

The Moscow Clinic for Nervous Diseases - Walking Along the Portraits

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The history of the Clinic for Nervous Diseases of the Moscow University reflects in its entirety the history of the Moscow neurological school itself. A.Ya. Kozhevnikov, the founder of the clinic, was the first professor of neurology in Russia. The clinic opened its doors in 1890 and became the first specialized medical facility in Europe devoted to the treatment of neurological disorders. Kozhevnikov brought up a number of talented followers, who later worked all over Russia, and some of them became in charge of the Clinic for Nervous Diseases. This paper looks into contributions Kozhevnikov, his pupils V.K. Rot, V.A. Muratov, G.I. Rossolimo, E.K. Sepp, and some others who were responsible for the development of the neurological science.

Keywords Clinic for Nervous Diseases, Moscow University, A.Ya. Kozhevnikov, Moscow school of neurology

To the memory of my father Alexander Vein

Introduction

On the walls of the Auditorium of the Clinic for Nervous Diseases, which is located in the very heart of the city of Moscow, hang the portraits of outstanding Russian neurologists who happened to lead the clinic in the last 100 years since it was founded. Those portraits are revealing the history of the Moscow Neurological School along with the history of the Clinic for Nervous Diseases of the Imperial Moscow University.

The idea of the creation of a Clinic for Nervous Diseases of the Moscow University was directly connected with the development of clinical neurology in Europe as well as in Russia, where clinical neurology was gaining ground as an independent medical discipline.

The first clinic for nervous and mental diseases was built by A.Ya. Kozhevnikov in 1887 with the money donated by the famous merchant V.A. Morozova, who was active in charities (Kulik, 1996). At this time it was decided to expand clinical facilities of the Moscow University. The site, where new clinics would be built, was set out close to Kozhevnikov's clinic, not far from the famous Novodevichii Monastery, at the so-called Devichie Polje playground. In a short time, the medical faculty of Moscow University

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Figure 1. Devichje pole. Clinics of Moscow Imperial University.

received significant financial support from the government and private donations. The Ministry of National Education of Russia financed the building of the clinics with 2.5 million rubles, and in 1890, the Clinic of Nervous Diseases headed by Kozhevnikov opened up in a new facility. That was the first clinic of Moscow University ever built with government money and it was the beginning of a new “medical village.” From 1890 to 1897 the medical faculty had been able to build 13 magnificent buildings to be used as new clinics (710 beds) and 6 scientific institutes (Fig. 1). In this way Moscow University got an opportunity to teach different medical specialists at the same clinical place (Stochik, Pal’cev, & Zatravkin, 1998). This remarkable achievement of the Russian health care system was duly noted by the scientists who gathered to attend the 12th International Medical Congress at in Moscow in August 1897. A century later, the medical faculty of Moscow University was reformed into the Moscow Medical Academy. The Clinic for Nervous Diseases founded by Kozhevnikov is still a part of Moscow Medical Academy and bears the name of its founder. The very street that houses the “old” and the “new” Clinics for Nervous Diseases and Psychiatry was named after Kozhevnikov’s follower, the well-known neurologist G.I. Rossolimo. Considering the purpose of this article and the limited space, which may not allow us to highlight all the events and names over the last century, I decided to present the history of the clinic through the chronological stages related to the personae of the clinic’s leaders, who defined the ways of the development of the clinic itself as well as the development of the neurological science in Moscow.

The Beginning: 1869 – 1902 A. Ya. Kozhevnikov

The most prominent figure in the history of the clinic was its founder, A.Ya. Kozhevnikov. Alexey Yakovlevich Kozhevnikov was born on the 24th of February 1836 in the provincial city of Ryazan into a family of a clerk. In 1846, he was admitted to the First Male Ryazan Gymnasium and graduated with the silver medal for academic achievement in June 1853. The same year, he enrolled in the medical faculty of the Imperial Moscow University.

Professor I.V. Varvinskii, director of the Clinic of Hospital Therapy, noticed a young and curious doctor and offered him a position as assistant in his clinic. It was there that Kozhevnikov wrote his doctoral dissertation entitled *An Illness, Described by Duchenne as Ataxie Locomotrice Progressive* and received his medical degree on June 22, 1865 (Rot, 1902; Lisitsin, 1961).

