# Diseases of the urinary system in children

A.S. Mikhailova, T.S. Katina
("Center for Energy Information Medicine", Samara, Russia)

Inflammatory diseases of the urinary system occupy the second place among childhood infections.They are characterized not only by a high frequency of occurrence, but also by a tendency to relapse, especially against the background of urinary tract anomalies. Conventionally, all infections of the urinary system, depending on the localization of the process, can be divided into two groups: infections of the lower urinary tract and upper. Lower urinary tract infections involve the urethra and bladder (urethritis, urethral syndrome, cystitis) in the inflammatory process. Microbial damage to the upper urinary tract leads to the development of pyelonephritis and encapsulated processes, for example, a carbuncle or a kidney abscess. The ureters, as a link between the kidneys and the bladder, are practically not involved in the inflammatory process in isolation.

Urethritis and urethral syndrome is an inflammatory process caused by microbial effects on the mucous membrane of the urethra. In boys, the inflammatory process is more often localized in the lower part of the urethra, i.e. typical urethritis develops. In girls, due to the short urethra, the infection spreads quickly, and, as a rule, the clinic of cystitis joins within one or two days. The infection enters the urinary tract most often ascending.

Cystitis is a microbial-inflammatory process in the mucous membrane of the bladder. It is more common in girls (about 7% under the age of 15). For cystitis, as well as for urethritis, the ascending path of infection is most characteristic. The process is considered as acute, with a duration of the disease up to 3 months, and as chronic, with a duration of more than three months. Diagnostic criteria for cystitis are the presence of dysuric disorders, pain above the bosom at the end of urination, and sometimes low-grade fever. The criterion for recovery with urethritis is the absence of complaints and normal urine tests for six months of dispensary observation.

The pathogen can enter the OMS in three ways: hematogenous, lymphogenous and ascending. Hematogenous pathway the spread of the pathogen is of particular importance during the neonatal period and infancy. At an older age, its role is less significant, although one cannot deny the importance of hematogenous penetration of the pathogen into the OMS in diseases such as furunculosis, bacterial endocarditis, sepsis, etc. The nature of pathogens may be different, but the most common are representatives of gram-positive flora and fungi.Lymphogenous pathway
the entry of pathogens is associated with the general system of lymph circulation between the OMS and the intestines. Normally, lymph flows from the kidneys and urinary tract to the intestine, therefore, the spread of bacteria from the intestinal cavity to the OMS through the lymphatic vessels is excluded; moreover, the intestinal mucosa itself is a barrier to the penetration of microorganisms into the blood and lymph. but

in conditions of violation of the barrier properties of the intestinal mucosa and lymphostasis, the likelihood of OMS infection by the intestinal flora increases many times. This situation occurs with long-term dyspepsia (diarrhea and, especially, chronic constipation), colitis, infectious bowel diseases, disorders of its motility and dysbiosis. With the lymphogenous pathway of infection, representatives of the intestinal microflora predominate.

Upward path the spread of infection is dominant. The anatomical proximity of the urethra and the anus leads to the fact that in the periurethral zone there is always a large number of bacteria entering from the anus. The structural features of the external genital organs in girls and a shorter urethra create the most favorable conditions for the penetration of bacteria into the OMS ascending, which causes a higher frequency of IMS. Most often, with IMS, representatives of the Enterobacteriacae family are detected, and among them is Escherichia coli (E. coli), the proportion of which, according to different authors, ranges from 40 to 90%. 9% Proteus, 9% Enterococci, 9% Klebsiella, 6% Enterobacteria, 6% Pseudomonas aeruginosa, and 4% Staphylococci. Functional disorders of urinary tract motility (hypo-, hyperkinesia), even short-term, contributes to urinary stagnation, creating conditions for the adhesion of microorganisms and colonization of the epithelium. Functional obstruction can occur with an absolutely normal structure of the organs of the urinary system, it is provoked by hypothermia, bowel disease, intoxication, stress, etc. During the year with complaints of dysuric disorders, 6 children were examined and treated - 5 boys (7,

8, 10, 11, 12 years old) and 1 girl - 3 years old. In boys, in 4 cases the infection was localized in the kidneys, in 1 case in the bladder. In all cases, treatment at the center resulted in laboratory-confirmed improvement. The girl's case is described below.

