

MATERIALS OF THE SCIENTIFIC-PRACTICAL CONFERENCE DEDICATED TO THE 50TH ANNIVERSARY OF THE CHILDREN'S SURGICAL SERVICE IN YAKUTIA

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PEDIATRIC SURGERY OF YAKUTIA - PAST, PRESENT, FUTURE

The Pediatric Surgical Service in Yakutia was established in 1967, at the same year on December 1 on the base of Pediatric Republican Hospital in Yakutsk the Department of Pediatric Surgery was opened, the stage of the development of pediatric surgery began. Now, after 50 years, it seems incredible that even in those far years when there was no modern surgical equipment, electrosurgical instruments, such voluminous operations as lobectomy, pericardotomy, etc. were carried out. Along with the development and becoming of pediatric surgery, pediatric anesthesiology and resuscitation also developed, which made it possible to perform more complex surgical interventions and care for serious patients. The department of pediatric surgery worked for 40 beds, there were 2 posts - purulent and clean surgery. Honored Doctor of the Republic E.N. Ponomarev was in charge of the department. Most of the patients were children with septic pathology: acute and chronic osteomyelitis, destructive pneumonia with very serious complications, diffuse peritonitis. There were no pediatric surgeons in the regions of the Republic; surgeons of the department flew to complicated cases. On 40 beds they managed to render planned surgical help. Evgeny Nikolayevich was a highly qualified surgeon who possessed the technique of many complex interventions, but his favorite section was pediatric urology. Sobolevsky V.F. worked as a senior resident in the department, who was more specialized in thoracic surgery. Viktor Feliksovich, along with c.m.s. assistant professor Gorodov Y.N. for the first time in Yakutia performed lobectomies, pericardotomies, surgeries for complications of destructive pneumonia, as well as for bronchiectasis. Sobolevsky V.F. for the first time in the republic performed thoracoplasty at pectus excavatum by Paltia. At that time, the operation was accompanied by a great deal of blood loss, requiring prolonged analgesia in the postoperative period. I remembered the words of Viktor Feliksovich: «Thoracic surgery is

a surgery on the vessels», since each vascular branch was tied up, at that time there was no electrocoagulant. In addition, Viktor Feliksovich is the ancestor of pediatric cardiosurgery, in 1992 he first performed a ligation of the common arterial duct with thoracic access, performed pericardectomy with constrictive pericarditis. Nikolaev Valentin Nikolayevich, who specialized in neonatal surgery, worked in the department. It should be noted that the mortality of newborns at that time was very high, which depended primarily on the problems of anesthesia and nursing children of this age after surgery. There was a general ward of intensive therapy with 40 beds, where were large children and newborns, including septic patients. Kapitonov Andrei Andreevich was involved in osteomyelitis in children, so 5-6 children with osteomyelitis were constantly treated there; many patients were there with advanced and chronic septic forms. The chronic form of osteomyelitis occurred in the 1990's in 30-35% of cases, which indicates a late diagnosis of the disease. Despite the high percentage of septic patients, mortality in acute hematogenous osteomyelitis was no more than 2% of cases. All this was achieved thanks to the creative productive work of the collective of the surgical department of the PRH. Eduard Ivanovich Petukhov was closely engaged in problems of acute hematogenous osteomyelitis and nowadays he continues to treat actively this pathology. Kapitonov A.A. and Petukhov E.I. for the first time applied the method of imposition of intraosseous lavage by K.S. Ormantaev, which saved many children's lives. Although the method at first glance is traumatic, washing the bone marrow of the tubular bone, but it allowed in a fairly short time to reduce the manifestation of infectious-toxic shock. Many implementations were applied by surgeons together with the pediatric traumatologist-orthopedist Solodovnikov P. N. for the treatment of the consequences of chronic osteomyelitis. Petr Nikolaevich truly is the founder of

