

Original papers

UDC 616-053.2+616-072.1+616.329-007.271

<https://doi.org/10.56871/MHCO.2026.16.62.004>

Modern possibilities of endoscopy, prospects and ways of development

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For citation: Orel V.I., Korolev M.P., Babikov E.I., Guryeva N.A., Smirnova V.I. Modern possibilities of endoscopy, prospects and ways of development. *Medicine and Health Care Organization*. 2025;10(4):50–60. <https://doi.org/10.56871/MHCO.2026.16.62.004>.

Received: 28.10.2025

Revised: 28.11.2025

Accepted: 28.01.2026

ABSTRACT. The first practices of using endoscopy date back to the early XIX century, while in Russia it developed in parallel with Western countries. High-tech systems are successfully implemented in modern Russia, virtual, robotic and capsule endoscopic techniques are developing. Modern challenges in the use of endoscopy and their solutions: 1) low availability of technologies — creation of more accessible systems, international assistance programs; 2) personnel shortage — creation of training centers, online training; 3) risks of complications — compliance with standards, real-time monitoring; 4) infection safety: use of disposable components, automated sterilization systems; 5) diagnostic limitations — implementation of new visualization technologies and artificial intelligence; 6) ethical aspects — informed consent, documentation of procedures; 7) Lack of innovation: phased implementation of new technologies through pilot projects. The participants of the conference “Current Issues in Endoscopy”, held in St. Petersburg on March 26–29, 2025, highlighted existing problems in the field of endoscopy and shared their experiences in overcoming them. The conference program was diverse, including lectures, workshops, and real-time demonstrations. The particular achievements in gastroenterology, thoracic surgery, oncology were discussed. New technologies were presented: ultra-high resolution, capsule endoscopy, robotic systems. The conference emphasized the importance of a systematic approach to the development of the industry and the role of innovations in the future of medicine.

KEYWORDS: endoscopy, scientific and practical conference, endoscopic coagulation, endoscopy during pregnancy, esophageal strictures

Funding. This study was not supported by any external sources of funding.

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<https://doi.org/10.56871/МНСО.2026.16.62.004>

Современные возможности эндоскопии, перспективы и пути развития

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Для цитирования: Орел В.И., Королёв М.П., Бабилов Э.И., Гурьева Н.А., Смирнова В.И. Современные возможности эндоскопии, перспективы и пути развития. *Медицина и организация здравоохранения*. 2025;10(4):50–60. <https://doi.org/10.56871/МНСО.2026.16.62.004>.

Поступила: 28.10.2025

Одобрена: 28.11.2025

Принята к печати: 28.01.2026

РЕЗЮМЕ. Первые практики применения эндоскопии относятся к началу XIX века, в России она развивалась параллельно с западными странами. Сегодня Россия использует высокотехнологичные комплексы, развивается виртуальная, роботизированная и капсульная эндоскопия. Современные вызовы применения эндоскопии и пути их решения таковы: 1) малая доступность технологий — создание широкодоступных систем, международные программы помощи; 2) кадровый дефицит — разработка тренажерных центров, онлайн-обучение; 3) риски осложнений — соблюдение стандартов, мониторинг в реальном времени; 4) инфекционная безопасность — использование одноразовых компонентов, автоматизированных систем стерилизации; 5) диагностические ограничения — внедрение новых технологий визуализации и искусственного интеллекта; 6) этические аспекты — информированное согласие, документирование процедур; 7) дефицит инноваций — поэтапное внедрение новых технологий через пилотные проекты. Участники конференции «Актуальные вопросы эндоскопии», состоявшейся в Санкт-Петербурге 26–29 марта 2025 года, поднимали существующие проблемы в области эндоскопии и делились своим опытом их преодоления. Программа конференции носила разноформатный характер, включая лекции, мастер-классы, демонстрации в реальном времени. Обсуждались достижения в гастроэнтерологии, хирургии, онкологии, педиатрии. Представлены новые технологии: ультравысокое разрешение, капсульная эндоскопия, роботизированные системы. Конференция подчеркнула важность системного подхода к развитию отрасли и роль инноваций в будущем медицины.