The teaching of the nervous and mental disorders first started at the department of therapy of the Moscow University. The first lectures on nervous and mental diseases were given by S.G. Zibelin (1735–1802) in 1768 (Lisitsin, 1961). It would take almost a century before neurology would be considered an independent specialty and the first department of neurology would be founded. According to the laws adopted in 1863, the university proposed the creation of the clinic for neurological and mental disorders. The same year, the medical faculty recommended Kozhevnikov as a chair person for a newly formed clinic and be in charge of the curriculum for nervous and mental disorders. In accordance with the traditions of the time (1866), he was sent abroad to study European neurology and psychiatry. For almost three years Kozhevnikov worked in clinical settings and in laboratories led by outstanding physiologists and neurologists, such as Charcot, Griesinger, du Bois-Reymond, and others. In Charcot's laboratory Kozhevnikov showed convincingly that spinal degeneration could be traced to the motor cortex. Charcot commented that many researchers had previously failed to correlate a primary lesion of the gray matter of the medulla with the clinical signs known as glosso-labial-laryngeal paralysis (Pearce, 2002). Kozhevnikov visited and paid a lot of attention to the organization of the European psychiatric institutions. He particularly studied in detail new St. Anne's psychiatric clinic in Paris; he made a detailed report and sent it to Moscow (Kozhevnikov, 1867). He also worked at the National Hospital for the Paralysed and Epileptic in London devoting much attention to the organization of neurology as an independent clinical discipline. Founded in 1860, the National Hospital was beginning to emerge as an independent clinic for neurology (Grashchenkov, 1960). In 1869, the Moscow University Council chose the 33-year-old Kozhevnikov, a lecturer of neurological diseases and psychiatry, to lead the department. That was how the first Russian independent department of nervous and mental diseases was born in the summer of 1869 (Archangel'skii, 1965).

Initially, the university department of nervous and mental diseases had only a few rooms with 19 hospital beds, which were taken from the internal medicine and surgery departments of the Novo-Ekaterininskii hospital of the city of Moscow. Kozhevnikov's lectures were popular with students, who crammed into the lecture halls, because his explanation of the material was original, well thought-out, clearly explained, and accessible. Soon more than 200 students would be attending the lectures. Not a single room in the hospital could house such an audience, and the lectures had to be delivered in the hallways (Lisitsin, 1961). It was obvious that a new facility was needed and in 1884 Kozhevnikov along with architect K.M. Bykhovskii¹ designed the first building of the Clinic for Nervous and Mental Diseases and personally managed its construction (Stochik et al., 1998).

The first patients were seen there in 1887. However, Kozhevnikov considered that clinical neurology as an independent specialty should be separated not only from internal medicine but also from psychiatry, as the two subjects, despite their common features,

¹K.M. Bykhovskii, an academician of architecture. Before planning the clinics he made a trip abroad together with two professors of medical faculty, F.F. Erisman and V.F. Snegirev, to learn about the university clinics in Western Europe. They visited Zurich, Bern, München, Heidelberg, Leipzig, Strassburg, and Paris. Having seen a lot Bykhovskii used none of those clinics as the prototype for his project.

have many differences with respect to their objects and methods (Grashchenkov, 1960). Therefore, Kozhevnikov was simultaneously building a second, new, Clinic for Nervous Diseases. With the permission of the medical faculty, he transferred the control over the first clinic to one of his best pupils, S.S. Korsakov, and since that period the clinic had become exclusively for psychiatry.

That was the historical moment of separation of neurological and psychiatric disciplines in Moscow to be regarded independently, whereas in elsewhere Europe and even in Russia, e.g., St. Petersburg, the two disciplines would be practiced together for a long time.

The construction of the new building for the clinic was completed in three years, and on October 11, 1890, the very first specialized Clinic for Nervous Diseases in Russia and Europe was opened (Lisitsin, 1961; Stochik et al., 1998). The “old” clinic of Korsakov and the “new” clinic of Kozhevnikov shared the same huge park that bordered the park of the Moscow estate of Lev Tolstoy. Later on, Tolstoy developed a personal bond with the professors of both clinics, particularly Korsakov and Rossolimo. He visited the clinics a couple of times on special occasions (Porudominskii & Vein, 2004).

In 1892, Kozhevnikov, in cooperation with his elder colleague G.I. Pribytkov (1857–1909), opened the Neurological Museum based on his own collection, which was remarkable for the period and consisted of preparation specimens of anatomy, histology, and comparative anatomy of the nervous system (Grashchenkov, 1960; Archangel'skii, 1965).

The museum collection was growing fast. At the moment of opening there were 415 museum pieces, in 1902, the year, when Kozhevnikov died, the collection had increased to more than 1500 (Lisitsin, 1961). Although the emphasis of the museum was on pathology rather than treatment, the collection also included photos of patients before and after successful treatment (Freeman, 1992). A museum catalogue in Russian and French was exhibited at the 12th International Medical Congress (Kozhevnikov & Pribytkov, 1897).

