


Research Article

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Outstanding Surgeon and Scientist Dmitry Alekseevich Arapov

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ABSTRACT In 2022, we are approaching 125 years since the birth of Dmitry Alekseevich Arapov, a prominent domestic surgeon, scientist, experimenter, organizer of the military medical services. Dmitry A. Arapov, one of the most prominent representatives of the S.S. Yudin scientific school, worked at the N.V. Sklifosovsky Research Institute for Emergency Medicine from 1929 till 1984. He quickly proved himself not only as an excellent doctor and a skilled surgeon, but also as a researcher, and soon became one of the closest students and associates of S.S. Yudin. Dmitry A. Arapov drafted as a field surgeon during the Soviet-Finnish war of 1939-1940, from the first to the last day he went through the Great Patriotic War, being the Head of the surgical service of the Northern Fleet in Polyarny. In this position, he significantly improved the system for providing emergency surgical care on ships and in naval hospitals, based on the experience gained over the years of work at the N.V. Sklifosovsky Research Institute for Emergency Medicine. From July 1950 Dmitry A. Arapov was Chief Surgeon of the USSR Navy, from May 1953 he was Deputy Chief surgeon of the Main Military Sanitary Directorate of the USSR Ministry of Defense, and from May 1955 - again Chief Surgeon of the USSR Navy, until his retirement in October, 1968. At the same time, Dmitry A. Arapov did not leave his work at the N.V. Sklifosovsky Research Institute for Emergency Medicine until the last days of his life. Dmitry A. Arapov is the author of more than 200 research papers, including 14 monographs. Scientific interests of Dmitry A. Arapov went far beyond emergency surgery, to which he naturally paid most attention. His works are devoted to various issues of military and emergency surgery of the abdominal and thoracic organs, topical issues of burn injuries, surgical site infections, reconstructive surgery, neurosurgery, treatment of endocrine disorders, and anesthesiology and resuscitation. Also Dmitry A. Arapov successfully dealt with the problems of autotransfusion, blood reinfusion from the chest and abdomen, transfusion of fibrinolytic blood.

The main directions of scientific research, laid down by Dmitry A. Arapov, are currently being continued at the Scientific Department of Emergency Surgery, Endoscopy and Intensive Care of the N.V. Sklifosovsky Research Institute for Emergency Medicine.

Memory of Dmitry A. Arapov has been preserved to this day. To the 100th anniversary of the birth of D.A. Arapov, a scientific conference was held at our Institute.

The naval hospital in the town of Polyarny, Murmansk region, was named after Dmitry A. Arapov, and in honor of D.A. Arapov, a memorial plaque was installed on its building. In the 70s of the twentieth century, People's Artist of the USSR L.E. Kerbel created a sculpture of Dmitry A. Arapov, which was stored in the local history museum of the town of Polyarny.

His bust portrait (by artist T.S. Smagina) is exhibited at the Scientific Department of Emergency Surgery, Endoscopy and Intensive Care of the N.V. Sklifosovsky Research Institute for Emergency Medicine. In addition, the N.V. Sklifosovsky Research Institute for Emergency Medicine owns an earlier portrait of Dmitry A. Arapov by artist F.S. Bulgak. We introduce these portraits into scientific circulation for the first time. We are confident that they will be able to tell contemporaries a lot about this scientist, surgeon and man who made a great contribution to surgery and military medicine, and rightfully entered the history of Russian medicine.

Keywords: history of medicine, Dmitry A. Arapov

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INTRODUCTION

In 2022, we are approaching 125 years since the birth of Dmitry Alekseevich Arapov, a prominent Russian surgeon, scientist, researcher, organizer of the military medical service (photo 1). In the late 1920s - early 1930s at the N.V. Sklifosovsky Research Institute for Emergency Medicine the S.S. Yudin scientific school began to take shape, and its achievements were a vivid example of the fruitful work of a team of talented scientists united by an original research program, solidarity of natural scientific views, topics of scientific work, fundamental approaches to practical issues and the creative development of the scientific views of their leader [1]. In December 1929, S.S. Yudin invited the on-site physician of the Moscow ambulance station Dmitry Alekseevich Arapov, who also had quite a significant experience as a surgeon, to work as a resident at the surgical department of the Institute (Note 1). Dmitry A. Arapov quickly proved himself to be an excellent doctor and a skilled surgeon, and soon became one of the closest students and associates of S.S. Yudin [2].