КЛЮЧЕВЫЕ СЛОВА: эндоскопия, научно-практическая конференция, эндоскопическая коагуляция, эндоскопия при беременности, стриктуры пищевода

Источник финансирования. Авторы заявляют об отсутствии внешнего финансирования при проведении исследования.

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INTRODUCTION

Endoscopy is one of the most important diagnostic and therapeutic methods in medicine, allowing doctors to examine internal organs without the need for major surgery. Its history spans several centuries.

The 16th All-Russian Scientific and Practical Conference “Current Issues in Endoscopy” took place in St. Petersburg on March 26–29, 2025, and brought together participants from Russia, Belarus, and 14 other countries. In total, more than 2,000 participants were registered (Fig. 1). The conference was a significant event for the medical community, bringing together leading specialists in the fields of endoscopy, gastroenterology, oncology, and surgery. The event was distinguished by its high level of organization, the relevance of its topics, and a rich scientific program.

Thanks to the conference, the domestic medical community once again received a powerful impetus for development and the exchange of experience in one of the most rapidly advancing fields of modern medicine. The event brought together leading Russian and international specialists, scientists, practicing physicians, and representatives of the medical industry.

ENDOSCOPY AROUND THE WORLD

The first ideas for examining the internal cavities of the human body emerged as far back as ancient times; however, the actual development of endoscopy began in the 19th century.

In 1806, the German physician Philipp Bozzini created a “light guide” — the prototype of the modern endoscope [1, 2]. His device, equipped with a candle and mirrors, allowed visualization of body cavities. He was even awarded a prize by the Vienna Medical Society for this invention.

The next major step was taken in 1853: French surgeon Antoine Jean Desormes developed a more sophisticated device for examining the bladder [3]. And in 1868, German physician Adolf Kussmaul performed the first gastroscopy: inspired by the story of a magician who could swallow swords, he used a rigid gastroscope to examine the stomach.

The 20th century marked a revolutionary period in the development of endoscopy:

in 1932, Rudolf Schindler developed a semi-flexible gastroscope [4];

in 1957, Hiroshi Kuroda and his colleagues in Japan created the first fiber-optic endoscope based on fiber-optic technology [5];

in the 1960s, endoscopy began to be actively used for biopsies and later for minimally invasive surgeries.

Today’s endoscopes are equipped with high-resolution video cameras, LED lighting, and 3D visualization capabilities, enabling precise and safe procedures.

As part of the 16th All-Russian Scientific and Practical Conference “Endoscopy — The Future of Medicine,” a pre-conference event titled “EndoBRICS” was held (BRICS is an intergovernmental organization established in 2006 and, as of 2025, comprising 10 countries: Brazil, Russia, India,



Fig. 1. Participants of the conference “Current Issues in Endoscopy” (photos by the authors)

Рис. 1. Участники конференции «Актуальные вопросы эндоскопии» (фото авторов)



Fig. 2. Reports made by foreign experts as part of the “EndoBRICS” pre-course (photos by the authors)

Рис. 2. Выступления иностранных специалистов в рамках прекурса «ЭндоBRICS» (фото авторов)

China, South Africa, Egypt, Iran, the UAE, Ethiopia, and Indonesia), featuring presentations by leading endoscopy specialists from China, India, and Egypt (Fig. 2).

ENDOSCOPY IN RUSSIA

In Russia, endoscopy began to develop rapidly in the late 19th and early 20th centuries. The first gastroscopy experiments were conducted by Russian scientists almost simultaneously with their Western colleagues.

Professor P.A. Herzen, the founder of Russia's oncology service, made a significant contribution to the development of domestic endoscopy. In the 1920s and 1930s, he used endoscopic methods to diagnose tumors.

After World War II, in the 1950s and 1960s, endoscopy in the USSR entered a new phase of development: Japanese-made fiberendoscopes began to be used, and domestic designs soon followed. The first endoscopy departments were established in major clinics in Moscow, Leningrad, and other cities [6].

In the 1970s and 1980s, endoscopy was actively introduced into oncology, gastroenterology, pulmonology, surgery, and pediatrics. Domestic devices appeared, enabling biopsies and minimally invasive surgeries. An important milestone was the establishment of specialized departments and training centers for endoscopy.