The new clinic occupied a two-storied brick building with an addition of another, the third floor, where apartments for medical and nursing staff were located. The main building was divided into two parts. In the bigger part, the male and female clinical stations, which consisted of 44 hospital beds, were located. The smaller part housed an outpatient department, medical offices, and study rooms on the second floor as well as laboratories and a lecture hall with 250 seats. In the middle of the building, electrotherapeutic and hydrotherapeutic rooms were located for easy access for outpatients and inpatients. The clinic was equipped with first-class microscopes, reagents, microtome, and projection equipment for educational and pathology slides, and it even had a special pavilion for photography (Lisitsin, 1961).

Kozhevnikov's scientific interests were broad. His early works were mainly in the field of neuroanatomy and neuromorphology. The topics included amyotrophic lateral sclerosis, aphasia, myasthenia, familial spastic paralysis, and cysticercoids of the brain. He wrote 25 scientific papers, some of which were as long as monographs; I shall mention just some of them. In his monograph *Axonal Cylindrical Nervous Dendrites in the Calf's Cerebellum* (1869), Kozhevnikov described the large pyramidal cells of the cortex in the greatest detail. He was the first to show the origin of the axons of the cerebellar Purkinje cells from the cell itself (Kozhevnikov, 1869). His data was included in the various monographs, textbooks, and treatises.² In his PhD thesis *An Illness, Described by Duchenne as Ataxie Locomotrice Progressive* Kozhevnikov addressed the problem of *tabes dorsalis*. Furthermore he hypothesized that progressive muscular atrophy had damage at the level of the muscle, whereas changes in the nervous system were either occasional or secondary.

²See for instance Schultze-Waldeyer-Hertwigs Archiv für mikroskopische Anatomie, 1869.

Later, in his treatise *Nervous Diseases and Psychiatry* Kozhevnikov stated that syphilis is the main cause of *tabes dorsalis* and described it as a “postsyphilitic affection of the nervous system” (Kozhevnikov, 1883a, 1892).

In 1874 Kozhevnikov published the monograph *Aphasia and the Central Organ of Speech*. He concluded that a special center responsible for speech function is located in an area not far from the left Sylvian fissure. Kozhevnikov supported the already existing view of Broca and Meynert, though he assumed the center organ of speech to be less limited to a small area and to have numerous connections with other brain areas. However, Kozhevnikov failed to indicate temporal lobe involvement, as was done by Wernicke in the same year. In 1870, Kozhevnikov pioneered studies on the localization of function in the cortex. He stated that psychological processes are possible as a result of the functioning of specific portions of the brain (Kozhevnikov, 1874).

In his treatise *Nervous Diseases and Psychiatry*, which described spinal paralysis of childhood, in essence, poliomyelitis, Kozhevnikov was the first to suggest the infectious and inflammatory nature of the disease, which was proven by later research (Kozhevnikov, 1883b). In 1883 and 1885, in his two papers on amyotrophic lateral sclerosis where he analyzed morphological changes, Kozhevnikov was the first to demonstrate the affection of the pyramidal fibers of the cortex and the fact that it was a strictly systemic process (Kozhevnikov, 1883, 1885). In 1891, he published “Regarding Alcohol Paralysis,” in which he described the symptoms of peripheral paralysis, ataxia, and psychiatric disturbances of in detail (Kozhevnikov, 1891). Later, in 1897, the peculiarity of the psychiatric presentations of this condition was studied in greater detail by his pupil Korsakov. In 1895, Kozhevnikov described another illness, which he called *Diplegia spastica progressive (familiaris)*. Familial predilection was emphasized in the very name of this disease. Kozhevnikov differentiated this illness from Little’s disease and *familial spastic paraplegia* of Strümpell. The significance of this work was the fact that Kozhevnikov tried to clarify the confusion regarding different spastic and paralytic syndromes and to outline an independent illness in its midst (Kozhevnikov, 1895).

A special place in clinical neurology is occupied by the illness, which was first described by Kozhevnikov and called *Epilepsia partialis (corticalis)*. Later, it was called “Kozhevnikov’s syndrome” or “Kozhevnikov’s epilepsy.” It was first described at the meeting of the Neurological and Psychiatric Society on January 21, 1894. A paper “A Peculiar Kind of Cortical Epilepsy” was published in the journal *Medicinskoe Obozrenie* (Kozhevnikov, 1894). In four clinical cases, a seizure disorder was described, which affected one part of the body, consisting of frequent jerking movements that were resistant to treatment and lasting from 3.5 to 5 years. He recognized the epileptic nature of the convulsions and postulated that they were caused by a localized inflammation of the brain involving the motor pathway. Later, in 1927, L. I. Omorokov reviewed 42 cases of “Kozhevnikov’s epilepsy” from the literature and described 52 more cases that he observed in his Siberian clinic recognizing a connection between this form of epilepsy and Russian spring-summer tick-borne encephalitis (Omorokov, 1927, 1951; Ismagilov & Popelyanskii, 2001).