Photo 1. Dmitry A. Arapov (1969)

Dmitry A. Arapov was born on November 7 (21), 1897 in Moscow. His father, Alexei Efimovich Arapov, served in the Derbenev trading house, and his mother, Zinaida Ilyinichna, was a housewife. After the October Revolution, his father served in Soviet institutions, and died in 1934, his mother died in 1947. In 1916, during the First World War of 1914–1918, after graduating from the 10th Moscow Gymnasium, Dmitry A. Arapov entered the medical faculty of Moscow University and at the same time began to work as a brother of mercy, and then as a paramedic in one of the military hospitals. In 1919, at the peak of the typhus epidemic that broke out in Russia, Dmitry A. Arapov was sent to work as a paramedic in the hospital at the factory of the Franz Rabenek Partnership in the village of Bolshevo, Moscow region. In the same year, he was called up for military service as a medical assistant. As part of the 22nd field hospital of the 4th Army, Dmitry A. Arapov participated in the combat operations on the Turkestan front. In 1921, he was seconded to continue his education at the medical faculty of Petrograd University, but in 1922 it was closed, and Dmitry A. Arapov was transferred to Moscow, where in 1925 he graduated from the Medical faculty of the 2nd Moscow University. In addition, he studied three foreign languages (French, German and English) in sufficient volume. Dmitry A. Arapov stood out for his great zeal for learning and admirable performance. Thus, from 1923 Dmitry A. Arapov, being a 3rd year student, worked as a paramedic in a hospital at the Ratner plant. According to Dmitry A. Arapov's own words, "... in 1923 I first picked up a scalpel, from that moment I became an intern of the surgical department of the hospital at the Krasny Bogatyr plant" [3]. After graduating from the university in 1925, Dmitry A. Arapov continued to work as a surgeon in the hospital at the Krasny Bogatyr plant, and at the same time began to work at the Moscow ambulance station as on-site doctor. In addition, from 1925 to 1930 Dmitry A. Arapov was an extern at the Department of Operative Surgery of the Medical Faculty of the 2nd Moscow State University [2–4]. Also Dmitry A. Arapov was actively involved in social activities - in 1927–1931 he was a deputy of the Moscow Council [3, 5].

ACTIVITY OF DMITRY A. ARAPOV AT THE N.V. SKLIFOSOVSKY INSTITUTE AND DURING THE GREAT PATRIOTIC WAR

The main directions of scientific activity which were outlined by S.S. Yudin after his joining the N.V. Sklifosovsky Institute for the entire team of the surgical clinic were surgery of the esophagus and stomach, traumatology and military field surgery, transfusiology and surgical anesthesia [1, 4, 6]. Dmitry A. Arapov was actively involved in this extensive scientific program, and soon he was appointed head of a new surgical clinic of the Institute. In 1931–1941, Dmitry A. Arapov part-time worked as a consultant surgeon at the Institute of Experimental Endocrinology, where he was engaged in transplantation (replanting) of endocrine glands and tissues in order to rejuvenate the human body.

In 1936, for a number of studies related to anaerobic infections, endocrine disorders and thyroid pathology, Dmitry A. Arapov was awarded the degree of Candidate of Medical Sciences without defending a dissertation. By the beginning of the Soviet-Finnish war of 1939–1940, Dmitry A. Arapov was called up for military service in the field, served on the Kola Peninsula as head of the surgical department of the field mobile hospital of the 1st line and chief surgeon of the medical battalions of the 8th Army. In addition, in 1939 he participated in the military campaign for the liberation of Western Belarus as head of the surgical department of the divisional hospital [3]. In 1940 Dmitry A. Arapov, on the basis of his front-line experience, published his monograph "Gas Infection", and in 1942 - "Gas Gangrene", which went through several editions. After release, it was urgently printed and sent to all hospitals in the army as a teaching aid, becoming a reference book for military surgeons. By the beginning of the Great Patriotic War in June 1941, Dmitry A. Arapov volunteered to go to the front. First, he served in the naval hospital No. 74 in Murmansk, and then was appointed flagship (chief) surgeon of the Red Banner Northern Fleet (colonel of the medical service). Dmitry A. Arapov's activity proved to be very effective in this post. Based on the experience gained over the years of work at the N.V. Sklifosovsky Institute, he significantly improved the system of emergency surgical care on ships and in naval hospitals.

