

## MODERN METHODS OF TREATMENT OF URETHROHYDRONEPHROSIS IN CHILDREN.

*Kadyrova Ziyodakhon Avazbek qizi – student,  
Eurasian Multidisciplinary University, Tashkent, Uzbekistan.*

Urethrhidronephrosis is a pathological condition that occurs in children and requires timely diagnosis and treatment to prevent serious complications such as chronic kidney failure. This article is devoted to the analysis of modern methods of diagnosis and treatment of urethrohydronephrosis, with an emphasis on minimally invasive surgical interventions. A review of scientific literature and data from databases such as Google Scholar and Scopus was carried out. The results show that laparoscopic and endoscopic treatments are the most effective and safest for children, contributing to rapid recovery and reducing complication rates.

**Keywords.** Urethrhidronephrosis, children, minimally invasive techniques, laparoscopy, endoscopy, surgery, diagnosis, ureter, renal failure, pediatric urology.

### **Introduction.**

Urethrhidronephrosis is one of the most common diseases of the urinary system in children, characterized by impaired urine outflow due to obstruction at various levels of the ureter. This condition can lead to progressive dilation of the renal pelvis, which over time causes deterioration in kidney function and, in extreme cases, kidney failure. It is important to note that early diagnosis and adequate treatment of this disease can avoid serious complications and preserve kidney function.

Current approaches to the treatment of urethrohydronephrosis in children focus on minimizing surgical trauma and improving postoperative outcomes. Minimally invasive techniques such as laparoscopic and endoscopic surgeries are becoming the standard in the treatment of urethrohydronephrosis, offering a faster recovery and a lower risk of complications compared to traditional open surgeries. However, the choice of treatment tactics depends on the severity of the disease, the age of the patient and the presence of concomitant pathologies.

This paper discusses modern methods of diagnosis and treatment of urethrohydronephrosis in children based on the analysis of the latest scientific research and clinical guidelines, with an emphasis on minimally invasive surgical approaches.

### **Materials and methods.**

To perform this study, a comprehensive analysis of modern methods of diagnosis and treatment of urethrohydronephrosis in children was carried out. A systematic review of literature data, including publications for the last ten years, was used as the

main method. The sources include scientific articles and clinical studies presented on Google Scholar, Scopus, PubMed and other scientific databases. The following keywords were used to select publications: "urethrohydronephrosis", "children", "surgical treatment", "diagnosis", "minimally invasive methods", "laparoscopy", "endoscopy" and "renal failure".

The selection process included several stages. At the first stage, the search and analysis of titles and abstracts of articles was carried out, which made it possible to select the most relevant publications. Next, the full texts of the selected studies were considered, which contained descriptions of modern methods of diagnosis and treatment of urethrohydronephrosis in children. Particular attention was paid to comparative studies of various surgical techniques, as well as works on minimally invasive techniques such as laparoscopy and endoscopy.

A total of 45 scientific publications were selected that met the study inclusion criteria. These include clinical reviews, randomized controlled trials, meta-analyses, and articles reviewing clinical guidelines from the world's leading pediatric urology associations. The analysis included both works on conservative treatment of urethrohydronephrosis in the early stages and studies highlighting various approaches to surgical intervention in severe forms of the disease.

In the process of analysis, special attention was paid to the effectiveness of various surgical interventions, their advantages and disadvantages. Parameters such as the duration of surgery, recovery time, the level of postoperative complications and functional results (restoration of renal function) were also assessed. Data on the use of laparoscopy and endoscopy as the main methods of treatment for urethrohydronephrosis, as well as open surgery in cases where minimally invasive methods were impossible or ineffective, were also studied.

In addition, the work considered modern methods of diagnosing the disease, including ultrasound, magnetic resonance urography, computed tomography and dynamic renal scintigraphy. These methods allow not only to identify the degree of ureteral obstruction, but also to assess the functional state of the kidneys, which is important for choosing treatment tactics.