Kozhevnikov’s scientific achievements were complemented by his public activities. In 1890 he founded the Moscow Society of Neurology and Psychiatry and became its first president. On the foundation day the society counted 21 members and by 1902 the number had increased to 152 (Lisitsin, 1961). Physicians usually met on Saturdays once or twice a month and were involved in the discussions of one or two scientific papers, but most of the presentations included case reports (Freeman, 1992). In 1900, the *Journal of Neuropathology*

and Psychiatry was founded under the auspices of Kozhevnikov. It was named after his former student Korsakov, who died young that same year.

Kozhevnikov was one of the founders and organizers of Pirogov's Society³ and the First Congress of Russian Psychiatrists (1887). He was in charge of the neurological section at the 12th International Medical Congress, which took place in Moscow in 1897. Prominent European neurologists and psychiatrists visited the Clinics for Nervous Diseases and Psychiatry; all 45 foreign colleagues became members of Moscow Society of Neurology and Psychiatry (Lisitsin, 1961). In appreciation of Russian achievements R. von Krafft-Ebbing, G. Marinesco, C. Lombroso, V.J.J. Magnan and others planted trees in the park of the Moscow clinics (Romanuk, 2001). These trees are still there, providing shade for the physicians, students, and patients of the Moscow Medical Academy.

The Museum of the Moscow Medical Academy, named after I.M. Sechenov, hosts a large archive of correspondence of Kozhevnikov and leading foreign neurologists. Some of them, namely Charcot and Erb, have visited the clinic (Figs. 2, 3) (Rodionov, 2002).

The creation of a school of Russian neurology may be considered the main achievement of Kozhevnikov. He congregated a "Mighty Bunch"⁴ of Russian neurologists around



Figure 2. W.H. Erb during his visit to the Moscow Clinic for Nervous Diseases in 1894. Sitting A.Ya. Kozhevnikov (left), W.H. Erb (right); standing from left to right – G.I. Rossolimo, V.K. Rot, unknown, unknown, L.S. Minor.

³Pirogov Nikolai Ivanovich (1810–1881) was the greatest of all Russian surgeons. He introduced the teaching of applied topographical anatomy in Russia and was one of the first to use ether anaesthesia in Europe. He described ether per rectum in 1847. Pirogov's work during the Crimean War (1854) is of such importance that he may be considered the founder of field surgery. He devised the plaster cast, first used successfully in the Sevastopol campaign, and the Pirogov amputation. His experiences in field surgery, published in German in 1864, became a standard reference. Besides his personal efforts for the wounded, Pirogov organized the training of nurses. The Pirogov medical society was the center of Russian medical public life in the 1880s. In 1898 S. S. Korsakov was elected as the chairman of the society.

⁴Mighty Bunch — the term initially used in St. Petersburg cultural circles in the 1860s for the composers of new Russian school, included Rimsky-Korsakov, Balakirev, Cui, Moussorgsky, and Borodin.



Figure 3. J.-M. Charcot and Moscow neurologists. In the center sitting J.-M. Charcot and his daughter, sitting right A.Ya. Kozhevnikov. Standing (from left to right) V.A. Muratov, G.I. Rossolimo, son of Charcot, G.I. Pribytkov, V.K. Rot, L.S. Minor.

him, including S.S. Korsakov, V.K. Rot, G.I. Pribytkov, V.A. Muratov, G.I. Rossolimo, L.S. Minor, L.O. Darkshevich, and many others (Fig. 4). They made Russian neurology famous. Kozhevnikov valued the immense significance of teaching. Upon graduation, he would select the best medical students for what can be called a neurological residency program, where after two or three years of working in the clinic he would arrange an academic tour in Europe. Upon return in Moscow and finishing their dissertations, Kozhevnikov's students led neurological practice and research not only in Moscow but also all over Russia.

It is impossible to give a detailed description of all Kozhevnikov's pupils and colleagues in this paper. For this reason I will present a short account on two of them, who later in their career hold two newly created chairs of neurology in Moscow. L.S. Minor and L.O. Darkshevich were among the key figures of Moscow neurology.

Lazar Solomonovich Minor (1855–1942) graduated from the medical faculty of Moscow University in 1879 and subsequently he studied and worked with A.I. Babukhin⁵ and Kozhevnikov. He spent some time abroad working with Charcot, Westphal, and Mendel. From 1910 until 1932, Minor was in charge of the neurological clinic at the medical faculty of what was called Moscow Institute for Women in the beginning and later renamed the Second Moscow Medical Institute. He was the first to describe the symptoms related to an injury of the spinal cord known as the “sitting symptom,” i.e., a clinical sign for the differential diagnosis between lumbago and sciatica (Minor's sign).

⁵A.I. Babukhin (1835–1891) — Russian histologist and physiologist, founder of Moscow school of histophysicologists and bacteriologists.



