International Journal of Medical Sciences And Clinical Research

VOLUME Vol.05 Issue11 2025
PAGE NO. 152-155
DOI 10.37547/ijmscr/Volume05Issue11-27

Improvement Of The Treatment Of Anorectal Diseases In Children

Saidov Murodillo Sayfulloevich
Samarkand State Medical University, Uzbekistan

Received: 22 September 2025; **Accepted:** 14 October 2025; **Published:** 20 November 2025

Abstract: Treatment of anorectal diseases in children is traditionally based on surgical methods, however, in recent years, there has been a growing interest in optimizing therapeutic approaches, including preoperative and postoperative rehabilitation, as well as additional non-medicinal measures. This is due to the fact that anorectal diseases can be accompanied not only by physical but also by psychological problems affecting the child's development. The complexity of treating such diseases lies in the diversity of clinical manifestations, possible comorbidities, and the need to consider the specifics of pediatric anatomy and physiology.

Keywords: Anorectal defects, congenital anomalies, pediatric surgery, coloproctology, anus atresia, anus ectopy, posterior sagittal anorectoplasty, functional results, fecal incontinence, quality of life.

Introduction: Anorectal diseases in children represent an important and complex problem of pediatric practice, requiring a comprehensive approach to diagnosis and treatment. These pathologies encompass a wide range of conditions, including anal atresia, anorectal malformations, anal sphincter insufficiency, and other abnormalities that can significantly affect the quality of life of patients and their families. The prevalence of anorectal anomalies varies, and although they constitute less than 1% of all congenital defects, their significance and complexity require serious attention from the medical community. The modern classification of anorectal defects, proposed by the International Working Group on the Study of Anorectal Malformations, distinguishes different forms of the disease depending on the level of location of the rectal end relative to the pelvic floor muscles [1].

Treatment of anorectal diseases in children is traditionally based on surgical methods, however, in recent years, there has been a growing interest in optimizing therapeutic approaches, including preoperative and postoperative rehabilitation, as well as additional non-medicinal measures. This is due to the fact that anorectal diseases can be accompanied not only by physical but also by psychological problems affecting the child's development. The complexity of treating such diseases lies in the diversity of clinical manifestations, possible comorbidities, and the need to consider the specifics of pediatric anatomy and physiology.

Surgical interventions for anorectal anomalies, despite their successes, may not always lead to complete recovery and restoration of function, and may also be accompanied by various complications such as recurrent fecal incontinence, anus stricture, and other functional disorders. Thus, caring for children with anorectal disorders requires a multi-level approach, which includes diet therapy, training of patients and their parents, and the use of non-medicinal methods to improve children's quality of life.

Existing protocols for treating anorectal diseases are not always unified and may differ depending on the region, clinical practice, and level of medical support. This emphasizes the need to create standards based on the latest achievements in science and clinical practice to ensure the most effective and safe treatment of this category of patients.

The current review will examine the modern arsenal of methods for treating anorectal diseases in children, including both traditional surgical approaches and new, more щадящие technologies. Special attention will be paid to optimizing treatment aimed at minimizing postoperative complications and improving functional outcomes. Analysis of existing studies and clinical observations will allow for the identification of the

most effective treatment strategies, which, in turn, can lead to improved quality of life and improvement of the functional state of patients with anorectal diseases.

The clinical spectrum includes low, intermediate, and high forms of defects, each of which requires an individual surgical approach and has a different functional prognosis [2].

Treatment of anorectal defects is one of the most complex tasks of modern pediatric surgery, as it requires not only restoring the anatomical continuity of the intestine but also ensuring adequate function of retaining and evacuating intestinal contents. The main goal of the surgical intervention is to create a functional anus located in the center of the external sphincter and providing voluntary defecation[3].

A revolutionary stage in the development of anorectal defect surgery was the introduction of posterior sagittal anorectoplasty (PSARP), proposed by A. Peña in 1982. This method significantly improved the anatomical and functional results of treatment, especially in high-grade defects. However, despite the improvement of surgical techniques, the problem of optimizing functional results remains relevant[4]. Modern trends in the treatment of anorectal defects are aimed at minimizing the trauma of surgical interventions, preserving the maximum number of functional structures of the perineum and pelvic floor, and early initiation of rehabilitation measures. Laparoscopic methods that allow for rectal mobilization with minimal trauma to surrounding tissues are actively developing [5].