Currently, Russia has high-tech endoscopic systems, virtual endoscopy is developing, and new techniques are being actively introduced, including robotic and capsule endoscopy.



Fig. 3. Mikhail P. Korolev (photos by the authors)

Рис. 3. Михаил Павлович Королёв (фото авторов)

MIKHAIL PAVLOVICH KOROLEV

One of the leading specialists in the field of endoscopy today is Mikhail Pavlovich Korolev — Doctor of Medical Sciences, professor, surgeon, and endoscopist of the highest category, and a recognized expert in the field of urgent surgery and emergency endoscopy (Fig. 3). Mikhail Pavlovich headed the Department of General Surgery with a course in endoscopy at St. Petersburg State Pediatric Medical University (SPbSPMU) for 29 years.

Mikhail Pavlovich holds key positions in the professional community: he is the honorary chairman of the Russian Endoscopic Society (REndS), heads the St. Petersburg branch of the Russian Society of Surgeons, and is also the honorary chairman of the N.I. Pirogov Surgical Society.

M.P. Korolev is the founder and long-standing head of the scientific committee of the country's largest scientific and practical conference, "Current Issues in Endoscopy", which has become an important platform for the exchange of knowledge among specialists in the field of modern endoscopy.

For over 50 years, Mikhail Pavlovich has dedicated himself to working at the Mariinsky Hospital in St. Petersburg, where he pioneered the introduction of technologies such as ultrasound diagnostics, laparoscopic surgery, and endoscopic procedures. He has performed thousands of successful surgical procedures, conducted millions of diagnostic examinations, and earned the gratitude of hundreds of patients from all corners of Russia.

Professor Korolev's scientific work covers a wide range of topics: he is the author of eight monographs, a member of the editorial boards of three specialized scientific journals, a member of the Ministry of Industry and Trade's expert commission on medical technology, and a member of the State Duma's expert council in this field.

MODERN ENDOSCOPY: CHALLENGES AND SOLUTIONS

Despite impressive technological advances, endoscopy remains a field of medicine faces a number of systemic challenges. During the conference, the key challenges faced by specialists were identified, and possible solutions were proposed.

1. Lack of access to modern technologies [7]

Problem: Advanced endoscopic systems with high resolution, 3D visualization, and robotic

control are available only to a limited number of clinics. The high cost of the equipment makes it virtually unattainable for institutions in developing countries and regional hospitals, creating disparities in the quality of diagnosis and treatment.

Solutions:

- developing and promoting more affordable systems without compromising image quality;
- international aid programs to equip institutions in resource-limited countries;
- manufacturing budget models with basic functions for widespread use.

2. Staff shortages and training levels [8]

Problem: Endoscopy requires high qualifications, yet many regions face a shortage of trained specialists, and practical training is often limited due to a lack of simulators and access to modern equipment.

Solutions:

- establishment of simulation training centers with realistic simulators;
- introduction of a mandatory certification system and regular recertification;
- expanding access to online courses, webinars, and training platforms featuring international experts.

3. Risk of complications [8]

Problem: Even with minimal invasiveness, endoscopic procedures carry potential complications — perforations, bleeding, and infections. The high cost of error requires constant improvement of safety protocols.

Solutions:

- strict adherence to standards and algorithms for performing procedures;
- use of real-time monitoring and early detection systems for complications;
- conducting preoperative risk stratification taking into account the patient's individual characteristics;
- developing, in collaboration with surgeons, new methods for diagnosing and treating complications.

4. Infection control [9]

Problem: The difficulty of achieving complete sterilization of reusable endoscopes remains one of the main causes of iatrogenic infections. Violations of reprocessing protocols can lead to the transmission of pathogens.

Solutions:

- introduction of disposable endoscopes or components when indicated;

- use of automated washing and sterilization systems;
- ongoing training of medical staff on hygiene standards.

5. Diagnostic limitations [10]

Problem: Endoscopy always allows for the detection of pathology at an early stage, especially in the presence of flat or subepithelial lesions. The lack of gastrointestinal (GI) cancer screening in the Russian Federation increases the risk of late diagnosis of oncological and inflammatory diseases.

