



## PECULIAR FEATURES OF KIDNEY DISEASES IN ADOLESCENCE

<sup>1</sup>Rasulova Nilufar

Scientific adviser, docent of the Department of Public Health, Healthcare Management of the Tashkent Pediatric medical institute (Uzbekistan)

<sup>2</sup>Aminova Asalya

4th year students of the Medical and Pedagogical faculty of the Tashkent Pediatric medical institute (Uzbekistan)

<https://doi.org/10.5281/zenodo.7559526>

### ARTICLE INFO

Received: 12<sup>th</sup> January 2023

Accepted: 22<sup>th</sup> January 2023

Online: 23<sup>th</sup> January 2023

### KEY WORDS

Hormonal changes, adolescence, kidney disease, prevention, diagnosis.

### ABSTRACT

*The kidneys ensure the constancy of the chemical composition of the body and purifies the blood from harmful substances. They release excess metabolic products and excess fluid, regulate a person's need for water and chemicals, control blood pressure, stimulate the formation of red blood cells, vitamin D. They especially have an important role in adolescence, since the growth of individual organs ends during this period.*

The kidneys are the most important organ of the human urinary system. Kidneys are a kind of filter by which the human body removes all harmful and simply unnecessary substances from the body. For the functioning of the body, it is extremely important to maintain an optimal balance of the internal environment of the body. Only with the right balance is it possible to properly process the metabolism and the formation of new blood cells – red blood cells. The laying and development of the kidneys begins during the intrauterine development of the child. Before starting a conversation about kidney and urinary tract diseases, it is necessary to mention how they function. The kidney itself consists of a cup and a pelvis, in which, in fact, urine is formed. The resulting urine through the ureters enters the bladder, and from there through the urethra (urethra) is excreted from the human body outside. The filling of the bladder occurs gradually, so the urge to urinate appears in a person only when his bladder is more than half full. In the same case, if there is a violation of the nervous regulation of this process, all kinds of urinary tract dysfunctions occur. An increase in body temperature for no apparent reason. The appearance of facial edema, especially in the morning, after the child wakes up. The appearance of so-called "bags" under the eyes. Feeling of weakness, rapid fatigue of the child. A feeling of dry mouth, a constant feeling of thirst. However, sometimes some kidney diseases occur in a latent form, without standard symptoms.

Adolescence (from 14 to 18 years). In adolescence, the increased risk of disruption of the normal functioning of the urinary system is explained by two factors: rapid growth and changes in the hormonal background of the child. The highest risk of developing urinary tract diseases is in those children whose parents suffer from either pyelonephritis or diseases of the endocrine system. To the state of health of such children, mom and dad should be the most attentive so as not to miss the first alarm bells. After all, the earlier treatment is started, the more successful it will be. If a child is unable to hold urine in the bladder and does not feel



the urge to urinate, we can talk about such a violation as urinary incontinence. Such a violation brings a considerable number of problems, both to the child himself and his mother. However, it must be borne in mind that the child is able to control his urination no earlier than he turns one or two years old. Until then, the diagnosis of "urinary incontinence" is not made. Urinary incontinence, although it has a consonant name with the previous violation, is inherently different from it. The child feels the urge to urinate, but cannot hold urine and does not have time to run to the toilet. Enuresis is called night incontinence at night. During the daytime, the child has full control over his urination, but in the morning he wakes up in a wet bed. Moreover, such a violation without proper treatment can persist in a child all his life. However, there is also a pathological expansion of the renal pelvis. There are quite a large number of reasons that can cause it. Such causes can be reflexes that cause urine to be thrown from the ureter back into the kidney, and vascular anomalies of the kidneys, leading to a pathological change in the renal tissue. All young children need to have an ultrasound examination of the kidneys during the first month of life. And in the event that a physiological expansion of the kidney pelvis is detected in the baby, regular monitoring of the child's health is necessary in the future. Control ultrasound examinations should be performed every three months. Such tactics will allow timely detection of all violations and timely take the necessary measures aimed at preventing the deterioration of the child's condition. Urinary tract infections are the most common kidney disease in children. As a rule, every third child suffers from them at least once in their life. According to the frequency of occurrence, this disease is in second place after acute respiratory infections. There are several types of such infections:

- Pyelonephritis. An inflammatory process affecting kidney tissue.
- Cystitis. An inflammatory process affecting the tissues of the bladder.
- Urethritis. An inflammatory process affecting the lining of the urethra.
- Asymptomatic presence of pathogenic bacteria in the urinary tract. Bacteria enter the urethra via an ascending path. Initially, the bacteria enter the perineum and genitals, after that they rise up the urethra into the bladder and from there on into the kidneys.