pediatric orthopedics in the republic, he introduced methods of corrective osteotomies in congenital deformities, methods of surgical treatment of congenital clubfoot, including machine osteosynthesis, treatment of bone cysts with the use of allografts. Zuev Alexey Leonidovich, who is still a regular airborne surgeon, has been and continues to work with emergency surgery with visiting work. Vasiliev Evgeniy Pavlovich is the first pediatric urologist, he has introduced reconstructive operations with congenital hydronephrosis, ureterohydronephrosis, surgical treatment of hypospadias, various methods of operative treatment of varicocele, including microsurgery. The introduction of endoscopic surgery in the 1990s is associated with the name of Mikhail Vladimirovich Stroikov, who defended the thesis for the degree of candidate of medical sciences on the materials of the department in 2004. The first pediatric surgeon, who received the certificate of urologist-andrologist, was Nina Fedorovna Stepaniuc. Her name is associated with the introduction of endosurgery in pediatric urology, new methods of treating hypospadias, bladder pathology. Since 1987 I have been working in the surgical department of the PRH, I chose neonatal surgery, reconstructive surgery for congenital malformations. Over the years, many new algorithms and surgical methods were introduced. In 2003 I defended in the RSMU thesis for the degree of candidate of medical sciences, based on practical work, in 2014 - the doctor of medical sciences. Since 1994, the foundations of pediatric coloproctology have been laid, when the operations by Soave in Hirschsprung's disease, posterior sagittal anorectoplasty (Nikolaev V.N., Savvina V.A.) were introduced, patients with anorectal anomalies already began to be operated in the Pediatric Center. Nina Serafimovna Nemova, Ignatieva Marta Mikhailovna, Verbitskaya Lyudmila Ilyasovna, Berezin Semyon Maksimovich worked in the pediatric ENT department.

I want to recall our colleagues in intensive care - anesthesiologists: the

founder of the pediatric intensive care in PRH can be considered a remarkable, highly erudite doctor A.N. Ivanov. Later Kirillov Viktor Fedorovich headed IC. Anatoly Nikolaevich is also the founder of the pediatric endoscopic service, he performed bronchoscopy, search bronchial occlusions in bronchopleural fistulas in patients with destructive pneumonia. His pupil is a doctor of the highest category, pediatric endoscopist Illarionova Maria Pavlovna. Pediatric doctors reanimatologists Zhuravlev Reanoliy Anatolyevich, Zherbakov Sergey Nikolaevich, Popov Alexander Evgenievich and others made a huge contribution to the treatment of children with severe surgical pathology.

Thus, with rather meager technical capabilities, the lack of an intensive care unit for pediatric surgeons in the 1980-1990s, it was possible to reduce the mortality of children from surgical diseases, and to introduce more sophisticated surgical interventions.

The present of pediatric surgery began with the opening of the Center for Maternal and Child Health within RH №1- National Center of Medicine in March 1998, when specialized pediatric surgical departments were organized: thoraco-abdominal surgery, orthopedics and traumatology, purulent-septic department, pediatric neurosurgery, ENT department, and finally, pediatric intensive care and anesthesiology for 16 beds. I remember our move to the new building of the Center, how we were shocked by the scale of the areas, the equipment of the operating rooms, there were 2 halls with a full set of endovideosurgical racks. Of course, the present pediatric surgery is associated with the development of endosurgery in all areas of pediatric surgery, including neonatal surgery. Subsequently, in 2002, the department of thoraco-abdominal surgery was divided into a general surgical department and a department of pediatric urology. Department of Pediatric Neurosurgery was headed by an experienced neurosurgeon Prokopy Nikolaevich Semenov, ENT branch - Petrov Igor Filippovich. Now each department has its operating room. For 19 years the surgical service has been developing a lot. It is facilitated not only by the organization of the pediatric intensive care department, the technical equipment of the operating rooms, but also by the renewal of the creative team of like-minded people. The invaluable role of the education of the new generation of surgeons was made by the Department of Pediatric Surgery,

