

DOCTOR SMILJA KOSTIĆ – LIFE AND LEGACY OF A FORGOTTEN HEROINE

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Abstract: Doctor Smilja Kostić was a pioneer in the field of medicine, making significant contributions, particularly in the areas of immunology and infectious diseases. One of her most important missions was combating infectious diseases, which were among the leading causes of mortality in Yugoslavia during the first half of the 20th century. During the Balkan Wars, at the age of seventeen, Smilja volunteered as a nurse at the Third Reserve Hospital in Belgrade. Her exceptional humanity and bravery during the Balkan Wars earned her the Cross of Mercy and the Bronze Medal of the Serbian Red Cross. She began her medical studies in 1915 in Lausanne, continued them in Montpellier, and graduated in 1919 in Strasbourg. After completing her studies, she returned to Belgrade, where she became the first female docent at the Faculty of Medicine in Belgrade. One of her most notable achievements was the introduction of the BCG vaccine to the country. For her outstanding contributions to the fight against tuberculosis, she was awarded the National Order of the Legion of Honor by France. In the post-war period, she remained unaffiliated with any ideological organization, which led to accusations of harboring a hostile attitude toward the socialist community. As a result, she was prematurely retired and dismissed from the faculty. Half a century after her dismissal and twenty years after her death, she was posthumously rehabilitated. Doctor Kostić was much more than a physician and scientist. She was a humanist, a leader, and a visionary whose influence transcended the boundaries of medicine.

Keywords: woman, physician, pioneer, achievements, vaccine, tuberculosis

INTRODUCTION

In the world, in the period after the Second World War, the BCG vaccine became widely accepted as a preventive measure against tuberculosis. Our country was among those that actively implemented this prevention, and the doctor who made an immeasurable contribution to its application in our region was awarded the Legion of Honour. The broader public only learned in 2020 that this doctor was Dr. Smilja Kostić [1,2].

Dr. Smilja Kostić was a pioneer in the field of medicine, with significant contributions, especially in immunology and infectious diseases. Born in Belgrade in the first half of the 20th century, Dr. Kostić devoted her life to advancing medical knowledge and healthcare, which made her one of the most respected figures in the scientific community.

One of her most important missions was the control of infectious diseases, which at that time were among the leading causes of mortality in Yugoslavia. With the development of science and technology, Dr. Kostić was among the first in our country to study the immune system and its responses to various pathogens. Her research and practical fieldwork significantly improved the understanding of methods for preventing and controlling the spread of infectious diseases, thereby helping to safeguard the health of the entire community.

In scientific research, Dr. Kostić was known for her innovative approach and great dedication. In addition to working with patients, she was actively involved in educating young medical professionals, believing that education was key to long-term improvement of the healthcare system. She also founded several centers for the study of immunological responses, where she worked on developing new therapeutic methods and disease prevention strategies [3,4,5].

Dr. Kostić's work remains highly significant today, as her discoveries and methodologies laid the foundation for further development of immunology and infectious disease medicine in Serbia and beyond. Her legacy lives on through generations of doctors and researchers who continue her mission, applying her findings and methods in the daily fight for human health. Through her dedication and passion for science, Dr. Smilja Kostić left a profound and lasting mark in medicine, and her work continues to inspire today.

EARLY CHILDHOOD AND EDUCATION

Dr. Smilja Kostić was born as Smilja Joksić in 1895 in Belgrade, to her father Momčilo Joksić, an adjutant of the Royal Guard, and her mother Staka Pačić. She was the second of seven children born to Momčilo and Staka. She was the great-granddaughter of Toma Vučić Perišić, a participant in the First and Second Serbian Uprisings and one of the most influential figures in Serbia in the second half of the 19th century. It is assumed that she inherited from her great-grandfather her persistence, determination, and skill in dealing with people, especially children.

Her schooling was neither easy nor continuous. She completed primary and secondary education in Belgrade and passed the so-called maturity exam in 1913. During the Balkan Wars (1912–1913), at the age of seventeen, Smilja voluntarily enlisted as a nurse at the Third Reserve Hospital in Belgrade. For her great humanity and bravery shown during the Balkan Wars, she was decorated with the Cross of Mercy and the Bronze Medal of the Serbian Red Cross.