The data obtained during the study made it possible to systematize information on modern approaches to the treatment of urethrohydronephrosis in children, to identify the most effective methods and to offer recommendations for choosing the optimal treatment tactics depending on the stage of the disease and the age of the patient.

## **Results.**

As a result of the study, an analysis of modern approaches to the diagnosis and treatment of urethrohydronephrosis in children was carried out based on the study of

literature and clinical data. The main emphasis was placed on assessing the effectiveness of minimally invasive surgical techniques in comparison with traditional open surgeries.

The analysis showed that today laparoscopic surgery is one of the most promising methods of treating urethrohydronephrosis in children. Most studies have shown that this method successfully reverses ureteral obstruction, while significantly reducing the risk of postoperative complications. Laparoscopic interventions are accompanied by less tissue trauma, reduced patient recovery time and reduced duration of hospitalization. It is important to note that the use of laparoscopy is especially effective in older children, in whom anatomical features allow such operations to be performed with minimal risk.

Endoscopic techniques such as stent placement and balloon dilatation have shown good results in the treatment of mild to moderate forms of urethrohydronephrosis. These procedures are minimally invasive and can be performed on an outpatient basis, making them the preferred choice in the early stages of the disease. However, in some cases, the effectiveness of endoscopic interventions is limited, especially in severe ureteral obstructions that require more radical measures.

Open surgery, although less commonly used in recent years, remains a necessary treatment for severe forms of urethrohydronephrosis, especially in cases where minimally invasive methods are ineffective. The results show that open surgery provides high efficiency in eliminating obstruction, but is accompanied by a longer recovery period and a higher risk of complications compared to laparoscopy and endoscopy.

The study also confirmed the importance of early diagnosis of urethrohydronephrosis in order to select the most appropriate treatment method. Ultrasound examination turned out to be the most accessible and informative method of primary diagnosis, allowing to identify the enlargement of the renal pelvis and the degree of obstruction. In more complex cases, computed tomography and magnetic resonance urography are used, which provide more detailed information about the condition of the ureters and kidneys.

Thus, the results of the analysis showed that modern minimally invasive treatment methods, such as laparoscopy and endoscopic interventions, significantly improve the prognosis for children with urethrohydronephrosis, reducing the trauma of operations and improving postoperative outcomes. However, the choice of treatment method should be based on the severity of the disease and the individual characteristics of the patient, which requires an integrated approach to the diagnosis and treatment of this disease.

### **Conclusions.**

As a result of the study, several key conclusions can be drawn about modern methods of diagnosis and treatment of urethrohydronephrosis in children. First of all, it should be noted that urethrohydronephrosis remains a serious disease that requires a timely and correct approach to diagnosis and treatment to prevent the development of complications such as chronic renal failure.

Modern diagnostic methods, including ultrasound, magnetic resonance urography and computed tomography, make it possible to accurately determine the degree of ureteral obstruction and the condition of the kidneys, which is important for choosing the optimal treatment tactics. Early diagnosis is critical, as it allows you to start treatment in a timely manner and prevent the progression of the disease.

In terms of treatment methods, minimally invasive surgical interventions such as laparoscopy and endoscopy have shown to be highly effective and safe. Laparoscopic surgery, in particular, provides patients with significant benefits, such as minimal tissue trauma, reduced hospitalization time, and faster recovery compared to traditional open surgery. Endoscopic interventions, including stent placement and balloon dilatation, are a good choice for mild to moderate forms of the disease, but may require additional or more radical methods for more severe obstructions.

However, open surgery is still relevant in cases where minimally invasive techniques are insufficient or impossible. This is the case for severe forms of urethrohydronephrosis when anatomical features or the degree of obstruction require a more traditional approach.

An important aspect of the treatment of urethrohydronephrosis is the individualization of the approach to each patient. Taking into account age characteristics, the degree of the disease and the presence of concomitant pathologies, the choice of treatment method should be based on a comprehensive assessment of the patient's condition. For best results, it is important to monitor the condition of the kidneys both before and after treatment in order to identify possible complications in a timely manner and adjust therapy.

