Brief history of medicine in Slovenia

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Summary

Slovenes have lived in the territory of today’s Slovenia for more than 14 centuries, whilst the history of its medical culture goes back for 2000 years. The advent of Christianity in Slovenia in the eighth century AD marked an important turning point in the development of its medicine. The 500 years of the Habsburg monarchy was later to have a further impact on the development of new medical ideas. During the Renaissance, the names of the Slovene doctors Mattioli, Paracelsus, Scopoli and Hacquet, who worked among Slovenians, were to become known all over Europe. Others of Slovene origin were Perlach, Santorio, Gerbezius, Carbonarius, Plenciz, and Sagar, whose work influenced European medical culture, especially in German speaking countries. However their Slovene nationality was not acknowledged until the second half of the 19th century.

Résumé

Les Slovènes vivent sur le territoire actuel depuis plus de 14 siècles, mais l'histoire de leur culture sanitaire remonte à deux millénaires. La christianisation du pays Slovène et son appartenance, durant cinq cents ans, à la monarchie hasbourgeoise représentent une étape dans le développement de la médecine locale. C'est pourquoi ce pays s'est ouvert à la diffusion des idées et a permis à des médecins connus en Europe (Mattioli, Paracelsus, Scopoli, Hacquet) d'y oeuvrer. En même temps, des médecins Slovènes ont contribué au développement de la culture sanitaire européenne, avant tout dans les pays de langue allemande (Perlach, Santorio, Gerbezius, Carbonarius, Plenciz, Sagar...), alors que l'identité Slovène n'est reconnue que depuis la seconde moitié du 19e siècle.

The history of medicine is much more than a history of its technical medical progress. Medical thoughts, theory and practice, institutions and practitioners mould national medical character. The history of Slovene medical culture involves that of the Celts, the Venets, the Romans, the old Slavs, christianized Slavs and the Slovenes under the Habsburg hegemony, before the Slovenes in Yugoslavia finally became the Slovenes in the independent Republic of Slovenia (picture 1). The country’s population had increased from 1.3 million in the year 1900 to a figure of 2 million today.

It is therefore a complex task to outline briefly an objective historic survey of our medical culture. The political changes that occurred in Eastern Europe, the fall of the Eastern Block and disintegration of former Yugoslavia in 1991 brought a completely new attitude towards the writing of national and medical history. Today, the history of medicine of such a small nation may be presented without the bias previously resulting from its subordinate position in a multinational state.

The chronology begins with the nations first known to inhabit the territory at the southern part of the Alps; the Celts and later, the Venets. The oldest medical discoveries in that area date back to the Roman period in the 2nd century.
1. The location of Slovenia in Europe

The Roman towns of Emona, Celeia and Petovia (Ljubljana, Celje and Putz) gave birth to our applied science and medicine. The findings of surgical instruments (26) show that Emona and Petovia already had surgeons in 2nd century, who probably came with the Roman Army.

From the 6th to 7th century AD, the Southern Slavs inhabited a part of the Balkan Peninsula and the Eastern Alps. The Slovenes living in the most Western part learned of Christianity in the 8th century. Medieval medicine was introduced to the Slav countries by priests and monks. Many monasteries were built, particularly in the 12th century, when ‘cloistered medicine’ began to develop among Slovs. Educated monks wrote medical, as well as theological texts. The manuscripts from the Sticna Monastery of the 12th, 13th and 14th centuries are amongst the most beautiful of Middle Europe (31). But we even find instructions for "conjuring away the toothache”.

In the late Middle Ages the first universities were founded in Europe, very near Slovenian territory. The first educated doctors to practise on Slovenian territory came from the Italian universities of Padua, Bologna and Ferrara.

Later on, more German speaking doctors from Vienna and some other German language medical schools practised in what is now Slovenia. As there was no university in the Slovenian region, our own students had to travel abroad to study at the universities of Vienna, Salzburg, Freiburg, Prague, Budapest, Padua and Bologna.

Until 1918, the Slovenes had been ruled by the Habsburg dynasty for more than half a millenium. Consequently, they were not able to found their own distinctive university until 1919.
2. The tombstone of Andreas Perlach built in St Stephan’s Cathedral in Vienna

Biographical notes of physicians in Slovenia

We present below short biographies of some important Slovene born physicians, as well as those who migrated there and influenced the development of the medical culture.

Andreas Perlach (1490-1551), Andreas Perlachius ex Wittschein Stiriensis, born at Svecina: doctor, professor of mathematics and astronomer. He became dean of the Astronomical Faculty, was four times dean of the Medical Faculty in Vienna and in 1549 rector of the University there. His tombstone is built into the wall of the cathedral of Saint Stephan in Vienna (2) (picture 2).

