had tools at their disposal that were almost perfect for minor surgical procedures.

Skulls found in newer times at the Vučedol site near Vukovar belonged to the bronze Vučedol culture and they had visible inflicted injuries (marks) on individuals who had not died afterwards. On the contrary, they lived for a long time thereafter and the skulls indicate that the wounds had ossified and healed⁴. The assumption is that molten copper was dribbled on a young person's head, which was an initiation into the circle of people who knew the metallurgic secrets. This proves that even prehistoric inhabitants of Slavonia were familiar with certain procedures that included at least basic medical treatment and knowledge about human body systems. Miniature statues of legs were found at individual archaeological sites of the Vučedol culture, which could

be linked to votive offerings or amulets that served as protection from illnesses.

In the historic times, the situation on the territory of Croatia was different. On the Adriatic islands and coast settlements were established, colonies of ancient Greek poleis, where all the elements of the Hellenic culture and way of life were implemented. In some Hellenic poleis, a lot of attention was paid to protection of public life, even public treatment centers existed that were financed by public funds⁵. It is almost certain that the experiences of Hellenic medicine authors were applied in these Hellenic colonies on the Adriatic, i.e., Issa, Korčula, Pharos, Epidaurus, etc.

In the interior, on the territory of today's inland Croatia, the experiences of healers were still used, as well as medicinal plants and preparations. Roman authors wrote reports on frequent use of medicinal plants in Illyrian settlements. The plants used included iris, gentian, valerian, argemone, etc.⁶. The conquest of the inland of Croatia by Romans and its incorporation into the system of the Empire led to the application of medicine and medical procedures.

Medicine in the era of ancient Rome was at a high level for that time. It was a well-organized state, where cities with a large number of inhabitants existed, which had a system of rules and provisions that enabled collective life of a large number of people on a small territory. They had water supply, waste water systems, garbage systems, public baths, funerals, etc. Due to numerous army and frequent conflicts, the need arose for doctors who would care for the health of soldiers and treat wounds within a legion⁷. In such circumstances, performing dental procedures was probably a daily practice.

It is also interesting that one of the earliest notes on the protective dental work stem from the Roman Law of the Twelve Tables from 451 BC. The tenth book (table) of the Law prohibits putting gold into tombs, it is only allowed "if someone's teeth were fixed with gold and they shall be buried or burnt with it; that shall be permitted"⁸. Evidence for this practice can be found on archaeological excavations. Examples of teeth connected with gold braces were found in Etruscan tombs in central Italy. These findings are from about the same period as the regulations in the Law of the Twelve Tables and they prove an existing dental practice on the Italian Peninsula⁷.

After being conquered by the Romans, the territory of today's Slavonia became part of the Roman

Empire at the beginning of the Common Era. Large towns, roads, river ports, military camps were built, and administration, religion and all other elements of the Roman way of life were implemented. Hygiene and sanitary measures were undertaken in these towns for the first time; water works and sewage systems were constructed, and funerals within the town walls were forbidden^{9,10}. Slavonia and Osijek (*Mursa*) gained particular importance due to the immediate proximity of the *limes*, border of the Roman Empire, therefore larger commands of the Roman army were constantly present for its protection. In the system of every Roman legion there were military doctors who took care of all health demands of soldiers, including dental procedures. It can be assumed that these doctors provided help to local inhabitants as well.

In Roman times, two battles were fought close to Osijek (*Mursa*), in 258 and 351 AD, in which tens of thousands of soldiers died. The year 168 AD saw a big Barbarian invasion, and the smaller Barbarian invasions over the *limes* led to frequent minor conflicts. Additionally, the unfavorable climate and swampy area often caused epidemics, one of which was particularly baleful, the Antonine or Galen plague in the second half of the 2nd century, which led to daily demand of medical interventions in order for the army to stay ready and protect the state. *Mursa* also had its own amphitheater, so there was constant need for medical care of the wounded gladiators.