Dmitry A. Arapov led the surgical service during all landing and ground operations of the Northern Fleet. In order to improve it, he also organized fleet-wide medical conferences which addressed topical issues of organizing surgical care and tactics for treating the wounded. On the initiative of Dmitry A. Arapov, a three-month secondment of doctors to the Murmansk and Polyarny military hospitals was organized, thanks to which 112 naval doctors received surgical training during the war.

Dmitry A. Arapov was the first to introduce registers of defects in the provision of medical care both at the prehospital and hospital stages, which significantly increased the personal responsibility of doctors. He introduced the method of drip infusion of large doses of anti-gangrenous serum. Under his leadership, the main

provisions of the stage-by-stage organization of the reception, sorting, rendering assistance and evacuation of the wounded were also developed and published in the form of instructions, which were strictly observed by the doctors of the fleet.

Particular attention was paid to sorting the wounded during mass admission, in which, at the direction of Dmitry A. Arapov, the most experienced doctors were involved.

Thanks to Dmitry A. Arapov's activities, a unified protocol for the treatment of gunshot wounds using extended surgical debridement was introduced in the Northern Fleet. In addition, he scientifically substantiated and prepared the defining provisions and regulatory documents for solving the problems of medical support for long-term navigation of both individual surface ships and submarines, and their formations, which remain relevant even today. Dmitry Alekseevich for the first time developed temporary instructions for the medical support of ships during combat operations in the Arctic.

Dmitry A. Arapov himself performed many unique, life-saving surgeries. He also gained invaluable experience through his direct participation in combat operations, including behind enemy lines.

As a result of Dmitry A. Arapov's (Frigate Surgeon, as sailors and polar pilots called him) activities, the Navy had the lowest lethality and the highest percentage of returning the wounded to duty.

In 1943 Dmitry A. Arapov defended his doctoral dissertation on the diagnosis and treatment of anaerobic gas infection. In August 1945, he was appointed head of the medical department and surgeon-consultant of the Central Moscow Naval Hospital, at the same time, he again began working part-time at the N.V. Sklifosovsky Research Institute for Emergency Medicine (Note 2) [3, 6–12].

In the first post-war years, the surgical activities of the N.V. Sklifosovsky Research Institute for Emergency Medicine significantly expanded and become more complex. Instead of two surgical departments that worked before and during the Great Patriotic War, three surgical clinics, each for 20 beds, were organized in 1945 [1]. The positions of heads of these clinics were taken by the best students of S.S. Yudin. Dmitry A. Arapov became head of the 3rd Surgical Clinic. Surgeons P.A. Agapov, N.M. Amosov, O.L. Dobrzhansky, A.G. Karlovskaya, F.I. Levitin, B.V. Nifontov and K.S. Simonyan worked here at that time [4, 5, 7].

So from 1945 to 1951 Dmitry A. Arapov served as consultant surgeon at the Central Naval Hospital in Moscow. From July 1950 he was appointed Chief Surgeon of the Soviet Navy, from May 1953 he was Deputy Chief Surgeon of the Main Military Sanitary Department of the USSR Ministry of Defense, and from May 1955 he was again Chief Surgeon of the Soviet Navy, until he resigned in October 1968. In 1961 Dmitry A. Arapov became head of the 1st Surgical Clinic of the Institute. From April 1969 Dmitry A. Arapov was Senior Researcher, Consultant Surgeon at the N.V. Sklifosovsky Research Institute for Emergency Medicine, in this position he remained until the end of his life. Since 1953 Dmitry A. Arapov was also professor at the Department of Surgery at the Central Institute for Postgraduate Medical Education [3, 8, 13–16].

One of the main directions in the multifaceted activities of Dmitry A. Arapov became abdominal surgery - his research works on acute appendicitis, perforated gastric and duodenal ulcer, acute intestinal obstruction (etiology, pathogenesis, surgical treatment) are widely known. Also Dmitry A. Arapov studied the issues of thoracoabdominal injuries, heart injuries, treatment for shock and traumatic brain injury [13–16].

It is understandable that a particularly important place in the scientific and practical activities of Dmitry A. Arapov was occupied by questions of military surgery. His book "Anaerobic Gas Infection" in 1972 was awarded the Pirogov Prize. On the basis of the N.V. Sklifosovsky Research Institute for Emergency Medicine, he trained several dozen naval surgeons for ships of the 1st rank and submarines [3, 7, 9, 13–16].