Solutions:

- introduction of auxiliary imaging technologies (NBI, OCT, endo-ultrasound);
- use of artificial intelligence for real-time recognition of pathological areas;
- development of sensitive biomarkers and “optical biopsy” methods;
- implementation of GI cancer screening in the Russian Federation.

6. Ethical and legal aspects [10]

Problem: An increase in the number of interventions is accompanied by a rise in patient complaints. This is caused by both actual complications and insufficient awareness of the risks involved in procedures.

Solutions:

- formalizing the informed consent process with a clear explanation of possible consequences;
- mandatory documentation of all stages of the procedure;
- creating an atmosphere of open discussion of complications within the team to improve quality and reduce the recurrence of errors.

7. Integration of innovative technologies [11]

Problem: Future technologies — capsule endoscopy (a method of examining the gastrointestinal tract in which the patient swallows a small video capsule that then passes through the digestive tract, taking images), artificial intelligence, and robotics — are already available, but their widespread adoption is limited by financial, organizational, and regulatory barriers.

Solutions:

- phased integration of new systems through pilot projects;
- public and private support for clinics participating in digital transformation;
- collaboration with IT companies and engineers to adapt technologies to real-world clinical challenges.

CONFERENCE SCIENTIFIC PROGRAM AND RELEVANT TOPICS

It is worth noting the variety of presentation formats — ranging from plenary sessions and section presentations to master classes and demonstrations. This allowed participants not only to learn about the latest scientific advances but also to see modern technologies and techniques in action (Fig. 4).

The conference program covered the entire spectrum of modern trends in endoscopic diagnostics and treatment. Participants discussed:

- the latest advances in gastroenterological and bronchopulmonary endoscopy;
- the integration of artificial intelligence technologies into the interpretation of endoscopic images;
- minimally invasive methods for treating oncological diseases;
- new approaches to training and certifying specialists.

Particular attention was paid to the safety and quality of endoscopic examinations, the prevention of complications, and standards for patient preparation.

A LOOK TO THE FUTURE

The conference slogan — “Endoscopy: The Future of Medicine” — fully reflected its theme. Unique technologies were presented, including:

- ultra-high-resolution endoscopic systems;
- next-generation capsule endoscopy;

- robotic systems for high-precision diagnostics and surgery;
- AI-based software solutions for automatic mucosal assessment.

Conference participants emphasized that endoscopy will play a key role in the early detection of cancer and the development of minimally invasive surgery.

YOUNG PROFESSIONALS AND EDUCATION

Special emphasis was placed on supporting young professionals. The opportunity to interact directly with experts, discuss clinical cases, and participate in hands-on sessions provided valuable experience for novice physicians.

The conference featured research paper competitions as well as educational sessions aimed at students, residents, and novice physicians: on March 26, the final round of the 2nd All-Russian Student Endoscopy Olympiad took place (Fig. 5), on March 27 and 28, live broadcasts from operating rooms titled “Live Endoscopy” were held (moderators on the first day — M.P. Korolev, E.D. Fedorov, Y.G. Starkov, V.V. Veselov, K.V. Shishin; moderators on the second day — M.P. Korolev, E.D. Fedorov, Y.G. Starkov, S.A. Budzinsky, M.Yu. Agapov) (Fig. 6), educational sessions were held as part of the Endoscopy Academy, and a training zone was operational thanks to the support of sponsoring companies.

Such initiatives contribute to the development of a new generation of high-class endoscopists. A poster presentation competition was held for young physicians, dedicated to the founder of



Fig. 4. Master class in a remote format (photos by the authors)

Рис. 4. Мастер-класс в дистанционном формате (фото авторов)



Fig. 5. II All-Russian Student Endoscopy Olympiad (photos by the authors)

Рис. 5. II Всероссийская студенческая олимпиада по эндоскопии (фото авторов)



