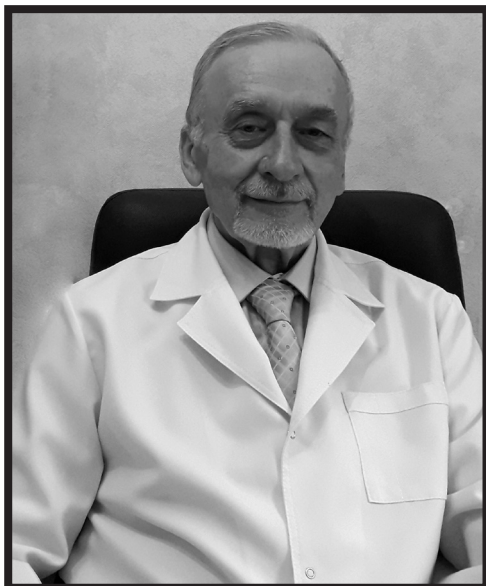


УДК 617.3(477)(092)Котульський

DOI: <http://dx.doi.org/10.15674/0030-598720242101-102>

Igor Volodymyrovych Kotulskyi



Domestic medicine suffered a heavy loss — a talented scientist, Head of the Department of Pathophysiology, Anesthesiology and Functional Diagnosis, Candidate of Medical Sciences Ihor Volodymyrovych Kotulskyi passed away. After a long illness, his life ended on 16 April 2024.

I. V. Kotulskyi began his career as a surgeon in the district hospital of Peremyslyany, Lviv region, where he showed great abilities, deep knowledge and quickly gained authority among his colleagues, and in 1963 he was appointed head of the surgical department of this hospital. Ihor Volodymyrovych always sought new knowledge, so in 1964 he entered the postgraduate course of Lviv Medical Institute, majoring in Normal Physiology, and after graduation (1967) he was sent to Poltava Medical Dental Institute as an assistant at the Department of Normal Physiology. In 1969, he defended his PhD thesis “The effect of resection of the distal part of the stomach on cholinergic and histaminergic processes in the mucous membrane of the stump”. In 1970, he started working as a traumatologist at the 1st Clinical Hospital of Poltava, later headed the regional children's orthopedic department, was a freelance pediatric orthopedic traumatologist of Poltava region.

In October 1975, Igor Volodymyrovych was offered a position at Kharkiv Professor M. I. Sytenko Research Institute of Orthopedics and Traumatology, which coincided with his desire to engage in scientific research in the clinical and theoretical direction, to the position of senior research associate of the laboratory of pathophysiology, later he took the position of its head. The laboratory changed its name several times, turned into the department of pathophysiology, anesthesiology and functional diagnosis, but for 46 years I. V. Kotulskyi remained its unchanged head. Under his leadership, laboratory employees performed 16 planned research works, and it should be noted that almost all of them, where he was the head or responsible executor, belonged to the “Fundamental research in the field of theoretical and clinical medicine” section.

The scientific activity of I. V. Kotulskyi was always connected with solving the problems of diagnosis and treatment of acute and chronic disorders of peripheral blood circulation in patients with an orthopedic and trauma profile, disorders of trophic tissue of the musculoskeletal system after injuries and surgical interventions, development of methods of early diagnosis and conservative treatment of diseases of the locomotor system with an unexplained etiology, for the study of development mechanisms and the development of new methods of treatment of chronic pain syndromes of the locomotion and locomotion organs.

Initially, the activity of the laboratory was aimed at developing methods of express diagnosis of tissue viability after severe limb injuries. For this purpose, I. V. Kotulskyi performed surgical replantation of an amputated limb in an experiment on dogs, which made it possible to create a concept of instrumental rapid diagnosis of acute muscle ischemia, in particular, in field conditions, to develop a device for the implementation of this idea.