Figure 4. Moscow neurologists: S.S. Korsakov, G.I. Rossolimo, A.Ya. Kozhevnikov, V.K. Rot, L.S. Minor.

Furthermore, his name is associated with familial essential tremor (tremor multiparus macrobioticus of Minor) and the syndrome characterized by sudden onset of back pain with paraparesis or paraplegia due to hemorrhage of the spinal cord (Minor's disease).

Minor was one of the founders and organizers of the Moscow Society of Neurologists and Psychiatrists. He was the author of *The Treatment of Nervous Diseases*, a treatise which was widely used and studied by many neurologists for many decades. He made his indelible contribution to the fight against alcoholism (Minor, 1897). He was an honorary member of Russian and foreign medical scientific societies. He created a large scientific school of neurologists, and his followers included V.V. Kramer, M.B. Krol, L.G. Chlenov, A.M. Grinshtein, and others (Chodos, 1965).

Another representative of Kozhevnikov's scientific school was Liverii Osipovich Darkshevich (1858–1925). Upon graduation from the medical faculty of Moscow University, he spent three years abroad studying with European scientists including Meynert, Flechsig, Goltz, and Charcot. He spent another three years working in Kozhevnikov's clinic, being Rot's assistant. From 1892 to 1916, he was in charge of the Department of Nervous Diseases of the medical faculty of Kazan University and he was an initiator and founder of Kazan neurological school. Along with V.M. Bekhterev, he founded the Society for Neurologists and Psychiatrists in Kazan (1893). In 1917, Darkshevich returned to Moscow and was in charge of another large neurological department at the State Medical School until 1923. He described the upper oculomotor nucleus that was later named after him (Darkshevich's nucleus) and wrote many works on neuroanatomy and neurophysiology. He spent 15 years writing and publishing *Course of Nervous Diseases* (Darkshevich, 1904–1917) in three volumes, which reflected his original thinking and vast clinical experience and knowledge of medical literature (Chodos, 1965).

During the last three years of his life, Kozhevnikov was very ill: he suffered from prostate cancer. He was using rare pain-free moments to discuss scientific problems and university and neurological society affairs, to continue research, and to check on new acquisitions for the museum. On the deathbed, exhausted and weak, he asked his friend to read to him the content of the recent issue of *The Journal of the Neurology and Psychiatry* (Rodionov, 2002). Kozhevnikov died on January 10, 1902, 12 years after the Clinic for Nervous Diseases was opened.

1902–1911: V.K. Rot

V.K. Rot became Kozhevnikov's successor as Department Chairman and as Director of the Clinic for Nervous Diseases. Vladimir Karlovich Rot (1848–1916) was a son of a pharmacist of Swedish decent who lived in the city of Orel. He graduated from the gymnasium with a gold medal and entered the medical faculty of Moscow University. His thesis *Regarding Jaundice* was rewarded another gold medal. In 1871, upon graduating from the university, he was allowed to remain there and would finally receive the title of professor. In 1873, following Kozhevnikov's recommendation, he was hired as a staff member of the Clinic for Nervous Diseases at the Novo-Ekaterininskii Hospital. After his residency from 1876 to 1880, he went abroad to study in Paris under Charcot and Vulpian. He also studied in Berlin and Vienna. In the fall of 1890, Rot was invited by Kozhevnikov to become senior assistant at the Clinic for Nervous Diseases. Rot immediately started a course of lectures on nervous diseases. (Figs. 5, 6). From 1899, he was substituting for Kozhevnikov, who was ill. After Kozhevnikov's death, he was appointed Director of the Clinic for Nervous Diseases (Lisitsin, 1961).

One of his patients bequeathed him 30,000 rubles, which he used to make Kozhevnikov's dream to build an Institute of Neurology come true. In 1909, the money that was needed for the project and building of the institute was raised. It was planned that the institute would consist of the museum, the library, a dissection room, and various laboratories (for studying the morphology of the nervous system, for physiological experiments,



Figure 5. Audience of the Moscow Clinic for Nervous Diseases. Photo taken September 18, 1898, on the day of the combined examination on general pathology, internal medicine, nervous diseases and psychiatry. V.K. Rot and S.S. Korsakov are sitting on the right side among other professors of the Medical Faculty.



Figure 6. Lecture of Professor V.K. Rot, February 26, 1904.

psycho-physiological experiments, bacteriology, and chemistry). An anthropological room was also designed. The institute was supposed to be run by a high-qualified Council and publish its own scientific papers (Lisitsin, 1961; Rodionov, 1998). Rot's efforts were not in vain, and in 1913 the Neurological Institute named after Kozhevnikov was finally opened.