That is why remains of medical equipment can often be found at Roman sites⁷. In the area of Osijek (*Mursa*), bronze pincers, spatulas, carved bone spoons, etc. were found on several occasions; those could have been used during minor medical procedures or for pharmaceutical purposes. A stone relief of Hygieia, goddess of health, was also found on the territory of the Roman *Mursa*¹¹.

After the fall of the Western Roman Empire, there were many different conquerors of the Slavonian territory over centuries, e.g., Huns, Avars, Gepids, Bulgars, Slavs, Hungarians, Mongolians, therefore the Roman urban way of life and its achievements were forgotten. The same happened to medicine and care for public health. Life expectancy was short and medical care did not exist.

In Osijek and the nearby Baranja, a few deformed human skulls were found, dating back to the 5th and 6th century, which can be linked to the custom of the Gepids, in which notable individuals had their head ban-

daged in early childhood in order to get an elongated skull that represented a status symbol. This indicates that they knew, at least at the elementary level, how the human body and skeletal systems function, meaning how to impact them^{12,13}.

In immediate proximity to Osijek, a big necropolis, the so-called Bijelo Brdo culture dating back to the 10th to 12th centuries, was examined and in more recent times the osteological remains of humans from the necropolis were studied. It became evident that a great percentage of inhabitants had caries and alveolar diseases, but dental procedures were not recorded¹⁴.

In the Middle Ages, dental medicine and medicine in general was at a very low level in Slavonia. In the rest of today's Croatia, especially in the parts that were not under Turkish rule, the situation was different. In the coastal towns of Dubrovnik and Zadar, already in the 13th century there were town doctors who, among other things, carried out dental procedures. From 1777, a separate dental medical office existed in Dubrovnik¹⁵. It was considerably better in Zagreb where Mihajlo Dab, a barber who became part of aristocracy due to his work, was mentioned as early as 1430. The connection to dental service is visible in his coat of arms, where three teeth are depicted, as well as a hand that holds a tooth¹⁶.

During the Middle Ages, the immediate surroundings of Osijek were an unhealthy area to live. The town was surrounded by large swamps in the north and south, which was a source of many infections, and the river Drava flooded parts of the town and its surroundings several times a year. Probably that is why Osijek did not develop into a more significant town in the Middle Ages. It was a smaller town the importance of which lay only in a primitive ferry that enabled crossing the river Drava, which was recorded in medieval documents only because there were frequent conflicts due to the fee for the ferry.

Throughout Europe, medicine was largely practiced in monasteries in the Middle Ages. In Slavonia and Baranja, close to Osijek, there are indications of the presence of Benedictines as early as the 6th century. In the chronicle of the Monte Cassino monastery, it was alleged that the Byzantine emperor Justinian gifted the estates of *Cibalae* (Vinkovci) and *Antiana* (Popovac in Baranja) to St. Benedict and the monastery¹⁷. However, more concrete data on Benedictine, Cistercian and Franciscan monasteries in Slavonia can be found from the 13th century. In these monasteries,

individual monks collected medicinal plants, provided medical preparations and medical care to other monks and common inhabitants. This practice was especially encouraged in Benedictine monasteries, which resulted in the rules of St. Benedict for the care of the sick. These medical treatments included dental care with big certainty.

In 1526, Osijek was conquered by the Turkish army and health situation in the town and its surroundings deteriorated. During the Turkish rule, Osijek was a relatively small town that gained significance due to a big bridge over the river Drava and the swamps of Baranja. The town was affected by huge Turkish armies passing through on their way to Hungary and Austria, numerous caravans carrying supply for the military units and trade between the newly conquered areas of the rest of the Turkish Empire. The nearby swamps and a great number of soldiers and travelers surely were favorable for the spread of epidemics and diseases. The period of the Turkish rule in Slavonia did not result in any documents evidencing any kind of medical care or procedures that were conducted.