Following the example of his teacher S.S. Yudin, Dmitry A. Arapov in the 1930-1940s began to deal with one of the most difficult sections of gastrointestinal surgery - surgery of the esophagus - and achieved great success in this area. In 1949 Dmitry A. Arapov noticed the fact of gradual spontaneous elongation of the subcutaneous small bowel graft and used it for several repeated presternal esophagoplasties, when during the primary operation the small bowel graft could not be brought to the neck due to its insufficient length [5, 6, 17, 18]. Thus, a new surgical technique for creating an artificial esophagus using the small intestine was born, which was widely introduced into practice by the students of S.S. Yudin, and then adopted by other Russian surgeons.

A great achievement of the second half of the 1940s was intrapleural esophagoplasty which had a number of advantages compared to antethoracic (subcutaneous) esophagoplasty. His first intrapleural esophagoplasty using the small intestine S.S. Yudin performed in 1947, and then this technique was successfully mastered by his students, including Dmitry A. Arapov, who, while working at the N.V. Sklifosovsky Research Institute for

Emergency Medicine personally performed more than 250 different esophagoplasties for tumor stenoses and cicatricial strictures of the esophagus [17].

S.S. Yudin wrote about Dmitry A. Arapov: "His surgical technique is impeccable, his ability to always find a way out and the right solution in any most difficult case of an emergency operation, raises his reputation to a high level of our art" [18].

In 1949, 6 years after his Doctoral thesis defense, Dmitry A. Arapov was awarded the Doctor of Medical Sciences degree, and in 1951 he was awarded the academic title of Professor; in 1953 he was elected Corresponding Member of the USSR Academy of Medical Sciences. Under his leadership, 11 doctoral and 26 master's theses were completed, 11 of which are carefully stored in the scientific and medical library of our Institute [4, 5, 17, 19, 20].

In July 1950, after the death of I.I. Dzhanelidze, Dmitry A. Arapov was appointed Chief Surgeon of the USSR Navy, in 1951 he was awarded the rank of Major General, and in 1962 - Lieutenant General of the Medical Service, he retired in October 1968 [5, 21, 22].

Dmitry A. Arapov's research works are devoted to various issues of emergency surgery of the abdominal and thoracic cavities (acute appendicitis, acute cholecystitis, perforated gastric and duodenal ulcers, acute intestinal obstruction, heart injuries, thoracoabdominal injuries, bilateral pneumothorax). Dmitry A. Arapov initiated the study of the topography of the supra- and subphrenic vagus. This played a great role in the clinical use of vagotomy for peptic ulcer, developed in detail by Dmitry A. Arapov's students.

At the same time, Dmitry A. Arapov paid great attention to topical issues of diagnosis and treatment for burn injury, surgical infection, reconstructive surgery, neurosurgery, endocrine disorders and anesthesiology. Dmitry A. Arapov was one of the first promoters of tracheostomy for shock and severe traumatic brain injury. In 1949, he published the country's first monograph on inhalation anesthesia, and was a pioneer of nitrous oxide for anesthesia in the USSR. He also participated in the development of a portable anesthesia machine and proposed to equip with it ambulance teams, which made it possible to get patients out of shock already at the prehospital stage [10, 12, 15, 23].

In addition, Dmitry A. Arapov successfully dealt with such problems as autotransfusion, reinfusion of blood from the chest and abdominal cavities, cadaveric blood transfusions. In 1949, he became (together with N.G. Belenky) a laureate of the State Stalin Prize of the 2nd degree for the development and implementation of a new blood substitute - nonspecific animal blood serum (Note 3) [12, 15].

Dmitry A. Arapov appears as a scientist, an innovator, whose scientific interests concerned not only clinical and military surgery, but also went far beyond it, being associated with anesthesiology, resuscitation and what is now called cell and tissue technologies. Dmitry A. Arapov wrote more than 200 scientific papers, including 14 monographs summarizing the results of his scientific research [2, 9, 15].

In 1959 Dmitry A. Arapov was awarded the honorary title of Honored Scientist of the RSFSR. Dmitry A. Arapov was Cavalier of many government awards of the USSR, including 7 orders and 15 medals. In 1977 Dmitry A. Arapov received the Hero of Socialist Labor Gold Star, he was also awarded two Orders of Lenin (1973, 1977), Orders of the Red Star (1942), Order of the Red Banner (1944), Order of the Patriotic War of the 1st degree (1943), two Orders of the Red Banner of Labor (1952, 1968) and the Order of the Badge of Honor. In addition, he was twice awarded the honorary weapon by the Commander-in-Chief of the USSR Navy (1957, 1967), as well as the Certificate of Honor from the Moscow Council (1972).