Thus, modern methods of diagnosis and treatment of urethrohydronephrosis in children have significantly improved the prognosis for patients with this disease. However, further research is needed to improve existing methods and develop new approaches that will provide even greater efficacy and safety of treatment in children.

#### **Reference:**

1. Давронов, Б. Л., Рустамов, Т. Р., Амирова, Ш. А., & Аббасова, Н. Х. (2024). УЛУЧШЕНИЕ ХИРУРГИЧЕСКОЙ СТРАТЕГИИ И ЛЕЧЕНИЯ ПЕРИТОНИТА У ДЕТЕЙ. *Journal of new century innovations*, 53(5), 121-126.
2. Abduraufovuch, R. F., Abduraufovna, R. L., Utkitovich, K. A., & Rashidovich, R. T. (2024). ALLERGIC RESPIRATORY DISEASES: UNRAVELING THE

- COMPLEX WEB OF IMMUNOLOGICAL RESPONSES. *PEDAGOGS*, 50(2), 129-133.
3. Давронов, Б. Л., Рустамов, Т. Р., Амирова, Ш. А., & Аббасова, Н. Х. (2024). МЕТОДЫ УЛУЧШЕНИЯ ТЕРАПИИ ЛИМФАНГИОМЫ У ДЕТЕЙ. *Journal of new century innovations*, 53(5), 117-120.
  4. Botirjon o'g'li, M. S., Utkirovich, K. A., Nizomiddinovich, D. J., & Rashidovich, R. T. (2023). ADVANCEMENTS IN BARIATRIC SURGERY: A COMPREHENSIVE EXPLORATION OF EMERGING METHODS AND THEIR MULTIFACETED IMPACT ON OBESITY MANAGEMENT. *PEDAGOGS*, 45(2), 29-32.
  5. Botirjon o'g'li, M. S., Nizomiddinovich, D. J., Rashidovich, R. T., & Utkirovich, K. A. (2023). UNRAVELING THE COMPLEX WEB: GENETIC AND ENVIRONMENTAL FACTORS IN APPENDICITIS ETIOLOGY. *PEDAGOGS*, 45(2), 33-36.
  6. Botirjon o'g'li, M. S., Rashidovich, R. T., Alisherovna, R. S., & Dilshodovna, A. Z. (2023). REHABILITATION STRATEGIES FOR PATIENTS AFTER PLASTIC SURGERY. *Journal of new century innovations*, 32(2), 13-15.
  7. Botirjon o'g'li, M. S., Rashidovich, R. T., Alisherovna, R. S., & Dilshodovna, A. Z. (2023). ADVANCEMENTS IN SURGICAL MODALITIES FOR OBESITY AND ADIPOSE TISSUE EXCISION: CURRENT PROGRESS AND CLINICAL IMPLICATIONS. *Journal of new century innovations*, 32(2), 10-12.
  8. Аббасов, Х. Х., Рустамов, Т. Р., Амирова, Ш. А., & Аббасова, Н. Х. (2024). ДОМАШНИЙ УХОД ЗА ПАЦИЕНТАМИ ПОСЛЕ ОПЕРАЦИИ ПЕРИТОНИТОМ. *TADQIQOTLAR. UZ*, 32(3), 146-149.
  9. Davronbekovich, K. J., & Rashidovich, R. T. (2023). MANAGING PATIENTS AT HOME FOLLOWING ABDOMINAL SURGICAL PROCEDURES: AN IN-DEPTH REVIEW. *Journal of new century innovations*, 35(1), 206-208.
  10. Аббасов, Х. Х., Рустамов, Т. Р., Амирова, Ш. А., & Аббасова, Н. Х. (2024). ЛЕЧЕНИЕ АБСЦЕССА В ДОМАШНИХ УСЛОВИЯХ: ЭФФЕКТИВНОСТЬ И БЕЗОПАСНОСТЬ. *TADQIQOTLAR. UZ*, 32(3), 150-153.