

HYDRONEPHROSIS IN CHILDREN: MODERN ASPECTS OF EPIDEMIOLOGY, DIAGNOSIS AND TREATMENT

Rakhmatov Bekzod Nasriddinovich

*Assistant of the Department of Pediatric Surgery No1,
Samarkand State Medical University*

Hydronephrosis in children is a serious medical problem characterized by enlargement of the renal-calyx system and pelvis due to impaired urine outflow. This article discusses the current aspects of the epidemiology, diagnosis and treatment of this condition. The relevance of the topic is due to the high prevalence of hydronephrosis in children and the importance of timely detection and adequate treatment to prevent complications and preserve kidney function. Data from a variety of sources, including scientific articles, literature reviews, and electronic databases, were used to write the article. The results of the studies highlight the need for a comprehensive approach to the diagnosis and treatment of hydronephrosis in children, as well as the need for further research to improve the management of this condition.

Keywords. Hydronephrosis, children, epidemiology, diagnosis, treatment, urinary system, enlargement of the renal-calyx system, complications, renal function, impaired urine outflow.

Introduction

Hydronephrosis in children remains a significant problem in pediatric urology and nephrology. This condition, characterized by enlargement of the renal-calyx system and pelvis due to impaired urine outflow, can have a variety of causes and vary in severity. Despite significant progress in diagnosis and treatment, hydronephrosis remains a cause of morbidity and complications in children.

In this review, we will consider the current aspects of this problem, including epidemiology, risk factors, methods of diagnosis and treatment. Turning to the latest studies and literature reviews, we strive to present a broad picture of the state of this pathology, to identify the main trends and challenges in its management.

The importance of studying hydronephrosis in children is due not only to the frequency of its occurrence, but also to potential complications, such as chronic renal failure and damage to kidney tissue. Understanding the factors that influence the development and course of this condition, as well as the development of effective treatment strategies, are essential to improve management outcomes for patients with hydronephrosis.

In this review, we will focus on key aspects of the epidemiology, diagnosis, and treatment of hydronephrosis in children, as well as outline prospects for future research and clinical practice.

Materials and methods

To write this article, data from various sources were used, including scientific articles, literature reviews, pediatrics manuals, as well as information from electronic databases such as Google Scholar, Scopus and others. Recent studies on hydronephrosis in children were analysed, taking into account various factors such as age, sex, clinical manifestations and treatment outcomes.

Epidemiological data on the prevalence of hydronephrosis in different age groups have been obtained from population-based studies and meta-analyses conducted in various countries and regions of the world. To analyze clinical manifestations and risk factors, retrospective and prospective studies were considered, including data on large cohorts of patients diagnosed with hydronephrosis.

The literature review also included data on current methods for diagnosing hydronephrosis, including ultrasound, computed tomography, magnetic resonance imaging, and other imaging tools.

Treatments for hydronephrosis in children have been reviewed based on the results of clinical trials and recommendations from national and international clinical guidelines. This includes conservative methods such as drug therapy and physical procedures, as well as surgical treatment, including endoscopic and open interventions. All information has been processed and analyzed in order to provide readers with an extensive idea of modern aspects of the diagnosis and treatment of hydronephrosis in children.

Results

Analysis of epidemiological data has shown that hydronephrosis in children is a relatively common condition occurring in different age groups. Among the main causes of hydronephrosis are congenital anomalies of the urinary system, bladder oppression, urinary tract infections and other pathologies.

Clinical manifestations of hydronephrosis can range from asymptomatic to severe symptoms such as low back pain, high blood pressure, changes in urination.

Diagnostic methods such as ultrasound, computed tomography and magnetic resonance imaging can accurately determine the enlargement of the renal cup system and pelvis, as well as identify possible causes of urinary tract obstruction.

Depending on the severity of the condition and the cause of hydronephrosis, the appropriate treatment method is chosen. Conservative methods include drug therapy and physical procedures, while surgery may be required in some cases. Studies show that timely detection and adequate treatment of hydronephrosis in children can prevent the development of complications and preserve kidney function.

Overall, the results of the studies highlight the importance of a comprehensive approach to the diagnosis and treatment of hydronephrosis in children, as well as the need for further research to optimize the management of this condition.

