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**CLINICAL AND NEUROLOGICAL MANIFESTATIONS OF ENURESIS IN CHILDREN AND NEW APPROACHES TO NON-DRUG CORRECTION.**

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*Abstract: Enuresis is a very common problem in children and is accompanied by impaired social adaptation, thereby reducing the quality of life and self-confidence of children with this pathology. To study the clinical and neurological manifestations of enuresis in children with an assessment of the effectiveness of non-drug methods of therapy.*

*Key words: children, enuresis, neurosis, acupuncture*

**Relevance.** Enuresis is a very common problem in children and is accompanied by impaired social adaptation, thereby reducing the quality of life and self-confidence of children with this pathology. Enuresis is involuntary urination during sleep in a child over 5 years old. According to the International Society for Urinary Incontinence in Children (ICCS), monosymptomatic enuresis is distinguished, in which there are no signs of impaired urinary function, and polysymptomatic enuresis with impaired function of the lower urinary tract. Monosymptomatic enuresis is divided into primary - bedwetting in a child for 6 months without episodes of "dry" period, and secondary enuresis that occurs after a "dry" period of more than 6 months [1,2]. If primary enuresis occurs in 80% of children with enuresis, then secondary enuresis is more associated with certain periods of stress arising against the background of social maladjustment, urinary tract infection, bladder dysfunction, occurs more often in girls. Complex enuresis (combined) is also distinguished, which is a combination of nocturnal and daytime urinary incontinence. As a rule, such children have a combination of urological and neurological disorders. The literature provides data on the combination of enuresis with encopresis, described as a syndrome of elimination dysfunction in children, a combination of enuresis with constipation is often found [2,3,5]. The urgency of the problem of enuresis is due to the high prevalence of this disease as a comorbid disorder in childhood, accompanying such neurological diseases as attention deficit hyperactivity disorder (ADHD), various forms of cerebral palsy (cerebral palsy), epilepsy, etc. According to research data, up to 30% of enuresis occurs in children aged 5 to 15 years, it is observed more often in boys (60%) than in girls (40%) [2,4]. According to its etiopathogenetic characteristics, enuresis is a condition with multifactorial causes such as nocturnal polyuria, detrusor overactivity (increased rate of contraction of the bladder) and a high threshold of awakening (abnormally deep sleep). Of no small importance in the development of enuresis is a delay in structural and functional development, a violation in the secretion of antidiuretic hormone and a genetic predisposition. Violation of the neuropsychiatric status can also be accompanied by enuresis, but they are considered more a consequence of the development of enuresis, and not the cause. The problem of bedwetting in children remains very relevant, and the issues of therapy are no less relevant, which often have a temporary effect and the symptoms of the disease return after stopping the drug intake. Today, non-drug treatments for bedwetting in children have become very popular. They are quite effective, provided that the frequency of treatment is observed with the obligatory combination of them with medications. One of the main recommendations in the success of bedwetting therapy is adherence to the regimen in the treatment of bedwetting: a favorable climate in the family, with the elimination of

factors traumatizing the psyche, diet - dinner 3 hours before bedtime without foods that have a diuretic effect, calm games before bedtime, sleeping on a semi-rigid bed, using the "alarm clock" during night sleep, keeping a calendar with the encouragement of the child in the absence of an episode of urinary incontinence. It is very important to take measures to improve the somatic status of children in order to prevent diseases of the upper respiratory tract [2,4,6].

**Purpose of the study:** to study the clinical and neurological manifestations of enuresis in children with an assessment of the effectiveness of non-drug methods of therapy.

**Materials and methods:** To achieve this goal, we studied 30 children with monosymptomatic enuresis at the age from 5 to 18 years. It should be noted that the study groups did not include children with diseases of the urinary system (pyelonephritis, glomerulonephritis, urolithiasis), with connective tissue dysplasia and children with organic diseases of the nervous system. All patients underwent studies of the genitourinary system in order to exclude diseases of the urogenital tract, which can cause urinary incontinence. A detailed history was collected, somatic status and social well-being in the family were assessed. Each patient in the study group kept an individual diary, where he noted episodes of enuresis and "dry nights".

**Results:** The clinical examination included an assessment of the somatic (checking Pasternatsky's symptom, analysis of the results of ultrasound of the kidneys, general urine analysis) and neurological status, psychophysical development of children with enuresis. It should be noted that all children with enuresis have repeatedly received treatment from a neurologist. After the treatment, they had a period of remission, but the signs of the disease returned again after any reasons associated with psychological and emotional stress. In 18 children (60%) enuresis was noted every night, in 10 children (33%) 2-3 times a week, in 2 children (7%) 2-3 times a month. Out of 30 children with enuresis, 18 children were diagnosed with neurosis-like enuresis. Children with neurosis-like enuresis, as a rule, had a history of signs of previous perinatal damage to the central nervous system (66%), intoxication of the nervous system (55%), while enuresis was regular, was noted every night, these children had deep sleep, after urinating the child did not wake up, sometimes there were 2 episodes of urination per night (33%). Parents complained of motor hyperactivity (61%) of these children, pugnaciousness (44%) and aggressiveness (55%), as well as reticence and self-doubt (72%), a tendency to deceive, secretive behavior (50%). Very often, parents of children with neurosis-like enuresis complained of decreased attention, memory, poor performance at school, and slovenliness. When assessing the social well-being in this group of children, they revealed a social and domestic situation (72%), an unfavorable situation in the family with frequent scandals and physical punishment of these children (66%).