After 160 years of Turkish rule, in 1687, Osijek was freed. The Austrian army stationed a strong military unit in the town to protect it and its surroundings from constant Turkish invasions; at the same time, a big fort was built, serving as a base for further liberation operations. The unfavorable natural environment and the frequent military conflicts resulted in continuous diseases and injuries, therefore there was an increased demand for medical interventions. Since then, mostly thanks to the Austrian army, medical treatments were performed again in the town. Every regiment had a few military surgeons, hence, in the first decade after the liberation from the Turks, several of their names were known, and in 1697 Heinrich Mayer, a military surgeon, worked in Osijek¹⁸.

From that time, there are data on the first cesarean section in Osijek. Christening records from 1694 prove that one child was born by cesarean section and that both the child and the mother survived. We do not know for sure whether this procedure was performed by a military doctor or town surgeon, but in the times of poor hygiene conditions and frequent infections, this was an enormous success¹⁸.

In the municipal statute of the town of Osijek from 1698, the first regulations on the maintenance of cleanliness in the town were included, as well as on the care for orphans and widows. In that manner they

introduced, at least nominally, the administration and way of life into devastated and robbed areas as in the rest of the Empire. At the beginning of the 18th century, the first pharmacies started working in Osijek.

During the 18th century, barbers performed dental procedures in Osijek. They were allowed to carry out the so-called minor surgical procedures, including dentistry. Their education greatly varied; some of them learnt about surgery in military schools in Austria, some even at the university in Buda, and for some it is alleged that they got trained in surgery in Osijek Lower Town or even in Dalj¹⁹.

However, very often the barbers and military surgeons executed medical procedures that they had no permission for, hence the authorities of the Virovitica County tried to regulate their work. The County Assembly concluded in 1765 that due to the unqualified work of surgeons (apparently regarding the barbers and military surgeons), patients ended up with even more severe consequences. Therefore, it was prohibited and punishable for surgeons to treat internal illnesses without knowledge and approval from the County surgeon²⁰.

It is interesting to find data on Osijek barbers who carried out medical treatments in the 18th century, in chronicles (*Diarium*) of the Franciscan monastery in Osijek from 1750. The abbot of the monastery in Osijek made an agreement on April 13, 1750 with Ivan Cammerer, a surgeon in Osijek fortress, to have the Franciscan monk hair cut throughout the year. For the amount of 13 forints and 16 coins, this barber-surgeon ought to shave beards and cut hair of the monks every 14 days, and of the superior of the monastery twice a week for the whole year²¹.

Furthermore, in the so-called Turković chronicles (chronicles of the parish church in the fortress), we can read that on January 3, 1805, he paid the surgeon Reinhardt 15 forints for annual services of hair cutting²¹.

We know little about dental treatments performed by barbers in Osijek. They are rarely mentioned as dentists; in all censuses, they are referred to as barbers. In a few cases, usually regarding a lawsuit, there are court documents referring to them as dentists. For example, in 1746, Lorenz Nikloš, a barber from Osijek, was mentioned in the documents as a provider of medical services because of a lawsuit due to overcharging his services. The town administration of Osijek consequently tried to regulate barber activities and the amounts they can charge for their services, but it was

not very successful, so the previous practice continued²². These data prove that in Osijek, the roles of a barber and surgeon-military surgeon were acquired by the same person who performed them depending on the need.

It should be noted that a big part of Slavonia and Sylvania were included into the so-called Military Frontier administered by the *Hofkriegsrat* (Imperial War Council) and that special military regulations were applied in it. Part of Slavonia along the river Sava, on the border to the Turkish Empire, was organized in three regiments, Gradiška, Brod and Petrovaradin, which were ruled by the army in all elements of administration and everyday life. This meant that strict military regulations were applied, which protected the Empire from Turkish incursions, but also from diseases and epidemics. The system of quarantine and platforms (*kontumac* and *raštel*) was applied, which regulated the incoming of people, goods and packages into the Empire, and the so-called system of *chardak* borders, from where military patrols protected the border and prevented unauthorized entering of people, goods and cattle²³. Furthermore, a variety of measures were implemented to protect public health, e.g., clean water, garbage system, order in stables, funerals, etc.