She began medical studies in 1915 in Lausanne, during the difficult years of war. Her studies were interrupted once again when, at the beginning of the First World War, she volunteered to serve as a nurse in the Military Hospital in Kragujevac. She resumed her medical studies in Montpellier and graduated in 1919 in Strasbourg, where she began working at the Children's Clinic. In 1921, she defended her doctoral thesis and earned the degree of Doctor of Medicine.

FAMILY

During her studies, in 1919, she married her colleague Aleksandar Kostić. Their civil ceremony took place in Montpellier, and the religious wedding was held in Nice, at the Russian Orthodox Church. They had two children: a son, Ivan (Vanja), who died in 1942 as a fighter in the Ravna Gora movement, and Vojislav (Voki) Kostić, a well-known composer and gastronome. [3,6,7,8].

RETURN TO SERBIA AND PROFESSIONAL CAREER

After completing her studies, Smilja Kostić stayed for a short time in Strasbourg. In 1922, she returned to Belgrade with her husband, Prof. Dr. Aleksandar Kostić. The reason for their return was Aleksandar Kostić's appointment as a professor of histology at the newly established Faculty of Medicine in Belgrade. When the Histological Institute of the Faculty of Medicine in Belgrade acquired its own premises in the 1920s, Dr. Smilja Kostić became the first assistant at that department.

She held this position for a short time, as in 1924 she became an assistant at the newly established Children's Clinic, where she founded the Children's Dispensary and later became head of the service. From that period, her pioneering work in pediatric medicine began, with far-reaching consequences. The Children's Dispensary became a center for preventive medicine and child health care, laying the foundation for modern pediatric practice in Serbia.

Dr. Smilja Kostić applied contemporary global methods in scientific research, teaching, and medical practice. Fluent in German and French, she not only wrote original works but also translated professional literature. She published over 120 professional and scientific papers as well as popular pediatric articles in Serbian and French, in both domestic and international journals.

During her career, in addition to her dedication to pediatric education, she worked as chief physician of the Children's Clinic outpatient department and as a physician in the Infant Advisory Clinic, where she guided mothers on newborn care and nutrition. She authored the first manuals in Serbia for clinical laboratory diagnostics. Besides research on cardiovascular diseases, antibiotic applications, and metabolic and nutritional disorders in children, by the late 1920s her professional focus shifted to a major public health problem—childhood tuberculosis—and its prevention.

She was appointed assistant professor at the Department of Pediatrics in 1939, becoming the first female assistant professor at the Faculty of Medicine. At the beginning of World War II in 1941, she was removed from the faculty for refusing to sign the "Appeal to the Serbian People," but two years later she

was reinstated and continued in her position until the end of the war. She was promoted to associate professor at the Department of Pediatrics in 1948, and at the same time appointed head of the main department of the Children's Clinic in Belgrade. [2,9,10].

CONTRIBUTION TO TUBERCULOSIS PREVENTION AND INTRODUCTION OF THE BCG VACCINE

Dr. Smilja Kostić was a pioneer in the fight against childhood tuberculosis in Yugoslavia. Her dedication to implementing preventive measures and the use of the BCG vaccine represented a crucial step in reducing the incidence and mortality of this dangerous disease.

In the first half of the 20th century, tuberculosis was one of the deadliest diseases, especially in poor and war-affected regions like Yugoslavia. Children were among the most vulnerable groups, often falling ill due to poor living conditions, inadequate nutrition, and lack of medical care. At that time, the country had one of the highest child mortality rates under the age of five caused by tuberculosis. Dr. Kostić recognized the seriousness of the problem and dedicated her work to combating tuberculosis through prevention and education. As the head of the Children's Dispensary, she initiated programs for early detection and treatment of tuberculosis in children, a revolutionary approach at the time.