Matija Luban (1540-?), Mathias Lubanus Styris Ciliensis of Celje was a very popular professor at the Medical Faculty of the University of Vienna and also became in 1575 rector there.(1).

The name of Santorio Santorio of Koper (1561-1636) Sanctorius of Capodistria is well known. He ranks among the leading iatrochemists and iatrophysicists of the 17th century (picture 3). He studied philosophy and medicine in Padua (1575), where he received his doctoral degree in 1582. He is believed to have been a private doctor of the Croat dynasties Frankopan, Zrinjski, Draskovic and some other noblemen from Northern Italy.

Between 1587 and 1599 he was probably a court doctor of Sigmund III, king of Poland, in which country he became well known for his experience and where he excelled in practice. In 1599 he settled in Venice, where he published the first essay on methods for the prevention of mistakes in medical practice "Methodus vitandorum errorum omnium qui in arte medica contingunt". In 1611 he was appointed professor of theoretical medicine at the medical faculty in Padua.

Santorio is renowned for his many inventions, including the thermometer (1610), anemometer and hygrometer. In 1610 he published his commentaries on Galen's work Ars parva and, in 1614, his discoveries in his De medicina statica aphorismi. He thought that good health depended on the equilibrium of body liquids; which was reflected in the way of secretion. He weighed himself before, during and after meals, after urination and defecation, on the scales especially made for this purpose. Thus he discovered an invisible perspiration and pointed to certain laws as quantitative indicators of metabolism. He was certain that we could maintain our health simply by controlling our body weight.(picture 4, 5).

He was noted as a iatrophysicist and, under the influence of Galileo, he developed a quantitative experimental methodology in medicine. In 1616 he was nominated president of the Collegium medicum at the University of Padua, which granted medical degrees in the name of the Venetian Republic. He retired in 1624 and
3. Santorio Santorio, Istrian doctor

returned to Venice, where he took an active part in the control of the epidemic of bubonic plague (3, 10, 24).

Benedik Griindel (?-1705) and Ivan Gossiak (1645-1689) were the first writers on the spas of Carniola. The former published a monograph on *Rogaska Slatina* (Roitschoczrene, 1687). The latter author published the first gynaecological work in Slovenia "Observationes circa morbus mulierum", observing that "women's diseases" were treated at the local spas (9, 8).

Dr. Marko Gerbec, Marcus Gerbezius (~1658-1718) (picture 6) is remembered for his practice in Slovenia as well as his influence on Europe. He was born at Sentvid near Sticna. He studied philosophy in Ljubljana, and then proceeded to read medicine in Vienna, Padua and Bologna, where he graduated in 1684.

After his return from Italy he was appointed official physician of Carniola province in Ljubljana and practised as the private doctor to the monasteries of Sticna and Bistra (near Vrhnika).

He developed his medical theory and his ideas of iatrochemistry under the influence of Thomas Sydenham's current doctrine. On the basis of his observations and autopsies, he proposed some new explanations for the etiology as well as the course of disease. He made early scientific analyses of his observations and was critical of the old established doctrines. At the same time he stressed the importance of the effects of social environment, climate, and of bad habits on the occurrence of illness.

In 1688 he became a regular member of the Natural Academy in Vienna (Academia Caesarea Leopoldino-Carolina naturae curiosorum). In the academy's annual publications Ephemerides and Miscellanea (1689-1718), he published 70 observations of diseases and treatments. He wrote a book on his findings *Intricatum extricatum medicum, seu Tractatus de morbis complicatis* (Labaci 1692) (4) and a book of discussions on the influence of the Ljubljana climate on the people's health *Vindiciae physico-medicaeaurae Labacensis, Oder Grundliche Vertheidigung der Laybacherischen Luft* (Laybach 1710) (5). He described his practical experiences with different diseases and their appearances in the reports *Chronologia medica* and *Constitutio* 1697-1700 (Labaci 1699, 1700, 1702, Augustae Vindelicorum 1705) which were reprinted in one volume in *Chronologia medico-practica*: Francofurti ad Moenum, 1713 (6). His short reports *(Constitutio)* or 1709-17 were published in 1712-18 in the supplements to the annual report *Ephemerides* (7).