Fig. 6. Moderators of the conference “Current Issues in Endoscopy”: K.V. Shishin — MD, PhD, Head of the Endoscopy Department, Moscow Clinical Research Center, Moscow Healthcare Department; Yu.G. Starkov — MD, PhD, Professor, Member of the Board of the Russian Society of Surgeons, the Russian Society of Endoscopic Surgery named after V.D. Fedorov, and the Russian Endoscopic Society; Deputy Chief Surgeon and Endoscopist of the Russian Ministry of Health; Head of the Surgical Endoscopy Department, A.V. Vishnevsky National Medical Research Center of Surgery, Moscow; E.D. Fedorov — MD, PhD, Professor. Chief Researcher, Department of Hospital Surgery No. 2 with the Research Laboratory of Surgical Gastroenterology and Endoscopy, Pirogov Russian National Research Medical University, Russian Ministry of Healthcare, based at G.M. Savelyeva City Clinical Hospital No. 31, Moscow Healthcare Department, Advisor to the Scientific and Practical Council of the Ministry of Health of the Russian Federation, Moscow; M.P. Korolev — Conference Chair, MD, PhD, Full Professor, Professor of the Department of General Surgery with a Course in Endoscopy at Saint Petersburg State Pediatric Medical University, Honorary Chairman of the Russian Endoscopic Society, Honorary Chairman of the Endoscopic Section of the N.I. Pirogov Surgical Society of Saint Petersburg, Chairman of the Saint Petersburg Branch of the Russian Society of Surgeons, Saint Petersburg (photos by the authors)

Рис. 6. Модераторы конференции «Актуальные вопросы эндоскопии»: К.В. Шишин — д.м.н., заведующий отделом эндоскопии ГБУЗ «Московский клинический научный центр ДЗМ», г. Москва; Ю.Г. Старков — д.м.н., профессор, член правления Российского общества хирургов, Российского общества эндоскопической хирургии России им. В.Д. Федорова, Российского эндоскопического общества, заместитель главного хирурга и эндоскописта Минздрава России, заведующий хирургическим эндоскопическим отделением ФГБУ «НМИЦ хирургии им. А.В. Вишневского» Минздрава России, г. Москва; Е.Д. Федоров — д.м.н., профессор, главный научный сотрудник кафедры госпитальной хирургии № 2 с НИЛ хирургической гастроэнтерологии и эндоскопии «РНМУ им. Н.И. Пирогова» Минздрава России на базе «ГКБ № 31 им. академика Г.М. Савельевой» ДЗМ, советник научно-практического совета Минздрава России, г. Москва; М.П. Королёв — председатель конференции, д.м.н., профессор, профессор кафедры общей хирургии с курсом эндоскопии СПбГПМУ, почетный председатель Российского эндоскопического общества, почетный председатель эндоскопической секции хирургического общества им. Н.И. Пирогова Санкт-Петербурга, председатель Санкт-Петербургского отделения РОХ, г. Санкт-Петербург (фото авторов)

endoscopy in the Russian Federation, Professor A.S. Balalykin.

PARTICIPATION OF THE ST. PETERSBURG STATE PEDIATRIC MEDICAL UNIVERSITY IN THE CONFERENCE

At the 16th All-Russian Scientific and Practical Conference “Current Issues in Endoscopy,” the St. Petersburg State Pediatric Medical University presented three papers in the following categories: “Gastric Endoscopy”, “Pancreatobiliary Endoscopy”, and “Pediatric Endoscopy.”

In the “Gastric Endoscopy” section, the paper “Analysis of Gastric Mucosal Coagulation Results

in an Experiment Using Various Modes” was presented by a team of authors including R.G. Avanesyan, L.Z. Khafizova, M.P. Koroleva, D.S. Rusanova, Sh.A. Shodieva, and N.S. Chernova [12]. The authors addressed a pressing issue — the instability of clip fixation following endoscopic hemostasis, which can lead to recurrent bleeding. The introduction of the study states that “a significant drawback of the method is the frequent migration and dislodgement of the clip after manipulation due to insufficiently deep insertion of the prongs”. This calls into question the reliability of a purely mechanical approach, especially in the context of an acute ulcerative defect.