Example

A 3-year-old girl, complained of cramps during urination, irritation of the skin of the perineum. 3 months before treatment, she was treated and examined in a hospital with a diagnosis of bacterial urinary syndrome. Escherichia coli was seeded, treated with antibiotics, bacteriophages. Laboratory data when contacting us: General urine analysis: L - 25-30, flat epithelium 10-13. Complete blood count: Hemoglobin - 127, L - $8.0x10^{nine}$, eosinophils - 6, segment. - 42 (normal - 63–67), lymphocytes - 41 (normal - 24–30). Urine analysis according to Nechiporenko: L - $2.25x10^{6}$.

When diagnosing by the ART method, causal organs were identified: bladder D 12.15, urethra D12, kidneys D12 (through zincum metalicum, VNS voltage). Acidity in these areas is 3 degrees, tension of the sympathetic nervous system along the urethra of 2 degrees, depletion of parasympathetic N.S. in the bladder of 2 tbsp., Bacterial burden: Escherichia coli, Staphylococcus aureus. Decreased immunity of the urethral mucosa was determined through a decrease in immunoglobulin A, E, G. When determining the causal chain, the following was revealed: 1) a problem in the small intestine - giardiasis, dysbiosis; 2) tension of the lymphoid tissue of the palatine tonsils as a result of the transferred adenovirus infection, the presence of Staphylococcus aureus;

3) connection with the lumbar nerve plexus - tension of the VNS of the 2nd degree, as a consequence of the transferred adenovirus infection.

The treatment was carried out: MRI, BRT 1 time in 10-14 days (5 sessions) with the construction of complex chains according to the method of A.A. Hovsepyan, osteopathic massage, herbal medicine, taking electronic drugs Bach Flowers. Complaints of cramps, discomfort during urination disappeared on the 5th day of treatment. Control blood and urine tests without signs of inflammation. The control examination by the ART method also showed the absence of an inflammatory process.

A stable positive trend was also observed in the treatment of nocturnal enuresis in combination with urinary tract infection. In 2008, three children (7, 10, 12 years old) were observed with this problem, all of them had a violation of the innervation connections of the bladder - dyskenesia of the urinary bladder sphincter. A clear dependence of the tone of the sphincter of the urinary bladder and the limbic system was revealed - a suppressed psychoemotional state, severe deficiency of trace elements, vitamins, changes in hormonal status - depletion of the endocrine system for endorphins, sex hormones, thyroid hormones. All children were diagnosed with urinary tract infection (IMS): bacterial burden with Escherichia coli, enterobacteria, staphylococcus aureus. Revealed chronic pyelonephritis,
nephroptosis, depletion of sympathy along the sphincter of the bladder. Differential diagnosis was carried out with organic disorders of the innervation of the bladder and anatomical structures of the brain, megacolon, decreased bladder volume, epilepsy, spina bifida. These children simultaneously had fears, teeth grinding, irritability, and decreased school performance. In clinical analyzes of urine, changes of an inflammatory nature, a large number of leukocytes, protein. The treatment was carried out: frequency therapy (MRI), BRT - once every 2 weeks with the construction of chains according to the method of A.A. Hovsepyan, herbal medicine (taking tincture of Eleutherococcus at night to shorten the phase of deep night sleep), electronic homeopathy - drugs "Guna", Bach Flowers, induction programs, osteopathy.

Positive dynamics in all treated children: attacks of nocturnal enuresis are much less frequent - once every 2-3 weeks (instead of daily), improved school performance, increased attention, memory, decreased emotional lability, tearfulness, the phase of deep sleep has become less pronounced - the child can be wake up at night and he remembers it; normalization of urine analyzes in all cases. Monitoring and treatment continues.

Literature

1. Vozianov A.F., Maidannikov V.G. Fundamentals of Pediatric Nephrology. - 2002.

2. Journal "Medicine". - No. 1. - 2001.

3. Journal "Medicine". - No. 1. - 2009.

4. Agadzhanyan N.A. Human physiology. - N. Novgorod, 2005.

A.S. Mikhailova, T.S. Katina Diseases of the urinary system in children // XV "- M .:" IMEDIS ", 2009, vol. 1 - C.117-122