KIDNEY DISEASE IN ADOLESCENCE.

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This article discusses kidney diseases in adolescents, their prevalence, main risk factors, methods of diagnosis and treatment. Adolescence is a critical period for kidney health due to the active growth of the body and hormonal changes, which makes this problem especially relevant. The study is based on the analysis of literature, including data from the scientific databases of Google Scholar, Scopus and other sources. As a result of the work, the most common diseases, such as glomerulonephritis, pyelonephritis and urolithiasis, were identified, and the importance of early diagnosis and prevention was emphasized.

Keywords. Kidney disease, adolescence, glomerulonephritis, pyelonephritis, urolithiasis, risk factors, diagnosis, treatment, prevention, chronic renal failure, Google Scholar, Scopus, PubMed.

Introduction.

Kidney disease in adolescents is one of the most important problems of modern medicine. The kidneys play a key role in maintaining water-salt balance, eliminating toxins and regulating blood pressure. In adolescence, when the body undergoes significant physical and hormonal changes, the kidneys become vulnerable to various pathologies.

Adolescents often do not pay enough attention to the symptoms of diseases, which leads to late diagnosis and complications. Diseases such as glomerulonephritis, pyelonephritis and urolithiasis can develop slowly, but their chronic course leads to a deterioration in kidney function and a reduced quality of life in the future.

In light of the increasing incidence of chronic kidney failure among adolescents, this topic requires in-depth study. The purpose of this study is to analyze the main causes and mechanisms of the development of kidney diseases in adolescence, methods of their diagnosis, treatment and prevention, as well as to consider risk factors that can contribute to the occurrence of these pathologies.

Materials and methods.

To conduct a study on the topic of kidney diseases in adolescence, a comprehensive analysis of scientific literature published in leading world and domestic sources was carried out. The main tool for data collection was electronic databases such as Google Scholar, Scopus, PubMed and Web of Science, which searched for articles and reviews related to the prevalence, diagnosis, treatment and prevention of kidney disease in adolescents. The study included publications describing various types of

renal pathologies occurring in this age group, including acute and chronic forms of glomerulonephritis, pyelonephriata, мочекаменной болезни, а также редкие наследственные нефропатии.

The selection of literature was carried out according to a number of criteria. Articles written in the last ten years (2013-2023) are included to reflect current trends in the diagnosis and treatment of renal diseases. Particular attention was paid to studies in which clinical trials and observations were carried out, including the adolescent population, since this age has its own specific features of physiology and development. Sources describing both classical diagnostic methods (clinical urinalysis, biochemical blood test) and modern imaging methods (ultrasound, magnetic resonance imaging) were also analyzed. In addition, articles concerning genetic studies and their contribution to the diagnosis of hereditary nephropathy were studied.

The materials used for the study included data from systematic reviews, meta-analyses, original articles describing clinical cases, and recommendations from major medical associations such as the National Institutes of Health (NIH), the International Society of Nephrology (ISN), and others. To assess the level of evidence of the studied materials, the classification according to the GRADE scale was used, which made it possible to identify the most relevant and reliable studies.

The methodology of the study was based on a comparative analysis of the data obtained, their systematization and interpretation. It was important to assess which risk factors are more relevant for adolescents compared to adults, as well as which methods of diagnosis and therapy are most effective for this age group. Based on the data obtained, an analysis of prognostic factors and dynamics of kidney disease in adolescence was carried out, which made it possible to identify key patterns and develop recommendations for improving the diagnosis and prevention of kidney diseases in adolescents.

Results.

The results of the study show that kidney diseases in adolescents are widespread and can manifest themselves in both acute and chronic forms. The most common pathologies among adolescents are glomerulonephritis, pyelonephritis and urolithiasis. Glomerulonephritis, which is an inflammatory lesion of the glomeruli of the kidneys, has been identified as one of the most common causes of impaired kidney function in adolescents. The literature describes both primary and secondary forms of the disease that develop against the background of infectious, autoimmune or metabolic disorders. An important role in the pathogenesis is played by a violation of the immune system, which is especially important for adolescents during hormonal changes.