As a person, Rot was modest to the point of shyness. He would not even tell his mother of his highest honors, the gold medal. She learned about his success accidentally from one of his school teachers. He was not a great speaker, which laid a great burden on him as a lecturer. However, the absence of stylistically fine passages was not by any means detrimental to the depth and validity of the material and his wide erudition (Rodionov, 1998). Rot was known as a "walking encyclopedia" to his friends and colleagues. For many years, he was working on the problem of muscular atrophy. He was able to distinguish neurogenic atrophies from myogenic atrophies (i.e., myopathies). In 1884, at the International Congress of Physicians in Copenhagen, Rot presented "On Amyotrophic Lateral Sclerosis and its Relationship with Progressive Muscular Atrophy" — he gave his original classification of the neuromuscular diseases, including the entities that later got the eponyms of Charcot-Marie, Tooth, and Hoffmann (Lisitsin, 1961). His work "Nosografic Review of Progressive Muscular Atrophies" was published in 1887. "With Regards to Amyotrophic Lateral Sclerosis" was published in 1889. In 1895, his now classical monograph *Tabes Muscularis* was published, and he was awarded the title of Professor Extraordinaire. In 1895, Rot described a new form of neuropathy of the anterior cutaneous femoral nerve and named this disorder *meralgia paraesthetica*. It is now known as Rot's disease. He published merely 30 scientific papers. All of them demonstrated the thoroughness of research, the depth of knowledge, and the clarity of scientific thought (Chodos, 1965). L.O. Darkshevich, E.K. Sepp, A.M. Grinshtein, V.V. Kramer, M.S. Dobrokhotov, S.A. Chugunov, F.D. Zabutin were students of Rot and later became well-known neurologists.

Rot was not especially fond of being a public figure but nevertheless was deeply involved in public life simply because of his compassionate nature. In the Staro-Ekaterininskii Hospital, he founded a nursing school for women and, furthermore, he founded a small society for young neurologists. Along with Kozhevnikov, he participated in the founding of the Pirogov Society and was involved in the organization of its meetings. Being a secretary-general of the 12th International Medical Congress in Moscow, he was in charge of the section for nervous diseases. He edited eight volumes of the congress documents and prepared them for publication. He was one of the organizers and leaders of the First Russian Congress of Neurologists and Psychiatrists (Lisitsin, 1961).

Rot was among the ideologists and founders of the People's University.⁶ In 1908, the People's University was opened in Moscow for persons who were ineligible for state education. The money for the university was donated by the Shanyavskij family.⁷ Students over 16 years of age, of any religious background and any social status, men or women, could enter the People's University. Rot was the first Chancellor (Shnol, 1997).

Russia was going through a lot of political changes at that time. The government was trying to fight off revolutionary ideas in the minds of the students. In 1911, Rot and Rossolimo, and more than a hundred professors and lecturers, resigned from the Imperial Moscow University protesting against a new educational reform of the tsarist's minister of education L.A. Kasso, which they considered reactionary. In this period the People's

⁶The idea of the Free People's University was born in Europe in the 1840s; the first was opened in 1844 in Denmark, and later in France and Germany.

⁷A.L. Shanyavskij (1837–1905) was a major-general, owner of gold-mines, patron of science and art, and Rot's close friend.

University played an essential role in preserving the intellectual potential in Russia as most of the resigned professors received departments and laboratories at that university (Shnol, 1997).

This resignation affected Rot's health and disposition. He cut down on his working hours and moved to the countryside; however, he continued to stay in touch with the clinic and the Institute of Neurology. Shortly before his death, he sent his own microscope and a thousand rubles to V.A Muratov for purchasing equipment for the experimental laboratory of the university. In the fall of 1912, Rot had a stroke with right-sided paralysis and speech involvement. He somewhat recovered and began to walk, but he never regained his speech. Being cared for by his sister and his wife, he lived until January 1916, when he had another stroke. He died on January 6, 1916 (Lisitsin, 1961; Rodionov, 1998).

1911–1916: V.A. Muratov

The name of the Russian neurologist Vladimir Aleksandrovich Muratov (1865–1916), another student of Kozhevnikov, is still hiding in oblivion. Most likely this is partly due to the fact that Muratov took charge of the department and clinic after a number of respected professors, including Rot, had resigned from the Imperial Moscow University. Public opinion was unforgiving (Rodionov, 2002).

In August of 1884, Muratov became a student of the medical faculty of the Imperial Moscow University, where he attended lectures on clinical psychiatry by Kozhevnikov, on clinical neurology by Rot, and on diagnostics of mental illness by Korsakov. In the fall of 1890, when the Clinic of Nervous Diseases on Devichje Pole had finally opened, Kozhevnikov invited Rot to work there as his permanent assistant. Muratov, Darkshevich, and Pribytkov were offered to work there as interns (Lisitsin, 1961). Darkshevich and, later, Muratov and Pribytkov began lecturing anatomy, physiology, and pathology of the central nervous system. In December 1893, Muratov was awarded the degree of Doctor of Medicine upon the completion of his dissertation *Secondary Degeneration in Focal Lesions of the Motor Pathways of the Cortex*. In April 1894, he became "privat-docent" (university lecturer) at the Department of Neurology of Moscow University.

