

Academician B.V. Petrovsky: cultural heritage, historical memory

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Abstract

In 2023, the medical community of Russia is celebrating two closely related significant historical events. They are the 115th anniversary from the birth of B.V. Petrovsky, an outstanding personality in Russian medicine, Academician of the Russian Academy of Sciences, and the 60th anniversary from the foundation of Petrovsky National Research Center of Surgery. The article presents little-known materials related to the cultural heritage of B.V. Petrovsky and keeping the historical memory of him. The paper esteems B.V. Petrovsky's activity as the founder of the Russian Scientific Center for Surgery and a reformer of higher medical education.

Keywords: history of medicine, B.V. Petrovsky, Petrovsky National Research Center of Surgery, reconstructive surgery, organ transplantation, medical education

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Introduction

In 2023, the country's medical community is celebrating two closely related significant historical dates. This is 115 years since the birth of B.V. Petrovsky, an Academician of the Russian Academy of Sciences and the 60th anniversary from the foundation of Petrovsky National Research Center of Surgery (Petrovsky NRCS).

Academician Boris Vasilievich Petrovsky was born in the city of Essentuki in 1908 in the family of a doctor; his childhood was spent in the village of Blagodarnoye in the Stavropol Territory. Polyvalent surgeon, the founder of the Russian Scientific Center of Surgery, as well as of the world's largest scientific surgical school, which has 4 world priorities in the field of surgery, author of more than 100 monographs, Honorary Member, Professor, Academician of 47 international academies and scientific societies, Hero of Socialist Labor, awarded with 4 Orders of Lenin, Orders of the October Revolution, Orders of the Red Star, two Orders of the Patriotic War, 2nd class, "For Merit to the Fatherland" , 2nd class, and the highest Order of the State, the Holy Apostle Andrew the First-Called. For 15 years, B.V. Petrovsky worked as the Minister of Health of the USSR.

Scientific and organizational contribution of B.V. Petrovsky in the development of medical science and health care, the creation of a scientific school and the implementation of the reconstructive surgery principles and organ-preserving operations in the country have been

reflected in detail in a number of monographs and other scientific studies [1–3]. The authors of the article believe that keeping the cultural heritage left by B.V. Petrovsky, as well as the historical memory of such an outstanding personality as academician B.V. Petrovsky, is very important for the successful development of medical science and public health.

The article presents little-known materials, some of which are introduced into scientific circulation for the first time.

Cultural heritage

When assessing the cultural heritage of Boris Vasilyevich Petrovsky, one cannot help saying that he was a comprehensively educated person, loved literature, music, poetry, and painting. He was brilliant in writing, a great speaker, was fond of filming and photography. Thanks to his outstanding personality, he was a treasure-trove of amazing memories on seeing the great people of his time, of important events in the life of the country and medical science. He put some of them on paper. In 1989, B.V. Petrovsky decided to publish the book *The Surgeon and Life*. This book can hardly be referred exclusively to memoirs, since it is not only a narration by a famous cardiac surgeon, teacher, statesman, and public figure about his life path and more than half a century of experience as a doctor, but also a presentation of ways to solve complex problems of the formation and development of medical science in our country. In addition, the book shows a wide historical layer, revealing the heroic work and exploits of Soviet doctors, scientists, surgeons, and all medical care providers during the war with the White Finns and the Great Patriotic War. He always said that we won the war with the wounded, since more than 70% of all the wounded were returned to duty [4].

A very interesting and important book by B.V. Petrovsky "*Man. Medicine. Life*", published in 1995 by the Russian Academy of Sciences

in the series "Science, worldview, life". The book is a unique work, which outlines the author's interesting thoughts about the meaning of activity and role of a doctor, his purpose in society [5]. A special place was given to the chapters devoted to meetings with famous historical figures - scientists, statesmen, military leaders. We present the most rare and unique photographs from the personal archive of B.V. Petrovsky, which is in the funds of the NRCS (Fig. 1–3).