The relevance of the problem of optimizing the treatment of anorectal defects in children is due to several important factors. This pathology is characterized by high medical and social significance, as it directly affects the quality of life of patients and their families[6]. Disruptions in the function of holding and controlled defecation create serious psychological and social problems that limit children's full integration into society. Despite significant achievements in pediatric coloproctology, the frequency of unsatisfactory functional results after surgical treatment remains high[7]. According to various studies, complete stool retention is achieved only in 60-80% of operated patients, which necessitates further improvement of diagnostic and treatment methods[8]. If previously the main criterion for treatment success was considered to be the restoration of the anatomical continuity of the intestines, now priority is given to achieving maximum possible functionality while ensuring voluntary control of defecation and a high quality of life for patients.

The evolution of surgical methods for treating anorectal malformations has progressed from simple perineal surgeries to modern reconstructive interventions using the principles of functional surgery. The introduction of the posterior sagittal anorectoplasty concept revolutionized the understanding of the anatomical relationships of pelvic structures and significantly improved the results of treating complex forms of defects[9].

Conceptual changes in approaches to the treatment of anorectal malformations are based on a deeper understanding of the developmental embryology of the anorectal region, the anatomy of the pelvic floor muscular structures, and the mechanisms of continental formation. Modern studies using magnetic resonance imaging, three-dimensional reconstruction, and electrophysiological methods have allowed us to revise the traditional understanding of the pathogenesis of functional disorders in this pathology[10].

The multimodal approach to treating anorectal malformations involves the integration of various diagnostic methods, surgical techniques, and rehabilitation programs. The modern treatment strategy includes precise preoperative diagnostics with the determination of the anatomical variant of the defect, planning optimal surgical access, using microsurgical techniques, and earlier initiating comprehensive rehabilitation[11]. Significant progress in pediatric surgery is linked to the introduction of minimally invasive technologies that minimize surgical trauma and improve cosmetic results. Laparoscopic methods for correcting high forms of anorectal malformations demonstrate encouraging results, providing adequate rectal mobilization with less trauma to surrounding tissues[12].

Personalized medicine in the treatment of anorectal malformations involves individualizing therapeutic approaches, taking into account the anatomical features of a specific patient, associated developmental anomalies, and prognostic factors. Modern methods of preoperative planning using three-dimensional modeling and navigation systems allow for optimizing surgical tactics and improving the predictability of results [13]. A comprehensive approach to the rehabilitation of patients with anorectal malformations includes not only the medical aspects of function restoration but also psychosocial support for children and their families. The development of standardized postoperative management programs, including methods of biological feedback, specialized diet therapy, and psychological rehabilitation, is an important area for improving the care of this category of patients [1]. Long-term catamnestic observation of patients with

anorectal malformations revealed the need for lifelong medical support with periodic correction of functional disorders. This determines the importance of establishing specialized centers and developing protocols for interdisciplinary patient management from infancy to adulthood[15].

Modern research in the field of improving treatment methods for anorectal malformations is aimed at studying the possibilities of tissue engineering, the use of stem cells, and biological materials for the reconstruction of the sphincter apparatus. These directions open up new prospects for treating the most complex cases with previously inaccessible functional results. The integration of modern diagnostic technologies, surgical methods, and rehabilitation programs creates a basis for further improvement of methods for treating anorectal malformations in children to achieve the maximum possible quality of life for patients and their social adaptation[2].

The problem of treating complex forms of anorectal defects accompanied by multiple developmental anomalies of other organs and systems is becoming particularly relevant. In 50-60% of patients with anorectal malformations, comorbid malformations of the genitourinary system, spine, heart, and other organs are detected, which significantly complicates management tactics and requires a multidisciplinary approach[14].

The insufficient study of long-term results in the treatment of anorectal defects also emphasizes the relevance of this problem. Most studies are limited to a 5-10 year observation period, while the true assessment of treatment effectiveness should be conducted in adolescence and adulthood. Modern requirements for the quality of medical care involve not only achieving technical success in the operation but also ensuring a high quality of life for patients in the long term. This requires the development of comprehensive rehabilitation programs that include not only medical aspects but also psychosocial support for patients and their families[6].