Since 1904, Muratov was in charge of the regional psychiatric hospital in the provincial city of Tambov and six years later he was appointed Professor Extraordinaire at the Department of Neurology of the Imperial University of the Siberian city of Tomsk. He continued to lecture anatomy, physiology, and pathology of the nervous system. In March 1911, upon the resignation of Rot, the Chair of the Nervous Diseases was offered to Muratov. He accepted the offer and became Professor at the Imperial Moscow University. Not all of his contemporaries comprehended the fact that Muratov's scientific papers ceased to appear in the medical journals since 1911 (Rodionov, 2002).

As mentioned above, Kozhevnikov dreamed of the creation of a neurological institute. To make his dream true, his students and followers were called to the task. Much work with this respect had been done by Rot and, upon his departure, Muratov took responsibility to continue the endeavor. In 1912 three new subdivisions were opened: the bacteriological, chemical, and neurophysiological laboratories. Muratov became head of the newly opened institute on May 7, 1913 (Lisitsin, 1961).

Muratov had several scientific interests. He wrote extensively on pediatric neurology, psychiatry, epilepsy, diseases of the peripheral nervous system, localization of functional centers in the cortex, endocrinology, progressive paralysis, and organization of the medical services. He published monographs including *Clinical Lectures on the Pediatric Neurology* (1898), *Clinical Lectures on Nervous and Mental Illnesses* (1899), and *Manual for*

Studying Diseases of the Nervous System (1917) (Chodos, 1965). Muratov died on August, 27, 1916.

After his death, G.I. Rossolimo became head of the department and the Clinic for Nervous Diseases.

1917–1928: G.I. Rossolimo⁸

From 1890 to 1911, Grigory Ivanovich Rossolimo (1860–1928) was in charge of the neurology department of the Novo-Ekaterinskii Hospital, a function that he combined with Assistant Professor of Moscow University.

Rossolimo was Kozhevnikov's student and a colleague of Rot. He was a key figure of the Moscow neurology school. His interests did not only include clinical neurology but also applied psychology, pedagogy, and children's mental health (Chodos, 1965).

Rossolimo thoroughly studied a special form of relapsing hypertrophic polyneuritis in children (1899), which became associated with his name. Rossolimo was among the founders of pediatric psychoneurology. He was especially interested in pediatric neurology, childhood education, and peculiarities of mental activity of children, psychotherapy for sick children, and disturbances of intellectual development in children with neurological diseases. Together with Rot, he resigned from Moscow University in 1911, protesting against the reactionary reform by the tsarist government.

Feeling the necessity of a more detailed study of the manifestations of and approaches to the treatment of neurological diseases in children, Rossolimo organized the Research Institute of Child Neurology and Psychology, using his own funds (1911). It became the first neurological child clinic in Europe. Thus, 1911 may be considered the year of birth of pediatric neurology in Russia. In 1917, Rossolimo was elected Head of the Neurology Department and Director of the Neurology Institute in Moscow University. The following year he opened another department for children in the neurological clinic. The first child neurologists in Russia were educated under his supervision (Petroukhin, 1998). In the same period, Bekhterev founded the Child Research Institute, the Medical and Pedagogic Institute for children with antisocial bents, the Otophonetical Institute for the study of speech and hearing disorders in children, and the Central Auxiliary School for mentally-retarded children in St. Petersburg (1918) (Akimenko & Shereshevski, 1999–2002).

Rossolimo became well known after developing a method for psychological profiling of the individuality of the child. His research emphasized the quantitative assessment of different functions of the child's psychological make-up, in order to create an individual picture of the pediatric patient. For young schoolchildren, he developed a test battery called the "Brief Rossolimo Method." For younger children he created a unique system of tasks, notably the "Method of the elementary representations." Much attention was paid to the problems of development, upbringing, and education of mentally retarded children and their integration into society. Rossolimo always emphasized the importance of psychological education of teachers and physicians. He contributed to the founding of the Moscow Society of Experimental Psychology and initiated a new medical journal *Psychiatry and Children* (Brusilovskii, 1960). During the last ten years of his life he was Chairman of the Moscow Society of Neurologists and Psychiatrists. He was a member of the Rome Medical Academy, Paris Society of Psychiatry, Philadelphia Neurological Society, and the Presidium of the International Bureau on Psychotechnique. He was the editor of the *Journal of the Neuropathology and Psychiatry* named after S.S. Korsakov.