A

B

Fig. 1. A. Year 1959. Conversation of B.V. Petrovsky with Academician A.N. Bakulev; B. With colleagues at the Session of the USSR Academy of Medical Sciences. From left to right: N.N. Blokhin, F.G. Uglov, B.A. Korolev, B.V. Petrovsky, S.V. Kurashov



A

B

Fig. 2. A. Academicians I.V. Kurchatov and B.V. Petrovsky. Kremlin hospital at Granovsky Street; B. B.V. Petrovsky at a Reception with USA President Richard Nixon. Washington, White House



Fig. 3. V.V. Putin and B.V. Petrovsky. Kremlin, 2003. Awarding with the Order of the Holy Apostle Andrew the First-Called

In 2001, the last book by B.V. Petrovsky *"Heroism, drama and optimism in medicine"* was published; it contained original chapters devoted to the life and work of N.I. Pirogov, injury and illness of V.I. Lenin, duel, injury and death of A.S. Pushkin from the standpoint of current surgery [6]. Why did B.V. Petrovsky return to the tragedy of A.S. Pushkin's death after more than 150 years from it? Little who knows that the Pushkin Commission of the USSR Academy of Sciences was

created in 1937, which worked in Moscow and Leningrad. At one of its Meetings in Moscow, N.N. Burdenko and A.A. Arendt made a presentation entitled "*Pushkin's Wound*", in which they rejected the prevailing opinion about the conspiracy of doctors with Emperor Nicholas 1 to kill A.S. Pushkin. But in 1965 one of the speakers, Andrey A. Arendt, the famous pediatric neurosurgeon, came to Health Minister Petrovsky and complained that deliberately slanderous fabrications periodically appear in the press about the involvement of his great-grandfather Nikolai Fedorovich Arendt, the life surgeon of Emperor Nicholas 1, in the alleged conspiracy and incorrect treatment of Pushkin. B.V. Petrovsky thoroughly studied all the available documents on this issue in the archives. He concluded that, according to the terms of the duel, this is a thoughtful, uncompromising death duel in advance. The methods of treatment of that time were very primitive and the professors and doctors who treated Pushkin could not do anything more active and radical. Even currently, with the use of all contemporary technologies, this injury should be qualified as severe, the outcome of which in 30–40% of cases could be unfavorable. And his last conclusion was in favor of the necessity to study the archives in detail and return to the issues of treatment and death of prominent people, whose memory was alive in the hearts of people. This is our history, existing alive in a single cultural space. Here we present the first page of the manuscript by B.V. Petrovsky from his personal archive about the duel, injury, and death of A.S. Pushkin (Fig. 4).

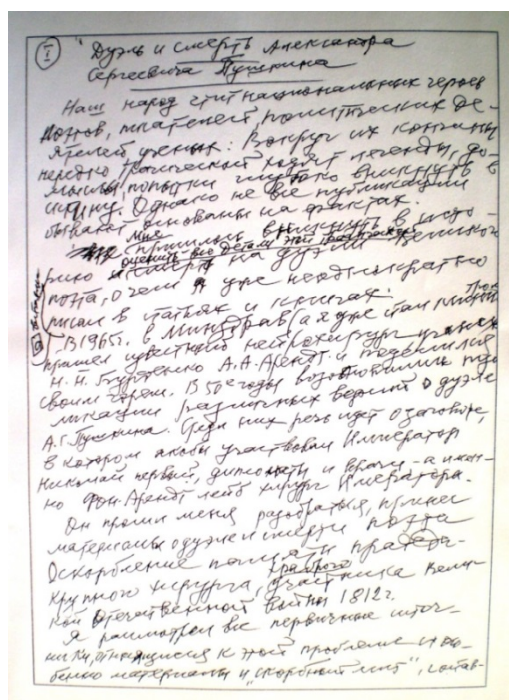


Fig. 4. Manuscript of the Chapter on the duel, injury, and death of A.S. Pushkin (from the personal archives of B.V. Petrovsky)

Understanding the invaluable contribution of N.I. Pirogov to world surgery and aiming to preserve for world culture an example of human achievement in science, B.V. Petrovsky prepared a facsimile edition of the 4-volume Atlas of Topographic Ice Anatomy by N.I. Pirogov that was originally published in 1859. Published by B.V. Petrovsky together with B.A. Konstantinov in 1996, N.I. Pirogov's Atlas is nowadays a bibliographic rarity [7].