In each regiment, there were military doctors and surgeons, a military hospital that provided medical treatment to civilians as well, there were pharmacies where one could get prescribed medication, so medical care was at a far more developed level than in the rest of Croatia. In this manner, measures were implemented in Slavonia, where for centuries medical care of its inhabitants was neglected; measures and procedures that were actually quite modern and provided effective health care for the inhabitants.

During the Middle Ages and later, especially in the 17th and 18th century, medical guidebooks (*ljebaruše*) were often used in Slavonia and Croatia; they contained collections of recipes and advice on how to treat various diseases. The oldest ones originate from the Middle Ages and were handwritten in Glagolitic script, whereas the newer ones were, of course, printed and widely used. The medical guidebooks used in the inland part of Croatia contained a significant number of recipes and advice for diseases of the teeth and oral cavity. One of these collections was written by Petar Dombaj, a Franciscan from Vukovar: *Od Razlicsti Trava, Praova, Pilula, Melema, Vijina, Balzama,*

*Dervia, Razlicsti Xivina, Stvari, Potaini, Bolesti Razlicsiti i svakoiaki Rana i Voda*¹⁸ (translator's note: the books are on various herbs, powders, pills, ointments, balms, preparations, etc., used for different diseases, wounds, etc.). Another medical guidebook was preserved in the library of the Franciscan monastery in Osijek. The handwritten booklet entitled *Zabilježenje od likova* gathered recipes and procedures that need to be applied in different diseases. This medical guidebook seems to originate from the first half of the 19th century²⁴.

Nevertheless, the question is how useful these medical guidebooks were to the inhabitants. Literacy was at a low level, so these medical guidebooks served only a small proportion of literate inhabitants.

During the Middle Ages, medicine in Europe was mostly under the influence of the *Schola Medica Salernitana*, whose doctrines were especially applied in the Benedictine and other monasteries. It is interesting that the fundamental medical piece of this school, *Regimen sanitatis Salernitanum*, or as it used to be called *Flos medicinae*, was translated into Croatian and printed in Pest in 1768 by the Franciscan Emerik Pavić. In this piece, we can find a variety of advice and instructions on treating dental problems. Emerik Pavić lived for some time in the Osijek Franciscan monastery, thus were the doctrines of the *Schola Medica Salernitana* definitely applied in Osijek too²⁵.

In the second half of the 18th century, the situation in Slavonia improved immensely. The reforms by Maria Theresa and her son Joseph II resulted in progress in many fields of everyday life. Parts of Slavonia were freed from the military authority and civil authority was introduced, three counties were formed with services that were responsible for numerous aspects of daily life of the citizens. Progress was visible in the field of health care and dentistry as well. A crucial moment was when the empress Maria Theresa invited Gerard van Swieten to Vienna. The empress hired the Dutch man as her personal doctor, who, besides being that, implemented various reforms in health care in the Austrian Empire. Regulations were introduced to regulate numerous fields of health care, the studies of health care at the Viennese university were reformed, the organization and function of sanitary cordons were regulated, etc. For this paper, it is especially significant that van Swieten sent two Austrian surgeons to Paris to the leading dentist of that time, Pierre Fauchard, the founder of modern dentistry, for education.

Within these reforms in the Austrian Empire, the first legal provisions were passed to regulate the work of dentists. In 1787, it was stipulated that it was necessary, for those who want to perform dental work, to pass an exam at the school of medicine and to hold a certificate as proof²⁵.