which was organized in 1997, headed by the Doctor of Medical Science, Professor Varfolomeev Ahmed Romanovich, who was the first director of the Center for Maternity and Childhood Protection. The staff of the department was c.m.s. associate professors A.A. Nikolaeva, P.N. Solodovnikov, L.A. Aprosimo, associate professor V.N. Nikolaev, A.P. Semenov, V.A. Savvina, in 2002 after the defense in Moscow c.m.s. M.E. Okhlopov came. Mikhail Egorovich since 2006 headed the surgical department of the Pediatric Center. Under his leadership, the department achieved great results: reconstructive operations on the esophagus, trachea, operations on the lungs, mediastinal organs, operations on the organs of the retroperitoneal space were introduced, pediatric oncology and neonatal surgery developed. In neonatal surgery, algorithms for treating developmental malformations and purulent-septic diseases of newborns have been changed, in 1998 with the opening of the Perinatal Center a department for the resuscitation of newborns was organized, and since 2011 the neonatal surgery beds have been opened on the basis of the surgical department. The process of laborious and productive work began in all areas of surgery for young children. The doctors of the surgical department actively published their results in various scientific journals, made reports at regional and Russian conferences and symposia. The development of endovideosurgery is primarily connected with the names of Okhlopov M. E., Tarasov A. Yu. In 2011, in the Pediatric Center, the North-Eastern Federal University equipped the operating room of the company Karl Storz, which allowed the introduction of high-tech surgical interventions, such as: thoracoscopic lobectomy, thoracoscopic surgery on the mediastinum, thoracoscopic esophagoanastomosis in newborns, thoracoscopic plastic defect in the diaphragm, including newborns, laparoscopic excision of choledochal cyst, laparoscopic reconstruction of biliary atresia, laparoscopic pyloromyotomy, laparoscopic removal of tumors thoracic, abdominal, and others.

A new, second generation of pediatric surgeons has appeared: c.m.s. Okhlopov Mikhail Egorovich, Tarasov Anton Yuryevich, Yakovlev Evgeniy Prokopevich, Erdyneev Tumen Erdyneyevich, Indeev Illarion Ivanovich, c.m.s. Pavlov Roman Nikolayevich, c.m.s. Vasilyev Sergey Petrovich, Popova Olga Oktyabrinnova, c.m.s.

Petrov Igor Filippovich, Shishigin Valeriy Antonovich, Dashkina Nadezhda Ramilievna, Korkina Natalia Petrovna, Mironova Lyubov Savvichna, Prokopyeva Valentina Vasilevna, Sleptsov Alexander Alexandrovich, Kupryakov Sergey Olegovich, Chernogradskaya Marfa Vladimirovna, Petrova Natalia Ermakovna, c.m.s. Kommunarov Vasily Valeryevich, Kharlampiev Afanasiy Afanasievich, Vychuzhina Lyubov Semenovna, Grigoryev Vasily Afanasievich, Gogolev Innokentiy Ivanovich, Khabarov Petr Petrovich. This generation of surgeons are engaged in the introduction of high-tech surgical interventions, and the second stage of development of pediatric surgery of the republic can be called as **the stage of introduction of high technologies in pediatric surgery**. Such areas of pediatric surgery as thoracic surgery, neonatal surgery, coloproctology, abdominal surgery, pediatric urology, traumatology and orthopedics, otorhinolaryngology, oral surgery, neurosurgery have developed.

During this period, laparoscopic interventions in planned and emergency surgery were introduced. 94% of appendectomy is performed endosurgically, laparoscopy is also introduced in the treatment of complicated appendicitis, with injuries of the abdominal cavity organs, with adhesive processes. The treatment protocols for many diseases and malformations have been changed, antenatal diagnostics of congenital anomalies and a perinatal consultation have been introduced, which allows predicting the development of severe complications in the newborn, which decides the timing, place and mode of delivery. That is the time has come when the fetus in the womb of the mother is already a patient of the pediatric surgeon. Mortality of newborns with surgical pathology decreased to 3%, in spite of the fact that premature babies were born, the criteria of live birth changed, and more necrotic enterocolitis changed. At present, we are already talking about the surgery of premature babies and the introduction of fetal operations. Single-stage reconstructive interventions for congenital malformations in the neonatal period were performed more often. Survival in multiple malformations also increased to 80%. With the improvement of nursing newborns in the specialized department of resuscitation of newborns, corrective interventions for occlusive hydrocephalus, with congenital heart disease in newborns began to be

performed. In 2016, there was another structural unit of pediatric surgery - the Department of Cardiovascular Surgery. Progress in pediatric urology is significant: modern one-stage methods of treating one of the most common malformations of the genitourinary system are introduced: hypospadias, good results in epispadias, laparoscopic pyeloplasty in hydronephrosis, retroperitoneoscopic surgeries, etc. With the extension of the age limit of patients in pediatric services, the gynecological pathology of adolescents, oncogynecologic diseases, which are also operated by a minimally invasive method, became more frequent. In pediatric coloproctology, the following operations have been introduced: endorectal reduction of the colon with congenital aganglionosis, laparoscopic access in the correction of anorectal anomalies, repeated surgical interventions in the case of insufficient retention function, levatorosphincteroplasty, surgical interventions are performed under the control of electromyography. Children with surgical pathology practically do not leave for special treatment outside the Republic, as all the main methods and modern modifications are performed within the walls of the National Center of Medicine.