Many scientific studies of B.V. Petrovsky are devoted to the problems of medical ethics and deontology. In 1988, he published a two-volume edition Deontology in Medicine edited by him. It covered the issues of deontology as a doctrine of what is due in medicine and as one of the most important elements of education, training and forming personality of a doctor [8, 9]. It also highlighted the problems of medical ethics of the twentieth century, medical aesthetics and health, medical duty and responsibility, medical secrecy, deontology in various fields of

medicine: transplantology, oncology, obstetrics and gynecology, experimental surgery. He himself was an ardent opponent of euthanasia, as well as corrective surgery and sex reassignment surgery for transsexualism.

In the 60s of the last century, an active discussion of the legal, moral and ethical problems associated with organ transplantation began around the world. B.V. Petrovsky, who was the first to transplant a kidney from a living donor in our country, was very ambivalent about the transplantation of unpaired organs and, above all, the heart, as well as the diagnosis of "brain death". Almost at the beginning of his activity as Minister of Health of the USSR, B.V. Petrovsky in 1971 approved the text of the "Oath of the Doctor of the Soviet Union" and its adoption in a solemn atmosphere at a doctor's graduation ceremony [10]. When the conversation turned to ethical issues in medicine, B.V. Petrovsky often cited the words of the Nobel Laureate Werner Forssmann, who was the first to develop the method of angiocardiography, and also the first to test this method on himself. He said that progress is an inevitable phenomenon, but paying for it with the loss of moral criteria is too high a price.

Moral criteria of B.V. Petrovsky were extremely high and can serve as a model for both medical, and universal ethics. He was very attentive to the priorities in science, asking scientists to always mention the authors of the technologies or operations they use in their studies. He certainly emphasized that he was a student of the scientific school of P.A. Herzen. And he called people who showed disrespect to their teachers "Ivans who do not remember kinship." In this photograph, B.V. Petrovsky is standing under the portrait of P.A. Herzen, who was always above the desk in his office (Fig. 5).



Fig. 5. Year 1993. B.V. Petrovsky on the day of the 30th anniversary of the foundation of the Scientific Center of Surgery of the Russian Academy of Medical Sciences and on his 85th birthday, in his office, against the portrait of his Teacher, Professor P.A. Herzen

Founder of the Russian Scientific Center of Surgery

Since 2005, the Russian Scientific Center for Surgery has been named after Academician B.V. Petrovsky [11]. This institution, unique in itself, is the historical, scientific, and also the cultural heritage of B.V. Petrovsky. Since the late 1980s, having become the Honorary Director of the NRCS, Academician B.V. Petrovsky had remained a wise teacher, mentor, ideologist, chief judge, and conscience for his students. B.V. Petrovsky did not change his life position - active, principled, and advancing - until the last days. By the power of his mind, will, authority, he preserved, and increased his scientific School: 21 disciples of his School were elected as Members of the Russian Academy of Medical Sciences during his lifetime. B.V. Petrovsky, when establishing his brainchild - the All-Union Scientific Center for Surgery of the USSR Academy of Medical Sciences (when it was created, 1963 it was named the Research Institute of Clinical and Experimental Surgery of the Ministry of Health of the RSFSR [12] put forward the idea of developing

a large multidisciplinary surgical center in order to develop new scientific areas both in surgery, and also in related disciplines, as well as to test and quickly implement new effective contemporary medical and diagnostic technologies into healthcare practice, to make it the flagship and "think tank" of surgery in the country. Within the walls of the Center, the most important and priority fields of medical science have been developed: cardiovascular, thoracic and abdominal surgery. Technologies such as organ transplantation, cardiopulmonary bypass, microsurgery, hyperbaric medicine, X-ray endovascular and endoscopic surgery were developed and implemented for the first time; comprehensive studies were carried out on the use of safety monitoring in the field of anesthesiology, resuscitation, the creation of new medical equipment, artificial organs, and precision surgical instruments. Today confirms the correctness of his ideas. Nowadays, multidisciplinary has become a prerequisite for the development of medical science. Hybrid operating rooms, teams of surgeons consisting of specialists from different areas of surgery - all this has become a reality today. Having inherited such a correct and powerful foundation, the NRCS named after Academician B.V. Petrovsky is currently developing rapidly and successfully, growing with new scientific directions and technologies.