In 1809, the town of Osijek obtained the status of a Royal Free City and it gained many powers that had previously been executed by other state authorities. One of them was the conduction of health measures within the town. The town employed more officials to execute the powers that it gained; among them also a town doctor with an annual salary of 200 forints, a military surgeon with a salary of 100 forints, and a midwife with a salary of 100 forints²⁶.

In 1737, a military hospital was established in Osijek, which functioned until dissolution of Austria-Hungary (a military medical institution functioned until 1991 in the building of the military hospital of Austria-Hungary). Throughout history, several departments were established within the military hospital, e.g., internal diseases, surgery, infectious diseases, skin and venereal diseases, which provided health care for the numerous army in the town.

Throughout the second half of the 18th and 19th century, dental work was often performed by traveling dentists, as in other towns of the Monarchy. They advertised their stay and work in local newspapers, stayed in the town for a few days, and carried out treatments in inns or hotels.

In 1739, Osijek also had a civil hospital that was financed by alms and grants from wealthy citizens. It was dislocated in a separate building in the today's City Garden and functioned until 1874, when the new Huttler-Kohlhofer-Monsperger Hospital was built in Lower Town. This hospital was built with the help of inheritance and donations from three Osijek philanthropists and became the center where the citizens of Osijek and its surroundings were treated and received health care. Over time, several departments were established within the hospital, with doctors working in them who left a big mark in the health care of Osijek and Croatia.

Around the mid-19th century, the feudal system was abolished and a range of laws was introduced into everyday legal life, which regulated legal matters in an entirely different way. However, the powers of the Royal Free City of Osijek changed very little. The city was still authorized to take care of public health care

on its territory. The emperor Franz Joseph I passed the Municipal Order for the Royal Free City of Osijek on September 7, 1850 *via* a special imperial patent, which in paragraph 79 stipulates that "the Municipal Council regulates and manages the local health care according to existing laws" (translator's note: this is a paraphrase, not an actual quote. Paraphrase of the footnote: Imperial patent from September 7, 1850, which approves and puts into effect the temporary Municipal order of the Royal Free City of Osijek; printed by Diwald in Osijek).

The Croatian-Hungarian Settlement from 1868 enabled Croatia to regulate its public health care autonomously. The big reformer Ban Ivan Mažuranić passed a new Law on Regulating Health Care in Croatia and Slavonia in 1874. The Law on Regulating Health Care in Croatia and Slavonia from 1874 stipulates the jurisdiction and activities in public health care in great detail (Collection of Laws and Orders, 1874, No. 435). The supreme authority responsible for public health care in Croatia and Slavonia established the Royal State Government of Croatia-Slavonia-Dalmatia.

At lower levels, the conduction of the Law and decisions of the Government was executed by political regions such as sub-counties and cities or municipalities with appointed magistrates. The sub-counties appointed sub-county doctors and veterinarians, and in cities the city councils appointed special committees responsible for health care.

The order of the Royal Government of Croatia-Slavonia-Dalmatia No. 22 633 from December 9, 1875 added to the Law a price list for medical services. This price list contained various dental procedures for which rewards for doctors were determined.

A new law on regulation of health care services in the Kingdom Croatia-Slavonia was passed in 1894 (Collection of Laws and Orders, 1894, Part IV, No. 9). After twenty years of applying the law from 1874, it became clear that a new law was necessary. It was not due to deficiencies of the old law or to implement new decisions, but to align it with the territorial and administrative changes that had happened in the meantime in Croatia.

The Military Frontier was reintegrated and significant reforms were implemented in the administrative system, so the new law aligned the state in health care with the administrative system in Croatia and Slavonia. Consequently, according to the provisions of this

law, the state government was responsible for managing and monitoring the activities of public health care within the Kingdom of Croatia-Slavonia. Within the Government, there was a separate health department and state health council to carry out these activities.

In the counties and cities, these activities were conducted by county physicians and county health boards or city doctors, city health boards and city midwives, and in districts, there were district doctors (The Law, 1894, Paragraph 2).