In the ENT department in 2017, cochlear implantation was introduced, in plans development of high-tech auditory-improving interventions. Good functional and cosmetic results were achieved in the reconstruction of malformations of the maxillofacial area, which are among the most frequent anomalies in children. A variety of ophthalmic operations, including cataract treatment, laser coagulation of retinopathy of prematurity, is diverse. Pediatric neurosurgery has long gone beyond the emergency pathology, operations are performed in developmental malformations and tumors of the central nervous system in children.

Great progress is also being made in pediatric orthopedics and traumatology:

the doctors of the department are authors of the RF patents, rationalization proposals, the methods of treating congenital clubfoot are modified, the technique of osteosynthesis is improved, in terms of the introduction of surgical correction of scoliotic deformations of the spine.

During this period, the rates of pediatric surgeons in the polyclinics of Yakutsk, in major regional centers - the towns of Neryungri and Mirny are allocated. In Yakutsk polyclinic, the head of the pediatric surgery room have been for a long time Egor Egorovich Litvinsev, surgeon with a large experience of work, then Alexander Ilyich Monastirev. Now experienced surgeons Elena Vasilyevna Gusarevich, Innokenty Vasilievich Tsybandin work there. Ambulatory pediatric orthopedic service in Yakutsk is associated with the names of Petukhova Natalia Konstantinovna, Struchkova Ustinya Semyonovna, Lonin Stanislav Nikolaevich. In Neryungri, the pediatric surgical service was raised to the proper level by Anton Yurievich Tarasov, it is continued successfully by Peshkov Sergey Mikhailovich. It is very important that experienced surgeons work in large regional centers, since the variety of encountered pathology causes the surgeon to engage in diverse work which only a highly qualified specialist can adequately do. In Mirny, pediatric surgeons Shvetsova Marina Alfredovna, Abylkasymov Bakyt Toktobayevich have been working for more than 10 years. By the forces of the Department of Pediatric Surgery and the Chief Freelance pediatric Surgeon, certification cycles are periodically conducted, regional surgeons of the majority of central hospitals are trained, good continuity is established with district hospitals. Newborns with surgical pathology are evacuated in Republican Hospital №1, National Centre of Medicine, the therapeutic tactics of other patients of childhood are decided collectively by the specialists of the resuscitation consultative pediatric

center and the heads of profile surgical departments.

The third stage of development of pediatric surgery - **science and practice** will begin in 2017, after the half-century anniversary of our speciality. And the third generation of pediatric surgeons will take part in the continuation of the started work. Every year, a certificate of a specialist of a pediatric surgeon is received by 2 to 3 young doctors, filling in our friendly creative team. I would like to mention our young generation: Bozhedonov Konstantin Konstantinovich, Pavlov Ian Griyanovich, Belolyubskiy Afanasiy Afanasyevich, Ammosov Aleksandr Sergeyevich, Gotovtsev Nikolay Nikolaevich, Syrovatskaya Elena Fedorovna, Nikolaeva Anna Vladimirovna, Milev Vitaliy Viktorovich, Bochkareva Ekaterina Yurevna, Popova Elena Anatolyevna, Koryakina Anna Dmitrievna, Bosikov Vladimir Alekseevich, Kolmogorov Vladimir Vladimirovich, Alexeyev Vladislav Dmitrievich, Sofronova Maria Semenovna, Purpueva Lena Badmaevna (Mirny). This stage is not marked with only practice but also scientific researches, the introduction of new more sophisticated algorithms and approaches in pediatric surgery. Modern youth is striving for higher heights; many of the young doctors are postgraduates and aspirants.

The current level of development of the pediatric surgical service of the Republic gives us hope for the planned and growing development of our speciality. The future of pediatric surgery of republic is in safe hands!

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