What is particularly valuable is that the authors did not limit themselves to theoretical assumptions but conducted experiments on both isolated organs

and living organisms, which significantly increases the reliability of the results. The comparison of the SOFT COAG and FORCED COAG modes was carried out methodologically soundly. The choice of exposure time is noteworthy: “the coagulation time was visually determined to be 5 seconds, as optimal for the severity of the effect without excessive tissue destruction”.

The results obtained in the histological analysis convincingly demonstrated the advantages of the SOFT COAG mode, which ensures sufficient clip adhesion and moderate tissue damage: “damage in some areas extends to the layer of oblique fibers of the muscular layer... the circular and longitudinal layers are intact”, which allows hemostasis to be achieved without the risk of deep necrosis.

At the same time, the FORCED COAG mode, as noted, leads to “total destruction of the entire gastric wall”, including the muscular and serous layers. This is an extremely important observation, highlighting the high likelihood of complications when using a more aggressive mode.

The wording of the conclusion deserves special attention, as the authors made a clear practical emphasis: “the most optimal duration of clip application during mechanical hemostasis is 5 seconds in SOFT COAG mode”. This practical knowledge can be directly applied in clinical practice, especially in complex cases, such as in patients with pancreatitis complicated by ulcerative bleeding.

Thus, the study presented a compelling investigation combining experimental data and clinical relevance, enriched the endoscopist's toolkit, and paved the way for more effective and safer combined hemostasis.

The “Pancreatobiliary Endoscopy” section featured presentations by D.S. Rusanov, Fedotov L.E., Antipova M.V., Klimov A.V., Komarova A.D., and Kuppenkov M.N. with their paper “ERCP in Pregnant Women — An Alternative Approach to Intraoperative Visualization of the Bile Ducts” [13]. The presentation drew interest due to the relevance of the topic, the boldness in seeking alternatives to radiological methods, and the clear presentation of clinical data. The authors addressed one of the most delicate and clinically complex issues — the necessity of performing invasive procedures on the biliary tract in pregnant women, where it is crucial to preserve not only the mother's health but also the safety of the fetus.

The authors addressed a real clinical dilemma: on the one hand, endoscopic retrograde cholan-

giopancreatography (ERCP) remains the “gold standard” for treating choledocholithiasis; on the other hand, the procedure itself carries risks: “it increases the rate of miscarriages and preterm births to 7.1%, as well as the risk of antenatal fetal injury to 15.9%”. These findings prompted the search for and development of alternative methods, one of which — intraoperative transabdominal ultrasound imaging — was presented by colleagues from St. Petersburg State Pediatric Medical University.

The use of real-time ultrasound (US) during ERCP in pregnant women appears not only logical but also an innovative step. The report described how “during selective choledochal cannulation, the guidewire was clearly visualized in the common bile duct as a hyperechoic linear shadow,” which allows for the elimination of X-ray imaging without compromising accuracy or control over the stages of the procedure. This technical achievement seems particularly important against the backdrop of a growing trend toward minimizing radiation exposure.

The clinical data is also interesting — the cases, though few in number, demonstrate the method's viability. Particularly impressive is the case of the successful evacuation of a large, 15-millimeter calculus, during which “turbid bile mixed with pus was actively flowing from the orifice of the major duodenal papilla”, indicating a complicated course — acute cholangitis. Nevertheless, the procedure was successful.

Attention to detail and careful observation were also evident in the description of side effects. The authors candidly report that one patient with a stent experienced elevated amylase levels, requiring emergency stent removal. Such transparency enhances confidence in the results and demonstrates that the method warrants further study but is already applicable in clinical practice.

The presentation left the impression of a conscientious, clinically oriented study offering a realistic and safe alternative to traditional approaches for a vulnerable patient population. The use of intraoperative ultrasound during ERCP in pregnant women appears to be a promising area deserving of further research and implementation in clinical practice.

It is, of course, difficult to imagine the “Pediatric Endoscopy” section without presentations by specialists from St. Petersburg State Pediatric Medical University. A paper with the poetic

title “The String of My Soul: Early Endoscopic Correction of Post-Surgical Esophageal Strictures” by authors A.G. Vasilieva, V.A. Kalashnikova, and N.S. Yakushenko was presented at the conference [14]. The report made a strong impression not only due to its clinical significance but also because of the profound humanity with which the authors approached the problem. It combined high professional competence, accumulated practical experience, and a subtle understanding of the psychological and social factors influencing the course of the disease in children.