Pyelonephritis, an infectious inflammation of the kidney tissue, is also widespread among adolescents, especially among girls, due to anatomical and hormonal features. Studies show that with timely diagnosis and adequate antibiotic

therapy, the prognosis of the disease is favorable. However, it is not uncommon for pyelonephritis to become chronic, especially in the presence of predisposing factors, such as urinary tract abnormalities or reduced immunity.

Urolithiasis, although less common in adolescence compared to other pathologies, also deserves attention. Adolescents prone to metabolic disorders, as well as those who consume insufficient fluids or excessive amounts of salts and proteins in the diet, are at risk for the formation of kidney stones. The results show that there may be no symptoms in the early stages of stone formation, making it difficult to diagnose in a timely manner. However, imaging techniques such as ultrasound and CT scans can effectively detect even small stones.

The study also revealed an important role for hereditary factors in the development of kidney disease in adolescents. Rare genetic pathologies such as Alport syndrome, which is manifested by a progressive deterioration in kidney, hearing and vision function, were considered. These diseases require early genetic diagnosis for timely intervention and prevention of serious complications.

An important result was the identification of risk factors that contribute to the development of kidney disease in adolescents. Among them, a significant place is occupied by malnutrition, low physical activity, poor hygiene and non-compliance with the drinking regimen. The stresses of adolescence, as well as bad habits such as nicotine and alcohol use, have an additional negative impact on kidney health. Gender also plays a role: girls are more likely to be diagnosed with inflammatory kidney disease, while boys are more likely to be diagnosed with urolithiasis.

In addition, research shows that many adolescents ignore the first symptoms of kidney disease, such as lumbar pain, swelling, and changes in urination. This leads to late seeking medical help and, as a result, to the development of chronic forms of diseases. Timely diagnosis, based on the use of laboratory methods (blood and urine tests), as well as imaging methods, plays a key role in the successful treatment and prevention of complications.

Conclusions.

Выводы исследования подчеркивают важность своевременного выявления и лечения заболеваний почек у подростков, поскольку данный возрастной период характеризуется особой уязвимостью организма из-за активных физиологических и гормональных изменений. Болезни почек в подростковом возрасте часто остаются недооцененными как пациентами, так и медицинскими специалистами, что приводит к хронизации процессов и развитию осложнений. Это связано с тем, что многие почечные патологии на ранних стадиях протекают бессимптомно или с незначительными клиническими проявлениями, которые подростки склонны игнорировать.

One of the main findings is that the most common kidney diseases among adolescents are glomerulonephritis, pyelonephritis, and urolithiasis. These pathologies can significantly worsen the quality of life of patients, especially if they are not diagnosed and adequately treated in a timely manner. Studies show that the use of modern diagnostic methods, such as ultrasound, magnetic resonance imaging and laboratory tests, makes it possible to detect diseases at an early stage and start the necessary treatment.

In addition, the results point to the importance of risk factors such as poor diet, lack of physical activity, stress and bad habits. Genetic predisposition also plays a key role, especially if there is a family history of renal disease. Adolescents with a genetic predisposition to kidney disease require closer medical monitoring and regular examination.

Particular attention in the conclusions is paid to the need for educational work among adolescents and their parents aimed at raising awareness of the symptoms and risks of kidney disease. An important task is to form a conscious attitude to their health in adolescents, which will allow them to seek medical help in time when symptoms of kidney disease appear. Prevention programmes that include recommendations on diet, physical activity and drinking patterns are also important in reducing illness among adolescents.

Thus, an integrated approach to the diagnosis, treatment and prevention of kidney diseases in adolescence can significantly improve the prognosis and prevent the development of chronic forms of pathology. It is important to continue research in this area, focusing on the development of more effective diagnostic and therapeutic methods, as well as the development of preventive measures aimed at reducing the incidence of disease among adolescents.

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.