⁸A more detailed account on G.I. Rossolimo is found in the R. Satran paper in this issue.

1927–1957: E.K. Sepp

Evgenii Konstantinovich Sepp (1878–1957) was successor to Rossolimo and in charge of the Clinic for Nervous Diseases for 30 years. He graduated from the medical faculty of Moscow University in 1904. He studied under Rot. After the death of Rossolimo in 1927, he became head of the Clinic for Nervous Diseases. Sepp was especially interested in the evolution of the nervous system and wrote the fundamental book *The History of the Development of the Nervous System in Vertebrates* (Sepp, 1959). Along with colleagues M.B. Zuker and E.V. Schmidt he published the textbook *Nervous Diseases*, which had five editions (Schmidt, 1958). Many generations of Russian doctors and students studied neurology using this book along with another one written by A.M. Grinstein, *Paths and Centers of the Nervous system* (1946).

Grinstein (1881–1960) was also a student of Rot and Minor. For more than 20 years he was a head of the Neurology Department of the Second Moscow Medical School (successor to Minor). In 1952, he and his wife N.A Popova, also a professor of neurology, were arrested and falsely accused of plotting to kill Stalin, known as the so-called “Doctors’ plot campaign.”⁹ The sudden death of Stalin miraculously saved them. They were set free and returned back to work (Vein, 2000).

Sepp published scientific papers on epilepsy, hysteria, brain injury, cerebral circulation, histopathology, and evolution of the nervous system. Many Russian neurologists studied under Sepp, including N.V. Konovalov, E.V. Schmidt, N.I. Grashchenkov, M.B. Tsuker, L. Ya. Shargorodskij, and I.D. Sapir. Some of them later on took charge of the Institute of Neurology of the Academy of Medical Sciences.

After 1957

Following the death of Sepp, Nikolai Ivanovich Grashchenkov (1901–1965) was head of the clinic for a brief period of time. He studied under Darkshevich and was able to combine the functions of neurologist, neurosurgeon, and neurophysiologist in one person. He was also a prominent figure in a health care system. He organized and became the first Director of the Institute of Neurology. He was a President of the Academy of Science of Belarus. When the offer came to return to and lead the clinic, he couldn’t resist and returned to his alma mater. However, soon after that he went to Geneva where he was appointed deputy to the Secretary of the World Health Organization (Vein, 2000). Grashchenkov’s successor was V.V. Mikheev (1899–1981). At that time the clinic underwent a significant reconstruction, which lasted a few years and ended in mid-70s. Instead of the cozy and beautiful old building built by Kozhevnikov, a new one was constructed and turned out to be much larger and more modern. The museum and library were no more a part of the building and new departments were opened, including the Neurosurgery Department, led by I.M. Irger (1910–1982) and the Department of the Pathology of the Autonomous Nervous System, headed by A.M. Vein (1928–2003). Later on, the Department of the Pathology of the Autonomous Nervous System turned also into the leading Center for Sleep research in the Soviet Union. Neuropsychologists under the leadership of A.R. Luria worked in close contact with the clinic. After Mikheev, the clinic was led by P.V. Melnichuk (1921–1995), who studied under the supervision of Sepp and was his last

⁹The Doctor’s plot was an alleged and now discredited conspiracy to eliminate the leadership of the Soviet Union by means of Jewish doctors poisoning the top leadership. After the death of Stalin in March 1953, the new Soviet leaders admitted that the case was fabricated.

PhD student. For many years the brilliant neurologist and teacher D.R. Shtulman was in charge of the student's scientific neurological society.

In 1991 the restoration of the clinic's museum began. Some of the lost materials were restored literally piece by piece and in 1995 the Museum of the Clinic for Nervous Diseases was opened again (Rodionov, 2002).

Conclusion

Kozhevnikov was one of the first doctors in the history of European medicine who anticipated the way clinical neurology was going to develop as an independent discipline. All his remarkable professional activities were devoted to this goal. He became the first Professor of Neurology in Russia and head of the first independent department of nervous and psychiatric disorders. The creation of two clinics almost simultaneously was an unprecedented event by European standards.

Kozhevnikov is rightly considered the founder of the Moscow Neurological School. He fostered a large group of talented students and followers due to his talent as a teacher and the scope of his unique personality. His followers did not only work in Moscow, where they received their medical degrees but all over Russia.

The Clinic for Nervous Diseases named after A.Ya. Kozhevnikov is the largest neurological clinic in Russia. It includes the Department of Neurology where undergraduate, graduate, and postgraduate education of medical professionals goes hand in hand with the intensive scientific research.

The portraits hanging on the walls of the main auditorium symbolize the gratitude for the achievements of Kozhevnikov and other outstanding neurologists, who contributed to the development of neurology in Russia.

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