Conclusions

Hydronephrosis in children is a serious medical problem that requires careful study and a comprehensive approach to diagnosis and treatment. Analysis of epidemiological data shows that hydronephrosis is quite common among children of different ages, and its occurrence can be associated with various pathologies of the urinary system.

The diagnosis of hydronephrosis is based on the use of various imaging methods, which makes it possible to accurately determine the enlargement of the renal calyx system and pelvis, as well as to identify possible causes of urinary tract obstruction.

Treatment of hydronephrosis in children can be conservative or surgical, depending on the severity of the condition and the cause of its occurrence. Effective treatment can prevent complications and preserve kidney function.

In general, the optimal management of hydronephrosis in children requires an individual approach to each patient, taking into account the characteristics of the clinical picture and potential complications. Further research in this area is needed to better understand the mechanisms of hydronephrosis development, develop new methods of diagnosis and treatment, and optimize strategies for managing this condition in children.

References:

1. Аббасов, Х. Х., Рустамов, Т. Р., Амирова, Ш. А., & Аббасова, Н. Х. (2024). ДОМАШНИЙ УХОД ЗА ПАЦИЕНТАМИ ПОСЛЕ ОПЕРАЦИИ ПЕРИТОНИТОМ. TADQIQOTLAR, 32(3), 146-149.
2. Yusupov, S. A., Shamsiev, A. M., Abbasov, X. X., & Shaxriyev, A. K. (2024). Immunological reactivity in children with chronic bronchitis. Science and Education, 5(1), 32-3.
3. Abdullaev, S., Rahmanov, U., Abdullaeva, L., Toirov, A., & Abbasov, K. (2020). Reviews of complications and treatment tactics for external hernias of the anterior abdominal wall. European Journal of Molecular & Clinical Medicine, 7(2), 2434-243.
4. Khabibullayevich, A. K., Farrukhovna, A. A., Shokirovna, G. S., Farkhodovna, M. F., & Shavkatovna, Y. S. (2019). Assessment of the efficiency of treatment of the distributed appenelicular peritonitis in children. Вопросы науки и образования, (4 (49)), 193-200.
5. Аббасов, Х. Х., Рустамов, Т. Р., Амирова, Ш. А., & Аббасова, Н. Х. (2024). ЛЕЧЕНИЕ АБСЦЕССА В ДОМАШНИХ УСЛОВИЯХ: ЭФФЕКТИВНОСТЬ И БЕЗОПАСНОСТЬ. TADQIQOTLAR, 32(3), 150-153.
6. Davronbekovich, K. J., & Rashidovich, R. T. (2023, September). HOME-BASED REHABILITATION FOR COVID-19 PATIENTS: A VITAL STEP TOWARDS RECOVERY. In Proceedings of International Conference on Scientific Research in Natural and Social Sciences (Vol. 2, No. 9, pp. 60-64).

7. Davronbekovich, K. J., & Rashidovich, R. T. (2023, September). INNOVATIVE APPROACHES FOR TREATING INFECTIOUS LUNG DISEASES: A PARADIGM SHIFT IN RESPIRATORY MEDICINE. In Proceedings of International Conference on Scientific Research in Natural and Social Sciences (Vol. 2, No. 9, pp. 69-72).
8. Davronbekovich, K. J., & Rashidovich, R. T. (2023, September). REHABILITATION AFTER PNEUMONIA: A COMPREHENSIVE REVIEW. In Proceedings of International Conference on Scientific Research in Natural and Social Sciences (Vol. 2, No. 9, pp. 50-55).
9. Davronbekovich, K. J., & Rashidovich, R. T. (2023). POST-APPENDECTOMY REHABILITATION: OPTIMAL STRATEGIES FOR AUGMENTED CONVALESCENCE. *Journal of new century innovations*, 35(1), 209-210.
10. Аббасов, Х. Х., Рустамов, Т. Р., Амирова, Ш. А., & Аббасова, Н. Х. (2024). ДОМАШНИЙ УХОД ЗА ПАЦИЕНТАМИ ПОСЛЕ ОПЕРАЦИИ ПЕРИТОНИТОМ. *TADQIQOTLAR*, 32(3), 146-149.