Dmitry A. Arapov was a board member of the All-Union Society of Surgeons, member of the International Society of Surgery, honorary member of the Russian, Moscow and other surgical societies. Dmitry A. Arapov was the chairman of the Commission on General Surgery under the USSR Ministry of Health, participated in the preparation of Soviet medical encyclopedias (author and editor of articles in the Surgery section of the second edition of the Large and Small Medical Encyclopedias). He was the editor of a 3-volume collection of selected works by S.S. Yudin published in 1960–1962 [15, 24].

Professor N.S. Uteshev and Professor G.V. Pakhomova, who for many years worked at the N.V. Sklifosovsky Research Institute for Emergency Medicine, became the most famous of the numerous students of Dmitry A. Arapov's School of Emergency Surgery. The main directions of Dmitry A. Arapov's School were also continued by N.S. Uteshev and G.V. Pakhomova's students A.G. Lebedev and P.A. Yartsev, employees of the same Institute.

Taking advantage of the existing opportunity, the authors of the present article addressed a request to the current employees of the N.V. Sklifosovsky Institute, whose activities took place in the 1st Surgical Department

together with Dmitry A. Arapov, to write their memoirs about him. Here are excerpts from these memoirs. N.A. Karasev, Candidate of Medical Sciences: "After graduating from a medical institute on September 1, 1977, I entered the clinical residency at the 1st Surgical Clinic of the Institute, where Professor D.A. Arapov worked as consultant at that time. He actively participated in the life of the Clinic and the Institute, daily morning and "big" Friday conferences, multi-disciplinary discussions.

Starting from 1980 D.A. Arapov visited the Clinic less often, but during the short time he spent there, he told interesting and instructive stories from his life and medical practice. Dmitry Alekseevich was always in professional readiness, and this helped him in a timely manner to diagnose acute appendicitis in his granddaughter.

D.A. Arapov retained sharpness of mind and clinical thinking until the end of his days. I remember the following episode. At a morning surgical conference, a patient with stomach cancer was presented for surgery. After looking at the X-rays, Professor D.A. Arapov said that he did not see the need for an operation, since the case was inoperable. After a long discussion, the chairman of the conference, B.D. Komarov gave permission for the surgery. The next day, the operating surgeon reported that the tumor was completely inoperable.

D.A. Arapov showed an active life position almost until the end of his days. When the move to the newly built Clinical and Surgical Building began, where the 1st Surgical Clinic was one of the first to settle in, Dmitry Alekseevich asked to be shown the new clinic. At that time, the elevators had not yet been put into operation, but an open elevator was operating on the inner facade of the Clinical and Surgical Building. With great difficulty we persuaded the builders, and Dmitry Alekseevich was taken up to the ninth floor. For more than two hours he examined the new premises of his Clinic and was pleased with what he saw.

In June 1984, D.A. Arapov passed away and was buried with military honors. All off-duty employees of the Institute took part in the funeral".

Memoirs of A.G. Lebedev, Doctor of Medical Sciences: "D.A. Arapov was one of those people whom, even after their retirement from active surgical performance, the staff did not forget and recalled how they operated, made rounds and what they paid attention to.

When my peers and I started working [at the N.V. Sklifosovsky Institute], D.A. Arapov was already at an advanced age and was perceived as a consultant. He was not so often involved in difficult work, but he was constantly turned to for advice. Even when he was already retired, military doctors from different fleets and, of course, from the Northern Fleet continued to meet him.

Many years after my serving in the Northern Fleet, my family and I managed to visit the Northern Fleet Aviation Museum, which is located in the village of Safonovo on the coast of the Kola Bay, and the museum of Severomorsk, on the coast of the Barents Sea. There are exhibits and words about wartime doctors, including surgeon D.A. Arapov: Chief Surgeon of the Northern Fleet. "The Chief Surgeon of the Fleet D.A. Arapov entered the struggle for the life of the famous aviator Kurzenkov. After examining the wounded, he first removed a fragment that had stuck in his leg. Then the surgery was continued. During the operation, several dramatic situations arose, which the doctor successfully overcame ... '.

D.A. Arapov was overly concerned by his work and patients. Once, after the end of one of the meetings of the Academic Council, he did not go home, but insisted to be taken to the Clinic.