Since 1995, every year in June, the NRCS has continued the tradition of arranging the Center's Assembly Day timed to coincide with the birthday of B.V. Petrovsky, the institution founder. Honorary Professors of the Center are elected with the presentation of the mantle. They are the leading scientists of the country, statesmen and public figures, students and followers of Academician B.V. Petrovsky. They are given the opportunity to deliver an Act speech at this Meeting. This year will be no exception.

Reformer of higher medical education

Education, including medical education, is an integral part of culture. B.V. Petrovsky paid very important attention to this issue. The slogan "To treat, to teach, to implement!", which belongs to B.V. Petrovsky, was a kind of program of NRCS activities, the scientific and pedagogical core, which gave rise to the creation of the Hospital Surgery Department of the 1st Medical Training Institute named after I.M.Sechenov. He embodied his old idea of organizing clinics, where the Head of the Department and the Chief Physician of the clinic are one person, which certainly improved the quality and provided new opportunities for the training of medical personnel.

B.V. Petrovsky's merit was the implementation an Internship Program into the University Education System, the creation of such a new organizational form as a scientific, educational and production association (NUPO), which functioned very effectively on the NRCS base. These ideas are consonant with today, when the issue of granting research institutes with the right to train doctors in a specialty is being decided.

Historical memory

An important part of the historical memory of B.V. Petrovsky are his portraits and sculptures: 17 lifetime portraits and 2 busts, which are the property of the NRCS and are in the funds of its museum, as well as a posthumous monument at the Novodevichy cemetery and a bust at the entrance to the NRCS named after Academician B.V. Petrovsky in Abrikosovsky Lane in Moscow. Portraits of B.V. Petrovsky are of artistic value, they are created by professional craftsmen and are mostly painted in oil on canvas. From our point of view, the most significant portrait of B.V. Petrovsky belongs to the brush of the artist M.A. Zakharevich (1983) (Fig. 6). On the portrait of B.V. Petrovsky is depicted at the age of

75. He stands, leaning his fingers on the table, looking into the distance. At this time, he actively led the All-Union Scientific Center for Surgery, continued to train new numerous students of his growing scientific school. It seems that this portrait reflects the inner world of the scientist to the greatest extent, his bright mind, purposefulness and focus on the future. Also interesting is the portrait painted by the artist M. Klammer in 1990 (Fig. 7). The teacher is depicted in a half turn, wearing a doctor's gown, cap; one might think that he is giving a lecture. Worthwhile to note the graphic portrait of B.V. Petrovsky (date of painting and author unknown), where he is young, and on his chest there is the Star of the Hero of Socialist Labor and the badge of the Deputy of the Supreme Soviet of the USSR, which suggests the date of painting: - in the late 60s and early 70s, since the title of Hero of Socialist Labor was awarded to him in 1968 (Fig. 8). A picturesque portrait of B.V. Petrovsky before the start of the operation was painted by Z.P. Mironova in 1983 (Fig. 9). Here B.V. Petrovsky in an operating suit, his face is calm, concentrated; at that period of time he was actively operating. Portrait of B.V. Petrovsky by the artist Rakhimov (the date of painting is unknown) is apparently a ceremonial portrait of the Minister of Health of the USSR (Fig. 10). B.V. Petrovsky worked at this position from 1970 to 1985; among the awards on his chest, in addition to the Star of the Hero, there is only one Order of Lenin, so we can assume that the portrait was painted in the period from 1971-1978, since in 1978 he was already awarded the second Order of Lenin. B.V. Petrovsky is depicted in a strict black suit, white shirt with a blue tie. The face is strong-willed, the look is calm, confident. We do not know the name of the artist, only the initials V.N.B., who painted a friendly caricature of B.V. Petrovsky, dated June 27, 1978, apparently a birthday present (Fig. 11). B.V. Petrovsky, who had a great sense of humor, was very fond of that picture, in which he is quite