From the very first lines, it is clear how relevant the topic is: “chemical burns rank first among esophageal diseases in childhood”, and it is particularly alarming that “in recent years, there has been an increase in chemical burns of the esophagus in children”, with cases projected to rise by as much as 4.5 times by 2024 compared to 2021. These are not just statistics — they are a call to rethink approaches to the treatment and prevention of the severe consequences of such injuries.

Particular attention should be paid to the shift in the treatment paradigm: from late intervention to early endoscopic correction. This approach allows us to avoid waiting for the development of severe fibrosis and progressive dysphagia, as was the case in the first clinical case, where a girl suffered from difficulty swallowing for five years. This patient’s story is deeply moving: emotional distress, the loss of her mother, and a lack of complaints or attention to symptoms led to advanced stenosis, which was diagnosed only incidentally during a routine endoscopic video gastroduodenoscopy (EGDS). The endoscopic findings — “three thick fibrous cords... partially obstructing the lumen” — make a grave impression. However, thanks to emergency string bougienage, it was possible to overcome the stenosis and significantly improve the patient’s condition after the very first procedure.

The second clinical case is an example of timely and competently organized care for severe alkali burns of the esophagus and stomach. Here, it is particularly important that treatment was initiated immediately and included the full range of necessary therapies: hormonal, antibacterial, infusion, and hyperbaric. This allowed the mucous membrane to be prepared for the start of bougienage as early as the 23rd day, and then, thanks to a clearly structured regimen — progressing from frequent to maintenance procedures — to achieve the formation of a patent scar and restoration of swallowing function.

The algorithm proposed by the authors is noteworthy: “1st month — 8 times, 2nd month — 6–4 times...”, with a gradual transition to infrequent maintenance sessions. It is important that the emphasis is placed on individualizing the regimen: “the choice of the interval between sessions... may vary”. This demonstrates a mature clinical approach that takes into account the specific course of the disease in each child.

The final conclusion of the study is also highly valuable: “a dilated ‘catheter-induced’ scar... is more preferable”, as it allows avoiding aggressive repeat interventions and ensures “adequate nutrition”, which is so essential for a growing organism. The high efficacy of the method mentioned — 97% over the past 5 years — confirms its practical viability.

Thus, the report made a profound emotional impression — not only as a description of clinical practice, but also as a reflection of the medical team’s responsibility, attentiveness, and professionalism. The work commands respect and represents a valuable contribution to the treatment of such severe, yet — as the authors’ experience demonstrates — overcome consequences of chemical burns in children.

INTRODUCTION

Endoscopy is undergoing rapid technological advancement, and its success depends on the community’s ability to respond to challenges in a systematic, ethical, and technologically sound manner.

The 16th All-Russian Scientific and Practical Conference “Current Issues in Endoscopy” served not only as a platform for exchanging knowledge and experience but also as a powerful stimulus for the development of new directions in endoscopic practice.

The event strengthened professional ties between countries, set a high standard for scientific and practical discussion, and confirmed that endoscopy is the future of modern medicine.

ADDITIONAL INFORMATION

Authors' contribution. V.I. Orel, M.P. Korolev, N.A. Guryeva, V.I. Smirnova — searching for literary sources, information processing, writing the article text, editing; E.I. Babikov — searching for literary sources, information processing, writing the article text.

All authors read and approved the final version before publication.

Competing interests. The authors declare that they have no competing interests.

ДОПОЛНИТЕЛЬНАЯ ИНФОРМАЦИЯ

Вклад авторов. В.И. Орел, М.П. Королёв, Н.А. Гурьева, В.И. Смирнова — поиск литературных источников, обработка информации, написание текста статьи, редактирование; Э.И. Бабилов — поиск литературных источников, обработка информации, написание текста статьи.

Все авторы прочли и одобрили финальную версию перед публикацией.

Конфликт интересов. Авторы декларируют отсутствие явных и потенциальных конфликтов интересов, связанных с публикацией настоящей статьи.

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