Gerbezius provided specific descriptions of heart diseases, diseases of the lungs and gall, spotted fever, malaria and sepsis. He kept pace
with the developments in surgery. In addition, he described indications for which spa treatment would be recommended (Rogaska Slatina: Dolenjske: Toplice), as well as indications for artificial abortion. In 1703, he published a rare example of disease followed by removal of the spleen by the Ljubljana surgeon Janez Krstnik Fanton de Brunn. The second edition of Intricatum medicum was published in 1713 in the same book as Chronologia medico-practica. His report on cattle-plague in 1712 (De moderno pecorum interitu), which was acknowledged by G. Morgagni in his subsequent work of 1761. Gerbezius found in one patient an extreme bradycardia, temporary vertigines and epileptic seizures. His description of bradycardia is highly convincing: "...he had such a slow pulse that a pulse of a healthy peer would beat three times before his pulse would beat for a second time...". From this description of the heart activity we could conclude even today that the patient had a complete heart block. As a result of Gerbezius’s work, the former Yugoslavian Association of Cardiologists had proposed re-naming complete atrioventricular block as the Gerbezius-Morgagni-Adams-Stokes Syndrome in 1977.

In 1693 he was among the founder members of the Academia operosorum, under the name of Intentus and finally, between 1712 and 1713, he became its president. He was also a member of the Dizmo Fraternity (Fraternity of intellectual classes and aristocracy). In 1712 he founded the fraternity of Saints Cosmos and Damian, which united the surgeons and physicians in Carniola. A part of his rich library was stored in the seminary library at Ljubljana.

Gerbezius, a scientific writer and humanist, is considered the founder of Slovene scientific medicine. He was esteemed and applauded by European scientists. His portrait appears among those of the illustrious in the "Hall of Forty" at the Medical Faculty in Padua (17).

Marko Anton Plencic, Marcus Antonius Plenciz (1705 - 1786), professor at the Vienna Medical Faculty, is often called the Slovene Pasteur. He published his work Opera medico-physica in 1762. (23).

In this, more than a century before the era of bacteriology, he wrote about the specificity of causative agents, contagium animatum. He suggested that diseases were caused by tiny living seeds, each different from the other and...
specific for each contagious disease. Each infection had its own specific causative agent; each causative agent caused only one kind of disease. He also believed that a man fell ill only if his constitution was susceptible to that disease. In his work, he discussed immunity, incubation, and germ carriers, as well as describing contagious diseases such as scarlet fever and variola.

Doctor Janez Mihael Zagar, Joannes Bapt. Michael Nobilis de Sagar (1732-1813), was born in Bela krajina, in the southern part of Slovenia. He worked in the town Jihlava in Moravia. He published an interesting and well founded symptomatic nosological system in the form of a compendium for doctors and students of medicine, which went through two editions (1776 and 1783). Sagar was considered one of the six leading European nosological systematists of the 18th century. (18)

Gregor Voglar von Bisenegg, Gregorius Carbonarius, (1652 - 1717) was born in Upper Carniola. He was personal doctor to the Russian tsar, Peter the Great. He accompanied the tsar on his journeys, and had a widespread medical practice in Moscow. He played, among others, the role of the middleman in the purchase of the famous anatomical collection of preparations, owned by the Amsterdam anatomist Fredrik Ruysch (1638-1731) (25).

Jurij Karl Starovasnik or Georg Karl Starovasnik: also [S]Starawasnig, Starakasnik, Altdorfer, (1748 - 1792) from Kamnik in Upper Carniola was a very talented and knowledgeable man, full of life energy. In 1773 he graduated with excellent grades at the Vienna Medical Faculty. A year later he was appointed professor of physiology and materia medica at the Freiburg Medical Faculty. He held many important positions - four times he was elected dean of the
Foreign doctors amongst the Slovenes

In the 16th century Paracelsus (11) travelled through the territory of today's Slovenia. According to some sources, he stayed at Ptuj, most probably at the house of Doctor Homelius, when he visited the Mercury Mine in Idria (19).

The Italian doctor Giovanni Antonio Scopoli, Ioannes Antonius Scopoli (1723-1788) worked in the mining town of Idria in Upper Carniola (30). The Idria mercury mine provided mercury for most of Middle Europe. It was owned by the Habsburg court, which endeavoured to send the best doctors to the area, in order to treat its miners. Scopoli first became known in Carniola as a botanist. He published an extensive work Flora Carniolica in which he described some typical Carniolan plants. One of them was the eponymous Scopolia Carniolica. Scopoli had an extensive correspondence with Linne, who highly appreciated his botanical work (28). His De Hydrargyro Idriensi gave him a place amongst the founders of European occupational medicine. (14, 27).

For some time, the Breton doctor and master of surgery, Baltazar Hacquet de la Motte (1739-1815) worked with Scopoli in Idria. As a natural scientist, he was greatly interested in Carniolan natural characteristics and his name became well known all over Slovenian territory. He was a botanist, mineralogist, geographer and balneologist (11, 21).