Dmitry Alekseevich played a certain role in the review of S.S. Yudin's case and his release from exile. On behalf of the USSR Academy of Medical Sciences D.A. Arapov recommended him as one of the best surgeons in the country, able to provide medical assistance to the wife of the Secretary of the Novosibirsk Regional Party Committee when S.S. Yudin served time in the Novosibirsk region and worked as surgeon in Berdsk".

A.G. Lebedev also notes that Dmitry A. Arapov managed to achieve high results in work and life without joining the CPSU, and this was then a rare occurrence. In this sense, he was an exception to the rule.

He continues: "When in June 1984 we said goodbye to D.A. Arapov at the N.V. Sklifosovsky Institute, a large number of people gathered from other institutions, institutes, hospitals, the Academy of Medical Sciences, there were also military doctors. At the coffin, young and old, honored people, doctors, front-line soldiers, scientists, professors and academicians succeeded each other in the mourning guard. We said goodbye to the surgeon, military doctor, scientist, Hero of Socialist Labor ... ".

The co-author of this article, Professor Yu.S. Goldfarb supplements with his memories the image of Dmitry A. Arapov as a person: "As toxicologist, I had no working contacts with D.A. Arapov, besides, we worked in different buildings. However, I saw Dmitry Alekseevich at the Institute's conferences. He attracted attention, and I

remember him as a restrained, but benevolent personality, clean-cut man, in whom one could feel self-confidence and great willpower. Sincere respect towards him from those around him was noticeable”.

In recent years, the Department of Emergency Surgical Gastroenterology of the N.V. Sklifosovsky Research Institute for Emergency Medicine has significantly expanded its functions, having now become the Scientific Department of Emergency Surgery, Endoscopy and Intensive Care (photo 2). Since 2009, it has been headed by Doctor of Medical Sciences, Professor P.A. Yartsev. Here, the traditions of Dmitry A. Arapov's scientific school have been successfully developing. The Department deals not only with emergency surgery in its wide range, but also with modern effective medical and diagnostic technologies. These are endotoxicoeses, issues of anesthesiology and resuscitation, endoscopic surgery and diagnostic procedures, and transplantology. The main areas of practical and scientific activity of the Department in the field of surgery are: diagnosis and treatment of complicated gastric and duodenal ulcers, acute appendicitis, intestinal obstruction, strangulated anterior abdominal wall hernias, short bowel syndrome, gastrointestinal fistulas, as well as abdominal trauma; issues of surgical treatment for diseases of the liver, gallbladder, biliary tract and pancreas are being developed.



Photo 2. Management and researchers of the Department of Emergency Surgical Gastroenterology (2003). 1st row, from left to right: chief researcher prof. N.S. Uteshev, Head of the Department prof. G.V. Pakhomova, Chairman of the Department I.A. Kirdyanov; 2nd row, from left to right: 3rd — researcher, Candidate of Medical Sciences T.G. Podlovchenko, 4th — leading researcher, Candidate of Medical Sciences L.F. Tveritneva; 3rd row, from left to right: 2nd — senior researcher, Candidate of Medical Sciences A.G. Lebedev, far right - researcher, Candidate of Medical Sciences T.P. Makedonskaya; 4th row, far right — senior researcher, Candidate of Medical Sciences P.A. Yartsev

The Department actively uses new medical technologies: laparoscopic access for almost all urgent patient conditions and injuries of the abdominal organs, staged treatment for acute colonic obstruction and intestinal fistulas, ultrasound guidance is actively used for common forms of peritonitis and endoscopic combined hemostasis for gastrointestinal bleeding, modern synthetic and biological materials (cadaveric dura mater grafts) - for hernias of the anterior abdominal wall.

Organ-sparing techniques are used for extravascular interventions: percutaneous cystogastro- and cystoduodenostomy for postnecrotic pancreatic cysts; simultaneous drainage and stenting of the pancreatic and bile ducts using endoscopic ultrasonograph-guided rendezvous technique for anastomotic strictures after liver and pancreas transplantation.

It is worth noting separately, the participation of the Department in the first successful clinical cadaveric small bowel transplantation in Russia, performed in 2013 after subtotal resection of the small intestine for mesenteric vascular disease [25].

In case of the development of acute endotoxicoeses, using highly effective dialysis-filtration methods of extracorporeal hemocorrection, urgent assistance is provided for acute renal failure, which most often occurs with multiple organ dysfunction caused by pancreatic necrosis and peritonitis.