On June 15, 1894, the Government passed a new Order No. 24 209, that was updated with a new price list of rewards for individual medical procedures. Part of it referred to the price list for surgical, obstetric, eye and dental operations, where the prices for about 30 dental procedures were determined in detail²⁷.

On March 25, 1906, a new Law on Health Care was passed that elaborated and improved regulations for health protection of the inhabitants, and stipulated measures and procedures necessary to achieve them. The Law ordered that counties and cities had to adopt statutes, approved by the Government, which would stipulate measures on how to conduct a number of daily activities regarding protection of public health. Furthermore, the Law ordered the conditions that needed to be fulfilled by doctors and midwives working in cities and counties, as well as measures to prevent fraud in medicine and obstetrics. The practice of preventing plagues and epidemics was continued and a number of provisions were adopted that protected the health of young children, school children and youth (Collection of Laws and Orders, 1906, Part VII, No. 19).

Nevertheless, health protection was still unavailable to a significant portion of the poor. Therefore, the Regional Treasury was founded in 1893 in Osijek for the insurance of workers, which was a branch of the State Treasury for the insurance of workers in Zagreb.

Increased consideration for conscientious and professional conduction of dental procedures in Croatia and Slavonia was noted in the Government Order No. 33 317 from February 13, 1892, which stipulated the scope of activities that could be carried out by dental technicians. To prevent incompetent dental procedures, this Order stipulated that dental technicians could only manufacture artificial teeth and dentures. They were not allowed to present themselves as dentists, do dental work or execute any kind of oral operations. If they had been caught doing any of these activities, they would have been punished for fraud²⁷.

Proof of increased and continuous care for dental health of their inhabitants can be found in a letter from the State Government, Department of Internal Affairs, to the administration of the Public Hospital in Osijek from December 11, 1908, which regulated the process of acquiring and prices of dentures²⁸.

In 1922, the Central Office for Insurance of Workers was founded in Zagreb, and in Osijek its branch, the Regional Office for Insurance of Workers was founded, which was responsible for a great part of Slavonia. The Office in Osijek had its own health care service, general and specialist doctor offices, pharmacy, etc. The year 1938 saw the biggest number of active insured people, 38 000¹⁸. Within this Regional Office, there was a dental practice as well, where workers and the less wealthy could receive dental protection.

After World War I, the People's House of Health was founded in Osijek, the main purpose of which was to work on health care awareness and preventive medicine. Within the People's House of Health, there was a practice for teeth, where school children could receive dental protection¹⁹.

In the first half of the 20th century, dental health made progress in Osijek. More complex dental procedures were executed and modern equipment was obtained, and one of Osijek first dentists, Dr. Kraus, had the first x-ray machine for dentistry¹⁹.

In the 1930s, 32 000 inhabitants lived in Osijek, with 10 dentists and several dental technicians working in the area, providing effective dental protection to the inhabitants.

At the end of the 19th century, medicine in Osijek was at a very high level. A new hospital was in function and a variety of renowned doctors were working in it and established their association in 1874, the Society of Slavonian Doctors that published its monthly journal, the Bulletin of the Society of Slavonian Doctors. At the end of the 19th century, dentists in Croatia were mostly members of the Doctors Assembly of the Kingdom of Croatia-Slavonia. However, in 1903, they founded their own professional association which would promote their professional interests, the Association of Croatian Dentists, one of the first in the world, which was a predecessor of the Croatian Dental Society. The Association issued its own Rules, which highlighted the goals of the Association to be developing and promoting awareness of dental hygiene and oral health in general. The Association of Croatian Dentists, with the help of a pharmacist from

Zagreb, produced and distributed preparations for oral hygiene; a significant portion of the profit was donated to schools with the aim to protect and promote oral health and hygiene among school children.