recognizable, depicted in a medical cap, with the Star of the Hero with rays on his chest, a pen with a snake in his right hand, and a heart on the palm of his left hand. B.V. Petrovsky portrait compiled from rice grains impresses by its outward resemblance with the original; it was a gift for his 75th birthday (1983) from doctors from the affiliated the Republican Center of Surgery in Tashkent. Impressive is the resemblance to the original in an exclusive portrait of B.V. Petrovsky made by the method of inlay from precious woods, which was a gift from the doctors of the Mikhailovsky Mining and Processing Plant (1981) (Fig. 12). Important is the last lifetime portrait of B.V. Petrovsky painted by the artist N.N. Merkushev in 1994 (Fig. 13). Boris V. Petrovsky posed for him after his illness, sitting at the table, in a suit, since by that time he had already ceased operating. The elderly face, covered with wrinkles, the look is calm, wise, but the hands on the table are the real hands of a surgeon.



Fig. 6. B.V. Petrovsky. By artist M.A. Zakharevich. 1983. Oil on canvas (86 cm ×116 cm)



Fig. 7. B.V. Petrovsky. By artist M. Klammer. 1990. Oil on canvas (45 cm ×55 cm)



Fig. 8. Graphic portrait of B.V. Petrovsky (date of painting and author are unknown)



Fig. 9. B.V. Petrovsky. By artist Z.P. Mironova. 1983. Oil on canvas (70 cm ×100 cm)



Fig. 10. Ceremonial portrait of B.V. Petrovsky (by artist Rakhimov, date of painting is unknown)



Fig. 11. B.V. Petrovsky. Friendly cartoon. Author is unknown. 1978.
Watercolor



A

B

Fig. 12. A. Portrait of B.V. Petrovsky, compiled from rice grains (1983, author is unknown); B. Portrait of B.V. Petrovsky, inlaid with precious woods (1981, author is unknown)



Fig. 13. The last lifetime portrait of B.V. Petrovsky. Canvas, oil. By artist N.N. Merkushev, 1994

Two lifetime busts of B.V. Petrovsky were created by the sculptor E.A. Kosova who was a friend of B.V. Petrovsky's family. The first bust was made of plaster covered with gray paint. The year of creation is unknown, but most likely the sculpture was created in the first half of the 50s of the 20th century, since B.V. Petrovsky is depicted as young and energetic. He may have posed for E.A. Kosova in Hungary, where he met her in the period from 1949 to 1951. The second bust was made of clay in the 90s, covered with bronze paint and presented by the author to

B.V. Petrovsky on his 90th birthday (Fig. 14). He is depicted in a medical cap and gown, looks appropriate for his age. The look is strict and severe.



A

B

Fig. 14. B.V. Petrovsky. A, by sculptor E.A. Kosova. 1955 (?); B, by sculptor E.A. Kosova. 1998

This is the last lifetime photograph of Academician B.V. Petrovsky (Fig. 15). He died on May 4, 2004 in Moscow.



Fig. 15. Last lifetime photograph of Academician B.V. Petrovsky.

2004

Monument at the grave of B.V. Petrovsky at the Novodevichy Cemetery was made of bronze and granite by Sergei Shcherbakov (sculptural workshop of A.N. Kolyshkin) in 2005 based on photographs and films about B.V. Petrovsky (Fig. 16).



Fig. 16. Monument of B.V. Petrovsky of bronze and granite on his grave. By sculptor S. Shcherbakov. 2005

A bronze figure of B.V. Petrovsky in a medical gown and cap stands on a marble pedestal. His hand pulls the operating mask off his face. He just finished the operation. In 2008, on the occasion of the 100th anniversary of B.V. Petrovsky's birth, his bronze bust on a high red granite pedestal made in the same sculptural workshop was erected in front of the entrance to the NRCS (Fig. 17).



