

Professor Ivan Mykolayovych Ishchenko — Heracles of Ukrainian medicine

The article focuses on the professional and scientific path of Professor Ivan Mykolayovych Ishchenko. He was a leading Ukrainian surgeon, a renowned scientist, an accomplished teacher, and a great humanist who formed the ideology of surgical science. Professor Ishchenko defined and developed promising directions for scientific research in the fields of military field surgery, urology, traumatology, neuro- and thoracic surgery, and tissue transplantation. His scientific interests included the surgical treatment of diseases of the biliary tract, liver, and stomach as well as theoretical and practical issues of anesthesia administration.

Happiness self finds the way to strong spirit!

Indian proverb



Ivan Mykolayovych Ishchenko was a leading Ukrainian surgeon, a renowned scientist, an accomplished teacher, and a great humanist who «breathed» medicine and inspired others with his hard work and commitment. For him, work was a mental and vital necessity and the only conceivable form of existence. His professional and moral development took place mainly under the influence of the scientific schools of such outstanding surgeons as M. M. Volkovich, E. H. Chernyakhivskiy, and O. P. Krymov. This created favourable conditions for determining the scientific and physiological direction of his research. Professor Ishchenko was one of the leaders in clinical surgery and helped form its ideology. He defined and developed promising directions for progressive scientific research in the fields of military field surgery, urology, traumatology, neuro- and thoracic surgery, and tissue transplantation. His scientific interests included the surgical treatment of diseases

of the biliary tract, liver, and stomach, as well as theoretical and practical issues of anesthesia administration. Professor Ishchenko wrote more than 100 scientific works, including 3 monographs and 2 textbooks. All of his scientific works stand out for their comprehensiveness and academicism.

The professional path of Professor Ishchenko was not only difficult because of his intensive work but also distressing due to the period of general repression. It should be noted that the scientist witnessed the key historical events of the 20th century, including revolutions, wars, and regime changes, which could not but influence his outlook.

Ivan Mykolayovych Ishchenko was born on June 22, 1891 in the village of Pustovarivka, Skvyr district, Kyiv region.

After he finished his training at the Kyiv medical school, Professor Ishchenko entered the medical faculty of St. Volodymyr University and graduated in 1917. Due to his remarkable academic achievements, he received a recommendation from the Academic Council of the university regarding his participation in scientific research. However, Professor Ishchenko began his medical career as a surgeon and a military doctor. He made his way from a junior resident, head of the surgical and urological department, consultant surgeon, and chief surgeon of the Kyiv Military Clinical Hospital, where he worked until 1953, to the chief surgeon of the Kyiv Military District. Ivan Mykolayovych Ishchenko devoted almost 40 years of his professional activity to the military medical service.

During the Second World War, Professor Ishchenko was the chief surgeon of the South-Western Front and managed the surgical service of the fronts in the South-Western direction. With the

introduction of military ranks for doctors, he was awarded the military rank of major general of the medical service in 1943.

Ivan Mykolayovych Ishchenko spent a lot of time in the combat zones at the front. He also visited battalion and regimental medical centres, medical stations, and field mobile hospitals to check on the work of surgeons, give them instructions, and teach them the techniques of surgical operations. In the most difficult and complicated cases, he operated on patients. During the war, Professor Ishchenko performed more than three thousand operations, including 500 on the head and 200 on the spinal cord, blood vessels, and peripheral nerves. He dealt with issues related to military field surgery, including gunshot wounds to the brain and peripheral nerve fibers. Professor Ishchenko investigated the impact of cerebral pressure in head injuries on vital bodily functions. The beginning of this scientific research was his dissertation for the degree of Doctor of Medical Sciences «Materials for the Pathogenesis and Treatment of Acute Cerebral Pressure Syndromes of Traumatic Origin», which was brilliantly defended by him in 1941. Professor Ishchenko studied the pathogenesis of sympathetic reflex dystrophies and proved the effectiveness of novocaine blockade of the sinoarotid zone in a number of diseases and in brain damage syndrome. He confirmed the need for early surgical interventions for gunshot injuries to peripheral nerves. In the treatment of causalgia syndrome with damage to the nerves of the upper limbs, he suggested extirpation of the second thoracic sympathetic node, and in the case of damage to the nerves of the lower limb, the second lumbar node. In his scientific works, he described the technique for performing gangliotomy, rhizotomy, and periarterial sympathectomy.

Professor Ishchenko clarified the segmental sensitive innervation of abdominal organs in studies on the use of a paravertebral novocaine block.

In his work «Neurological Basis in Surgical Diagnosis of Diseases of Abdominal Organs» (1928), Ivan Mykolayovych Ishchenko described in detail the significance of the Zakharyin-Ged zones for diagnosing acute diseases of the abdominal organs.