In the specialized unit, resuscitation and intensive care are carried out for the most severe patient conditions, especially for massive and recurrent gastrointestinal bleeding.

All this made it possible to achieve modern world indicators in the treatment for acute abdominal emergencies. As you can see, the legacy of Dmitry A. Arapov develops and multiplies.

Memory of Dmitry A. Arapov has been preserved to this day. To the 100th anniversary of Dmitry A. Arapov's birth, a scientific conference was held at our Institute, and its participants were not only employees of Moscow institutions, but also scientists from various cities of this country [26]. The naval hospital in the city of Polyarny, Murmansk region, was named after Dmitry A. Arapov (photo 3), and on its building in honor of Dmitry A. Arapov a memorial plaque was installed [9, 27]. In the 70s of the twentieth century, People's Artist of the USSR L.E. Kerbel created his sculpture (size 31x36x18 cm, plaster; hand pressing, engobing, coloring) based on a photograph of Dmitry A. Arapov taken in 1942. We did not find any reports of this fact in the periodical press. This sculpture was donated by L.E. Kerbel to the Center of Culture of the city of Polyarny, and then transferred to the local history museum (photo 4). The sculpture is a bust of the surgeon immersed in thought, his right hand touching his chin. Most likely, Dmitry A. Arapov posed for the photograph before or after surgical procedure, as he is wearing a medical gown [28].



Photo 3. Naval hospital in Polyarny

<https://ar.culture.ru/ru/subject/skulpturnyy-portret-arapova-dmitriya-alekseevicha>



Photo 4. Sculpture of Dmitry A. Arapov by L.E. Kerbel
URL: 6267fd0324a440dcd7037c81-squared



Photo 5. Portrait of Dmitry A. Arapov by T.S. Smagina (property of the N.V. Sklifosovsky Research Institute for Emergency Medicine)

His bust portrait (artist T.S. Smagina) is on display in the Department of Emergency Surgery, Endoscopy and Intensive Care of the N.V. Sklifosovsky Institute. The size of the portrait is 100x75 cm, it is made in tempera on hardboard (photo 5). The exact date of this portrait is unknown. But given the fact that on Dmitry A. Arapov's chest the Gold Star of the Hero of Socialist Labor (awarded to him in 1977) is depicted, the creation of this painting most likely dates back to the end of the 1970s.

The N.V. Sklifosovsky Research Institute for Emergency Medicine also owns an earlier portrait of Dmitry A. Arapov by the artist F.S. Bulgak, size 100x65 cm, made in oil in 1960. On the portrait, Dmitry A. Arapov is depicted in military uniform, sitting in an armchair (photo 6). On his chest there are medal ribbon bars and the badge of the Laureate of the Stalin Prize. The portrait clearly shows the strong-willed character of this man, his charisma. We can see a calm and confident look, a large, overworked palm of a surgeon. These portraits are introduced by us into scientific circulation for the first time. We are sure that they will be able to tell contemporaries a lot about this scientist, surgeon and man.

Dmitry A. Arapov died on June 14, 1984 at the age of 86, and was buried at the Kuntsevo cemetery in Moscow [9, 13, 14, 16] (photo 7). He devoted himself completely to surgery and military medicine, and deserved our long and good memory.



Photo 6. Portrait of Dmitry A. Arapov by F.S. Bulgak (property of the N.V. Sklifosovsky Research Institute for Emergency Medicine)



Photo 7. The final resting place of Dmitry A. Arapov at the Kuntsevo Cemetery. <https://warheroes.ru/hero/hero.asp?id=13695>

CONCLUSION

Professor Dmitry A. Arapov made a great contribution to medical science and practice, showing himself as an outstanding doctor, scientist and organizer of the military surgical service. The work of Dmitry A. Arapov for many years was associated with the N.V. Sklifosovsky Research Institute for Emergency Medicine where he honed his skills, conducted intensive scientific research in various areas of emergency medicine and shared his rich experience with civil and military medical specialists. Thanks to his fruitful activity and high human qualities, Dmitry A. Arapov deserved the grateful memory of the medical community. This is confirmed by historical information found from available sources, as well as by two portraits of Dmitry A. Arapov, located at the N.V. Sklifosovsky Research Institute for Emergency Medicine which are introduced by us into scientific circulation for the first time and well complement the image of this great personality and man who rightfully entered the history of Russian medicine.

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