An important step in deepening the understanding of the pathogenesis of acute dystrophic processes in the tissues of the musculoskeletal system was the participation of the team of the laboratory of pathophysiology in 1986–1989 in the implementation of a scientific topic within the framework of the All-Union program, which was coordinated by the former Institute of Pathophysiology of the USSR Academy of Sciences. One of the aspects of the study of the mechanisms

of the development of ischemic injuries and their role in the development of dystrophic transformations was the establishment of a relationship between the frequency characteristics of the heart's function and the blood's own oscillations in the human vascular system. I. V. Kotulskyi experimentally proved on humans that this relationship has a resonant character in healthy individuals. Its violation leads to the development of ischemia and dystrophic processes. The results of this study were published in the *Physiological Journal* (1992). In 1993–1995, the laboratory carried out an examination of the circulatory system in persons who suffered as a result of the accident at the Chernobyl nuclear power plant, developed a package of automated hemodynamic analysis programs, and formulated recommendations for the prevention of peripheral blood circulation disorders in persons exposed to ionizing radiation.

After subordination to the Institute of the Academy of Medical Sciences of Ukraine under the leadership of Kotulskyi (2001–2004), two works were performed on the study of spontaneous bioelectrical activity of tissues of human limbs, in particular, the peculiarities of the structure of spontaneous biopotentials under the conditions of various forms of pathology of the musculoskeletal system.

The combined efforts of the department of joint pathology and the team of laboratories of pathophysiology and biochemistry in the study of pathogenesis and development of methods of diagnosis and conservative treatment of aseptic necrosis of the femoral head in adults (2005–2007) proved to be effective. The presidium of AMSU recognized this work as the best and awarded it with a diploma. Currently, this method is successfully used at the Institute.

I. V. Kotulskyi developed a scheme of the pathogenesis of pain syndromes in the area of the shoulder and pelvic girdle, which arise due to acute or prolonged stress reactions and occur with the predominant involvement of monoaminergic or cholinergic mechanisms. In 2011–2016, under his guidance, the mechanisms of the formation of transient dorsalgia in people with mental work were analyzed; the pathogenic connection of some of its forms with the type of autonomic nervous system and disorders of neurotransmitter exchange was substantiated; approaches to differentiated drug correction of transient back pain have been developed. The study of heart rate variability, which made it possible to objectively assess the type of vegetative regulation and the degree of deviation from the norm of regulatory sys-

tems, was of great importance in understanding the mechanisms of formation of non-specific dorsalgia. Forms of non-specific dorsalgia that develop as a result of long-term use of certain pharmaceuticals were identified, a concept was created about the ionotropic mechanisms of the formation of certain variants of non-specific back pain, which was presented at the congress of pathophysiologists (Kharkiv, 2016) and the XVII Congress of orthopedic traumatologists of Ukraine (Kyiv, 2016). In 2017–2019, research was conducted aimed at elucidating the pathogenic mechanisms of the formation of juvenile osteochondropathic kyphosis.

In recent years, Ihor Volodymyrovych worked fruitfully with the Doctor of Medical Sciences M. V. Lyzogh, in particular, on research into the pathophysiological mechanisms of hemodynamic and neurological reactions caused by the type of anesthesia and the intraoperative position of the patient's body during spinal surgery, then they jointly prepared the project of the new research area and became the responsible executors of the topic “Optimizing perioperative management of surgical interventions in patients with the consequences of combat injuries and orthopedic disorders, combined with cardiovascular and nervous diseases”.

I. V. Kotulskyi successfully combined scientific and medical work: he constantly consulted patients with pain syndromes, peripheral blood circulation disorders, and impairments of the innervation of the locomotor system.

Ihor Volodymyrovych generously shared his knowledge and great experience with young people. Under his leadership, 6 medical and biological candidate theses were defended. Since 1978, he has been a permanent member of the academic council of the Institute. For almost 50 years, he was a reviewer of the journal “Orthopaedics, Traumatology and Prosthetics”.

An important achievement of I. V. Kotulskyi should be considered the organization of the bioethics committee at the Institute in 2001, which he headed for almost 15 years. For his significant contribution to the development of fundamental research in the field of orthopedics and traumatology, he was awarded the Diploma of the Verkhovna Rada of Ukraine and several times Honorary Diplomas of the National Academy of Medical Sciences of Ukraine.

The death of Ihor Volodymyrovych is an irreparable grief for his relatives, friends, friends and colleagues.

We are deeply saddened by this loss and offer our sincere condolences to the family.

Eternal and bright memory!