One of her most important achievements was the introduction of the BCG vaccine in Yugoslavia. This vaccine, developed in France in the 1920s, became a fundamental tool in the global fight against tuberculosis. Its introduction in Yugoslavia faced challenges due to lack of resources, trained personnel, and awareness of the importance of immunization. Dr. Kostić tirelessly advocated for the vaccine, using scientific evidence and international experience to convince authorities and the health system of its effectiveness. She organized educational campaigns to raise awareness among doctors and the general population, which led to the gradual acceptance of vaccination. Her efforts culminated in the beginning of mass immunization of children against tuberculosis, which soon resulted in a significant reduction in the number of cases.

Dr. Kostić not only introduced the vaccine but also worked on implementing comprehensive preventive measures. Through her work at the Children's Dispensary, she developed programs including regular health check-ups, early diagnosis, and treatment for children with tuberculosis or at risk of infection. She focused particularly on educating mothers and families about the importance of hygiene, nutrition, and healthy living conditions in disease prevention. Her programs also included training of medical personnel to ensure proper care for children nationwide. Her results, demonstrating the practical value and safety of the vaccine, were recognized by the Pasteur Institute and children's clinics in Paris and Stockholm as a significant scientific contribution.

For her exceptional contribution to the fight against tuberculosis, Dr. Smilja Kostić received a highly prestigious award. In 1952, she was decorated with the National Order of the Legion of Honor by France, one of the most esteemed recognitions at the time. The French President also presented her with a brooch in the shape of the initials "BCG" set with diamonds, honoring her pioneering work in promoting the vaccine. Her husband, Prof. Dr. Aleksandar Kostić, had received the same award 12 years earlier for his contributions to science. At the time of her decoration, there was only one other couple in the world with the same distinction: Marie and Pierre Curie [2,8,11].

PROFESSIONAL CHALLENGES

During her successful career, she faced numerous obstacles and difficulties. In her home country, some of her attitudes and actions were not well regarded. Because she did not participate in any ideological organization in the post-war period, she was labeled as a professor showing a hostile stance toward the socialist community. Her ideological and political positions did not align with the society's expectations, where intellectuals, particularly university professors, were required to show cooperation and loyalty. After a well-organized political campaign, she was officially morally and politically discredited and retired on June 1, 1954, effectively being removed from the faculty [9,12].

LATER LIFE AND LEGACY

Smilja and Aleksandar Kostić were inseparable from their youth. They lived together for 70 years, reaching old age side by side. After being removed from the Faculty of Medicine, Dr. Smilja Kostić

dedicated the last three decades of her life to private practice and assisted her husband in writing and research endeavors. She passed away on June 5, 1981, in Belgrade, in the family apartment at Dositejeva 1. Thanks to their son, Vokie Kostić, the couple rests together in the Alley of Distinguished Citizens at the New Cemetery in Belgrade. According to their wish, the memorial plaque reads:

"INSEPARABLE IN LIFE, INSEPARABLE AFTER DEATH."

Dr. Smilja Kostić was morally rehabilitated in 2001, becoming the only woman among 31 professors removed from the faculty after the war to receive this recognition. In 2018, as part of the renovated Grocka cultural-historical complex, her legacy was publicly showcased in the exhibition gallery of the Ilija Garašanin Library, where, alongside her husband, she found her place in life and posthumously [2].

CONCLUSION

The life and work of Dr. Smilja Kostić exemplify unwavering dedication to science, medicine, and humanity. As the first female assistant professor at the Faculty of Medicine, University of Belgrade, she broke barriers at a time when women's roles in science were limited. Her pioneering achievements in pediatrics and public health left an indelible mark on the medical history of Serbia.

Dr. Kostić not only treated patients, but also educated and inspired her students, colleagues, and community to recognize the importance of health and prevention. Although her work was internationally recognized, she faced many challenges. Her selfless dedication and perseverance were not always appreciated in the political and social context of her time, resulting in the injustice of her removal from the Faculty of Medicine.

Her posthumous rehabilitation and recognition confirm the lasting significance of her work. Dr. Smilja Kostić was more than a doctor and scientist; she was a humanist, leader, and visionary, whose impact transcended medicine. Her legacy lives on through the health of generations of children, improved public health systems, and the inspiration she provides to new generations of physicians. Through her commitment and persistence, she became a symbol of the fight for science, justice, and a better life for all. Her name remains recorded in history as a synonym for integrity, expertise, and love for humanity..

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