Fig. 17. Bronze bust of B.V. Petrovsky on a granite pedestal.

Sculptural workshop of A.N. Kolyshkin. 2008

Several commemorative medals with the image of B.V. Petrovsky, of which the bronze medal created by the sculptor G. Fedorova for the 95th anniversary of B.V. Petrovsky has the greatest artistic value. Petrovsky (Fig. 18). There is presented a silver medal made at the Leningrad Mint for the 100th anniversary of B.V. Petrovsky.



Fig. 18. Commemorative medals depicting B.V. Petrovsky: A, by sculptor G. Fedorova. 2003; B, silver medal made at the Leningrad Mint. 2008

Ministry of Health, the texts of scientific reports, etc. More than 30 pages in this book are devoted to the section “Students and colleagues about B.V. Petrovsky”, which contains memoirs of more than 20 famous medical scientists, students of his scientific school, colleagues, dedicated to the blessed memory of B.V. Petrovsky, his scientific and cultural heritage (Fig. 20).

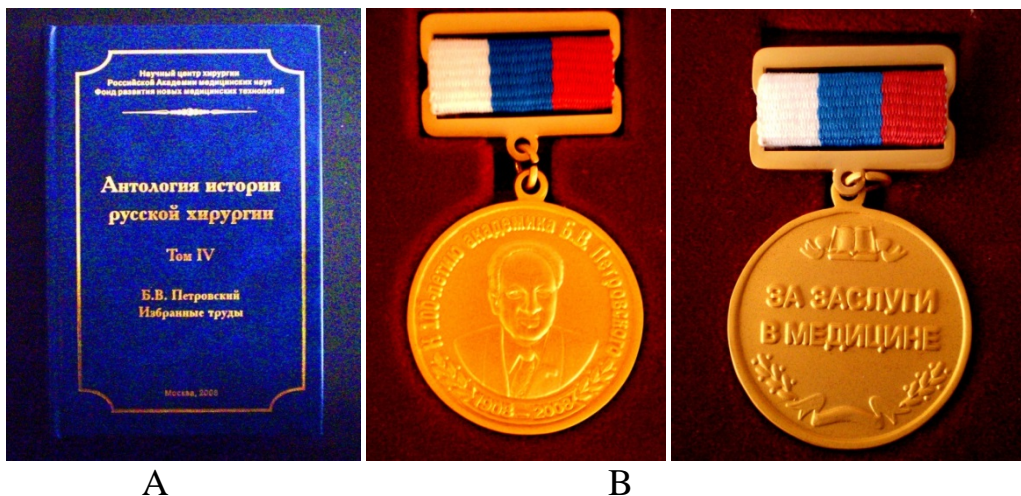


Fig. 20. A. Volume IV of the *Anthology of the History of Russian Surgery* devoted to Academician B.V. Petrovsky. 2008; B. Medal for the 100th anniversary of Academician B.V. Petrovsky

Conclusion

B.V. Petrovsky left a great cultural heritage, which even today plays a significant role in the history of medicine, in keeping its moral and ethical principles, and improving further the scientific and medical personnel training.

Historical memory of B.V. Petrovsky is alive and embodied in many pieces of painting and sculpture. The ideas of B.V. Petrovsky, incorporated in the development and prosperity of the Petrovsky National Research Center of Surgery, which he created, which bears his name.

To the 100th anniversary of B.V. Petrovsky the 4th volume of the Anthology of the History of Russian Surgery was published, dedicated to the scientific and cultural heritage of the scientist, his role as a teacher, public figure and statesman. His office-museum was opened, a public award, the medal for the 100th anniversary of Academician B.V. Petrovsky "For merits in medicine" was established. Every year on the birthday of B.V. Petrovsky, the Assembly Day of the Academician B.V. Petrovsky is held.

The unrelenting interest of the medical community in everything related to the activities of B.V. Petrovsky is the result of the influence of the personal and professional qualities of this outstanding personality on others. This also applies to his cultural heritage and historical memory of him.

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