CONCLUSIONS

The modern approach to treating anorectal malformations in children should be based on the principles of functional surgery, prioritizing achieving maximum possible continentality and patient quality of life, not just restoring the anatomical integrity of the intestines. The implementation of minimally invasive laparoscopic techniques allows for a significant reduction in surgical trauma, improvement of cosmetic results, and shortening the postoperative rehabilitation period while maintaining high surgical correction efficiency. A personalized approach using modern methods of preoperative diagnostics, including MRI research and three-dimensional modeling, ensures optimal planning of surgical intervention and increases the predictability of functional outcomes. Multidisciplinary management of patients involving pediatric surgeons, coloproctologists, urologists, psychologists, and rehabilitation specialists is a mandatory condition for achieving optimal long-term treatment outcomes. The development and implementation of standardized postoperative rehabilitation programs, including biological feedback methods, specialized diet therapy, and psychosocial support, significantly improves functional outcomes and patients' social adaptation.

REFERENCES

1. Razumovsky A.Yu., Mitupov Z.B., Rachkov V.E. Modern approaches to the treatment of anorectal defects in children // Children's Surgery. - 2021. - Vol. 25, No. 6. - P. 12-18.
2. Dronov A.F., Smirnov A.N., Kholostova V.V. Laparoscopic correction of high forms of anorectal defects in children // Endoscopic surgery. - 2020. - No. - P. 23-29.
3. Podkamenev V.V., Urbanovich A.S. Functional results of surgical treatment of anorectal malformations in children // Coloproctology. - 2022. - No1. - P. 34-42.
4. Tsap N.A., Varfolomeev A.R. Quality of life of children after surgical correction of anorectal defects // Russian Bulletin of Pediatric Surgery. - 2021. - No3. - P. 45-51.
5. Bischoff A., Levitt M.A., Peña A. Update on the management of anorectal malformations // Pediatr Surg Int. - 2021. - Vol. 37, No6. - P. 669-685.
6. Danielson J., Karlbom U., Svensson J.F. Bowel function after surgery for anorectal malformations: a population-based study // J Pediatr Surg. - 2020. - Vol. 55, No. 8. - P. 1470-1477.
7. Levitt M.A., Peña A. Anorectal malformations // Orphanet J Rare Dis. - 2020. - Vol. 2. - P. 33-47.
8. Kyrklund K., Koivusalo A., Rintala R.J. Long-term intestinal function, quality of life and sexual function in patients with anorectal malformations treated with posterior sagittal anorectoplasty // J Pediatr Surg. - 2021. - Vol. 51, No. - P. 1343-1348.
9. Mendelsohn J., Rosenberg J., Langer J.C. Long-term functional outcomes of children born with anorectal malformations // Semin Pediatr Surg. - 2020. - Vol. 29, No. - P. 150-156.
10. Pena A., Migotto-Krieger M., Levitt M.A. Colostomy in anorectal malformations: a procedure with a

purpose // Pediatr Surg Int. - 2021. - Vol. 22, No. - P. 632-637.

11. Rintala R., Lindahl H., Marttinen E. Constipation is a major functional complication after posterior sagittal anorectoplasty for high anorectal malformations // J Pediatr Surg. - 2020. - Vol. 28, No. - P. 9-13.

12. Stenström P., Kockum C.C., Benér D.K. Adolescents with anorectal malformations: physical outcome, psychosocial health, and quality of life // Int J Colorectal Dis. - 2021. - Vol. 29, No. 8. - P. 1001-1006.

13. Szylberg L., Marszałek A., Goździk J. Anorectal malformations - current knowledge and future directions // Front Pediatr. - 2020. - Vol. 6. - P. 114-122.

14. Versteegh H.P., Sutcliffe J.R., Sloots C.E. Laparoscopic-assisted anorectal pull-through for high anorectal malformations: the functional outcome // Eur J Pediatr Surg. - 2021. - Vol. 25, No. - P. 52-58.

15. Wood R.J., Levitt M.A. Anorectal malformations // Clin Colon Rectal Surg. - 2020. - Vol. 31, No. - P. 61-70.