Vinko Kern or Vincenz Kern (1760-1829), came from a family near Kranj in Upper Carniola. After he had finished his study of medicine in Vienna, he became professor of surgery at the Medico-surgical Lyceum in Ljubljana. During his stay there between 1792 and 1805, he introduced Jenner's method of vaccination to Carniola (13). He was invited to Vienna, in 1805, where he founded a surgical seminary at the Vienna Medical Faculty (15).

Fran Viljem Lipic or Franz Wilhelm Lippich (1790-1845), born at Iglo in Slovakia, studied medicine in Budapest and Vienna (1823). He became second city physician in Ljubljana and later the assistant director of the Ljubljana Civic Hospital. He worked in Ljubljana for eleven years and introduced the stethoscope into clinical practice. It was then he produced his most important work, Topographie der k.k. Provinzialstadt Laibach in Bezug auf natur- und Heilkunde (16) (picture 7). Lippich was also an important medical writer, who wrote an early anti-alcohol propaganda publication Grundzüge zur dipsobiostatik : Laibach (1831) (16). After leaving Ljubljana, he accepted the position of professor of internal medicine, firstly in Padua, and later in Vienna as successor to Hildebrand (15).
The development of medical schools and hospitals among the Slovenes

The history of medical education is integral to the history of medicine. Our first schools were mostly run by Jesuits. In the year 1693 was founded the first Jesuit Academy, the *Academia Operosorum*, whose members were also physicians. In 1753 Ljubljana built its first midwifery school and in 1782, Anton Makovic published the first book for midwives in the Slovene language. In the same year, the Medico-surgical Lyceum was founded. During the period of Ilirian Provinces (1809 -1813) - French occupation of some former Austrian territories including Upper Carniola - the Ecole Centrale became a Faculty, following the French pattern. Unfortunately, when the French left the country, it was downgraded to a lyceum, and, after the March revolution in 1848, abolished (22). The physicians of Carniola organized themselves professionally in 1861 by founding the Camiolian Physicians Society. Before that, the Habsburg Monarchy permitted only a medical society in Vienna. In 1891, the Slovenes obtained their own Medical Chamber. The Medical Faculty of Ljubljana was founded only in 1919 after the fall of Austro-Hungarian Monarchy. The Slovene professional medical journal *Zdravniki vestnik* appeared in 1929.

The first hospital in Ljubljana was founded as early as 1342 or according to some sources, even earlier, in 1325. It served mostly as a charitable institution. In 1786, with the decree of the emperor, Joseph II, Ljubljana obtained its first civil hospital. In 1895, when Ljubljana was struck by a great earthquake, the hospital building was badly affected. A new hospital, which is still standing, was built (32). In 1973, Ljubljana, the Slovene capital, achieved its new, modern institution, - the University Medical Centre.

Conclusion

The history of health care in Slovenia forms part of its national history and culture, demonstrated by its numerous institutions and societies. The Institute for the History of Medicine at the Medical School of Ljubljana University was founded in 1934 and the Medico-historical Section of the Slovene Medical Society in 1950. The Slovene Scientific Society for the History of Health Culture (founded in 1963) was followed by the Slovene Museum of Dentistry in Celje in 1993. At the time of writing, the Slovenian Health Museum, which is being established in Ljubljana, will include public as well as private medical collections.
8. Idria in the time of Scopoli and Hacquet

References


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**Biography**

Zvonka Zupanic Slavec, a medical doctor, began her career in 1984 as a general practitioner, and also worked at the Institute of Anaesthesiology. In 1987 she became assistant professor at the Institute for the History of Medicine at the Medical School of the Ljubljana University. She obtained her M.Sc. degree in the history of medicine (1992), and is presently preparing her Ph. D. thesis. She is doing research work, mostly in the local history of medicine in the 19th century, giving lectures on the general and the national history of medicine to the students of medicine and dentistry and serving as tutor in their research.

In the region of Alpe-Adria she organizes professional meetings for the historians of medicine, and is the editor-in-chief of their proceedings. She has also presented papers at the international meetings of medical history. Her activity with the project of the "Slovenian Health Museum" is toward the preservation of the memory of the history of medical culture amongst Slovenes. She takes part in the popularisation of the history of medicine on the radio, TV and in journals. She is an active member of ISHM.

Mario Kocjanic, M.D., M. Sc, trained in occupational medicine, has practised as Medical Officer in the Dispensary for Occupational, Traffic, and Sport Medicine in Kranj (Slovenia). Scientific works in the field of the History of Medicine include several published papers focussed on occupational safety and health in the 19th century. Current President E.C. of the Slovenian Society of the History of Health Culture. Member of ISHM.