Professor Ishchenko combined military service with the work of a teacher and a scientist, joining teaching activities at the Kyiv Medical Institute in 1920 and the faculty surgical clinic in 1927. In 1934, for his significant achievements in practical medicine, science, and education, he was awarded the academic title of professor without the defence of a doctoral thesis.

In 1937, Ivan Mykolayovych Ishchenko was appointed to the post of deputy director of the Kyiv

Institute of Emergency Surgery and Blood Transfusion and also served as its scientific director. Theoretical and practical issues of hemotransfusion in shock and acute blood loss, craniocerebral trauma, burns, blood transfusion in surgical infection, blood transfusion from a universal donor, preservation of blood, and use of blood in malignant neoplasms were successfully developed on the basis of the institute. The section on blood transfusion was included in the course of propaedeutic surgery.

In 1944, Professor Ishchenko headed the department of general surgery of the Kyiv Medical Institute, and after the death of O. P. Krymov, he was transferred to the Department of Faculty Surgery, which he ran from 1956 to 1968. In this way, the tradition of selecting the most accomplished surgeon-scientist was preserved in order to strengthen and further develop the scientific, pedagogical, and clinical activities of the Department of Faculty Surgery.

Many years of cooperation with O. O. Bogomolts became the reason for the scientist's constant interest in elucidating the pathophysiological changes in the patient's body during a wide variety of surgical diseases. He researched the pathogenesis and treatment of wound sepsis, the problem of allergy in surgical pathology, and new types of anesthesia (endotracheal anesthesia, muscle relaxation).

Professor Ishchenko conducted a series of successful experimental studies on tissue transplantation to investigate the interaction between the transplant and the patient's body. In his work, «The Phenomenon of Immunity in Homotransplantation of Tissues and Organs» (1935), he confirmed that after organ and tissue transplantation, the recipient's body produces antibodies that bind complement in the Bordet-Jangu reaction. He was the first to pay attention to the peculiarities of engraftment of retransplanted tissues and discover the dependence of the transplant on the physiological activity of the recipient's connective tissue.

In the conditions of the experiment and then in the clinic, Ivan Mykolayovych Ishchenko demonstrated the high efficiency of the use of antireticular cytotoxic serum (ACS). Later, he investigated the positive effect of ACS on the regeneration of bone fractures under experimental conditions.

In the post-war years, the subject of I. M. Ishchenko's scientific research was related to such problems as peptic ulcer disease of the stomach and duodenum, surgical diseases of the liver and biliary tract, blood transfusion, acute blood loss, nephrectomy, treatment of thermal burns, and complex treatment of stomach and mammary gland cancer. He was among the first in Ukraine to use hypothermia, ganglioblockers, and neuroleptics to improve narcosis. As

a result, the scientist published a scientific work on «Morphological Changes of Internal Organs and the Nervous System under the Influence of Hypothermia and Ganglio-Blocking Substances» (1958). His monographs «Operations on the Biliary Tract» and «Operations on the Biliary Tract and Liver» (1960) became the desk books of every surgeon. A separate place in his scientific activity belonged to research on the problem of geriatric surgery. The surgeon determined the indications for surgery very carefully and reasonably, taking into account the patient's age and general condition.

Professor Ishchenko was convinced that a surgeon should constantly and persistently work on improving surgical techniques and remember that anatomical science would always be a solid foundation for active surgery.

I. M. Ishchenko's lectures were distinguished by the depth of problem analysis, the novelty, and the clarity of their ideas. They were carefully prepared, as demonstrative as possible, and understandable for students. Professor Ishchenko was against the unnecessary use of foreign words in surgery. He used them only in cases of absolute necessity, although he knew five European languages. His lectures were attended not only by students but also by doctors and military surgeons because they contained the most recent information in the field of surgery. In his lectures, there were lessons on caring, humanity, deontology, and commitment.

Ivan Mykolayovych Ishchenko was a «teacher of everything in the world», who taught not by morals

but by the example of his own behaviour and actions. He paid great attention not only to the development of surgical and pedagogical skills in his students but also to their general level of culture. He taught to love not only one's profession but also one's native land, its culture, and its writers and artists.

The Academy of Sciences of Ukraine elected Professor Ishchenko as a corresponding member in 1945, which distinguished him as a scientist. The time of his presidency is still considered the Golden Age of the Kyiv Scientific Society of Surgeons. He retired in 1968.

Ivan Mykolayovych died in 1975 after a long and serious illness.

Professor Ishchenko is the Heracles of Ukrainian medicine, personifying enormous strength, indomitability, hard work, and perseverance. His surgical, scientific, and pedagogical achievements find their application in various fields of medicine and in medical education, and his high human qualities, life wisdom, and great nobility continue to inspire new generations of surgeons and scientists.

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