By the way, girls are much more likely to be exposed to infectious diseases of the urinary system than boys. This happens because of the physiological features of the structure of the genitals of girls. Their urethra is wider and shorter, which makes it much easier for bacteria to enter. It is because of this that the issue of personal hygiene of the girl requires more attention - it is very important to properly wash the little girl: from front to back, so as not to bring pathogenic bacteria from the anus to the genitals of the baby. After she grows up, her mother should teach her to do it on her own. In the event that a teenager has a normal metabolism, the amount of salt crystals in the urine very often increases in the urine. Phosphates, urates and oxalates are most common. In addition to metabolic disorders, a factor that provokes an increased salt content in the urine may be an incorrectly balanced baby's diet, in which the kidneys do not have time to dissolve salts. The content of oxalates in the urine increases if there are large amounts of such foods rich in vitamin C and oxalic acid in the diet. Such products include spinach, beetroot, celery, parsley, sour apples, currants, radishes, cocoa, chocolate, cottage cheese, broths, etc.). The increased content of urates in the urine is caused by the baby's diet saturated with purine bases. Such products include offal, liver, broths, pork, fatty fish, sardines, tomatoes, strong tea, sour mineral waters. The content of phosphates in



the urine increases if the child's diet is replete with phosphorus-rich foods, such as cheese, fish, caviar, pearl barley, buckwheat, oatmeal and millet cereals, peas, beans, alkaline mineral waters. As a rule, in such cases, changes in urine in children are temporary. With timely adjustment of the child's diet, the composition of urine is very quickly normalized. However, in no case is it unacceptable to ignore this problem, considering it something frivolous. In the event that parents do not urgently revise their child's diet, there is a high risk of sand and even stones forming, both in the kidneys and in the bladder. And urolithiasis is a rather serious and extremely unpleasant disease that requires long and complex treatment. signs of kidney disease in children.

The risk of developing kidney diseases is high in those children whose parents suffer from pyelonephritis, metabolic diseases (urolithiasis, arthrosis, fermentopathy), endocrine disorders, disorders (obesity, thyroid diseases). About 50% of children who have undergone neonatal resuscitation, unfortunately, have kidney pathologies. One of the most common diseases that a pediatrician detects during an examination in a polyclinic is a urinary tract infection. This diagnosis is made after passing urine tests (general urine analysis and urine culture for sterility). At the same time, the doctor, as a rule, prescribes antibacterial therapy, it should normalize urine tests. After such treatment, your child, as a rule, forgets about kidney disease for quite a long time. But this doesn't always happen, and here's why. The cause of the disease in girls is very often inflammation in the vagina, which is manifested by vulvovaginitis. The child complains of soreness of the labia majora and labia minora, strange discharge. These secretions from the vagina enter the bladder and the child has cystitis, there are complaints of pain in the lower abdomen, frequent or sometimes rare painful urination, then an ascending urinary infection gets from the bladder to the kidneys.

If you do not carry out all the necessary laboratory tests, do not consult a pediatric gynecologist, do not perform an ultrasound of the kidneys, with a full bladder and measuring the thickness of the bladder wall, it will be difficult to determine the causes that led to this disease. Such kidney diseases were treated for a long time, in nephrological clinics, with the use of hormone therapy. Therefore, do not forget that it is better to give your child vegetables and fruits appropriate to the season and grown in your own garden than a substandard product of unknown origin. Against the background of herpes virus infection, nephritis and cystitis occur, which cannot be cured without the complete elimination of the main viral infection. Children with such a diagnosis need to consult an immunologist and a nephrologist with an ELISA diagnosis to determine the activity of a viral infection.

Treatment of kidney diseases is impossible without a modern diagnostic base. This is well known by the specialists of the Regional Consultative and Diagnostic Center, where the latest expert-class equipment is concentrated and European standards of examination have been introduced. There are a great many kidney diseases and they can be described for a very long time. I have focused on some of the most common cases. It is important to remember the main thing: if your child has changes in urine and blood tests, or there are any problems on ultrasound, do not delay your visit to an experienced nephrologist. Otherwise, it will take much longer to be treated, and the complications that have arisen can even lead to irreversible consequences.

## References:



1. Ignatova M.S. Pathology of the urinary system organs in children (modern aspects) // Nephrology and dialysis. 2004.
2. Baranov A.A., Sergeeva T.V. Achievements and prospects of development of pediatric nephrology // Issues of modern pediatrics. 2007.
3. Chugunova O.L., Tabolin V.A. Modern aspects of renal pathology in newborns and young children // Bulletin of RSMU. 2005.
4. Makovetskaya T.A., Kozlova T.V. On the question of kidney diseases in newborns and children of the first months of life // Nephrology and dialysis. 2000.
5. Deryugina L.A., Vishnevsky E.L., Kazanskaya I.V., etc. Prenatal diagnosis of urological diseases // Russian Bulletin. perinatol. and pediatrician. 2007.
6. Gignard J.P. Neonatal nephrology. / In: Pediatric nephrology. Lippincott Williams and Wilkins, 1999.