It is interesting that after World War I, the doctors in Osijek established a new association named the Doctors Club in Osijek, which was active until World War II¹⁸.

Another interesting fact is that some dentists from Osijek, over time, wrote and published papers and booklets on particular subjects from the field of dentistry, therefore these pieces are considered some of the first in Croatia dealing with dental topics. To illustrate, Dr Vasilj Atanasijević, a famous Osijek doctor, defended and published his inaugural dissertation in 1826 in Pest, entitled *Dissertatio inauguralis medica. De glossitide*. It is so far considered to be the first in Croatia containing dental topics²⁵.

In 1884, Dr. Antun Lobmayer, born in Osijek, published a booklet in Zagreb entitled *Naši zubi, pouka za svakoga komu je stalo do zdravih zubi* (Our teeth, advice for everyone who cares about healthy teeth), in which he, in a simple way, explained how to take care of oral health and hygiene.

In 1890, Geza Bauer, a dentist from Osijek, published, in Croatian and German, a booklet entitled *Kako se njeguju i uzdržavaju zubi i usta* (How to take care of and maintain dental and oral health). This booklet was accompanied by a price list for services Bauer performed, where it becomes evident that he not only extracted and fixed teeth, but also conducted certain orthodontic services. Geza Bauer was actually not a doctor, nonetheless, he was one of the most respectable and best dentists in Osijek. Doctors from Osijek would report on him to the Royal State Government, but without any success. Proof of the quality of his work is the fact that in 1975, a dentist from Osijek still had two fillings that had been done by Geza Bauer in about 1912¹⁹.

After Slavonia had liberated from the Turks, it became part of the Austrian Empire, and afterwards, after the Austrian-Hungarian Settlement in 1867, it became part of the Austrian-Hungarian Monarchy. Slavonia was a region on the border of the Monarchy with existing administrative, judicial and, of course, health care system. However, dental health and dental protection were non-existent or at a very low level. Treatments were executed by folk medicine practitioners and self-trained individuals. The Austrian government

introduced all elements of civil life into Slavonia; among other things modern for the time and organized health care. Even though a distant region on the border, Slavonia gradually became an urban area, with traffic connections constantly being developed. Furthermore, hospitals were built, where doctors worked, who gained their education at prestigious universities in the Austrian Empire, and implemented modern medical procedures, as well as dental procedures²⁹.

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Sažetak

POVIJEST DENTALNE MEDICINE U OSIJEKU

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Osijek i Slavonija su tijekom vremena bili dijelom mnogih carstava i država. U ovome radu autori prikazuju skrb o dentalnom zdravlju stanovništva Osijeka i Slavonije kroz povijest. Od najstarijih pretpovijesnih vremena kada je dentalna zaštita, kao uostalom i medicina općenito bila u „nadležnosti“ božanstava i vračeva, preko rimskog i srednjovjekovnog razdoblja te razdoblja turske vladavine pa do novovjekovnog razdoblja kada Osijek i Slavonija ulaze u sastav Austrijske carevine i kada se uvode mnoge novine na svim poljima društvenog života, između ostalog i za ono vrijeme moderni postupci medicine i dentalne zaštite. Od tada zapravo možemo govoriti o pravim počecima medicine i dentalne zaštite. Autori prikazuju rad brojnih „zubara“ koji su djelovali u Osijeku, poput vojnih i gradskih kirurga, brijača i napose, nakon reforma provedenih u 19. stoljeću, liječnika koji su morali imati propisanu školsku i specijalističku izobrazbu. Zahvaljujući reformama austrijskih, a potom i austro-ugarskih vlasti uveden je red u postupanje i rad osoba koje su smjele provoditi dentalne zahvate, propisane su cijene za iste i uvedene kazne za one koji su se bavili dentalnim zahvatima, a za to nisu imali kvalifikacije.

Ključne riječi: Povijest dentalne medicine; Zubari; Slavonija; Osijek; Austrijska carevina