6 children had neurotic enuresis, which occurred after mental trauma, appeared after a "dry period", they were characterized by superficial sleep (66%), awakening after urination (83%), guilt and anxiety, as a rule, such children were noted a picture of neurosis in combination with tic hyperkinesia, logoneurosis. When assessing social well-being in the family, these children revealed incomplete families or a period of parental divorce (frequent quarrels and scandals in the family) (83%). In 6 children, enuresis was a manifestation of myelodysplasia, which is associated with a disorder at the level of the L1-S3 segments of the spinal cord associated with non-overgrowth of the arches of the lumbosacral vertebrae (spinabifidaoculta). The lack of effect after undergoing multiple courses of drug and non-drug therapy contributed to the MRI examination of the lumbosacral spine with the identification of signs of myelodysplasia. These children had a combination of enuresis with other pelvic disorders, such as daytime urinary incontinence (66%), constipation (83%), encopresis (33%). When studying the anamnesis of these





children, pregnancy took place against the background of viral and bacterial burden, preeclampsia in the first and second half of pregnancy. It should be noted that these children had little stigma of desembryogenesis.

Along with complaints of urinary incontinence at night, there were signs of asthenization of the nervous system: tearfulness, anxiety, irritability, emotional lability, fears. All children in the study groups complained of rapid fatigue, mood swings, and a tendency to depression. In 60% of children with enuresis, recurrent headaches, attacks of dizziness and nausea were noted when the weather changed. Of the concomitant diseases, diseases of the upper respiratory tract (chronic tonsillitis, adenoids) prevailed. When studying the neurological status in neurosis-like enuresis in children, signs of microorganic symptoms were noted in the form of central paresis of the 7th and 12th pairs of cranial nerves (44%), tremor of the fingers and instability in the Romberg position (55%), revitalization of tendon reflexes (77%). There were also signs of autonomic dysfunction in the form of hyperhidrosis of the palms and feet (77%), attacks of lack of air and palpitations in stuffy rooms (50%), meteorological stability (61%). These children were characterized by signs of asthenization of the nervous system: irritability (66%), anxiety (55%), emotional lability (77%). When studying the neurological status in children with neurotic enuresis, there was a predominance of signs of asthenization of the nervous system with autonomic dysfunction in the form of hyperhidrosis of the palms and feet in all children, pulse lability (66%), meteorological stability (83%), emotional lability with tearfulness (83%).

Children with myelodysplasia in neurostatus also had diffuse microorganic symptoms in the form of central paresis of 7 and 12 pairs of FMN (66%), revitalization of tendon reflexes (77%), hypotension of limb muscles (83%), marbling of the skin (66%) and cold extremities (50%). In children with myelodysplasia, deviations in the performance of coordination tests, awkwardness in movements, and a decrease in fine motor skills were noted (66%). All the children of this group showed slowness (33%) or hyperactivity (77%), emotional lability (83%) in their behavior. We have carried out complex treatment of children with enuresis. All children received standard medical treatment in combination with acupuncture sessions. Drug treatment included drugs that improve the metabolism of nervous tissue and restore metabolic processes in it, such as preparations of B vitamins, ATP, nootropic drugs (piracetam, cerebrolysin, encephabol, etc.) drugs that improve oxygen metabolism (Actovegin, Mexidol) and increasing the resistance of the nervous tissue to hypoxia, were prescribed herbal remedies with a sedative effect. In oriental medicine, the concept of enuresis-urinary incontinence is associated with weakness or underdevelopment of the "qi" of the kidneys. The bladder is in close connection with the kidneys by the type of "surface" and "internal" connection. For this reason, the violation of connections leads to uncontrolled function of the bladder, urinary incontinence occurs. Therefore, acupuncture sessions were carried out in order to maintain the energy of the kidneys: I group of points: shen-shu (23-VII), ba-liao (31-34-VII), wei-chzhong (40-VII), tai-si (3 -VIII); II group of points: shen-shu (23-VII), ba-liao (32-34-VII), yin-jiao (46-IV); III group: bai-hui (20-XIII), qi -hai (6-XIV), da-he (12-VIII), yin-lian (11-XII); IV group: ba-liao (31-34-VII), yin-ling-quan (9-IV) , bai-huang-shu (30-VII). For exposure in one day, 2-3 points were chosen, the time was 15-20 minutes. The sessions were carried out for 10 days.

It should be noted that the effectiveness after 1 day of acupuncture session was noted in children with neurosis-like and neurotic enuresis, later with a complete cessation of episodes of urinary incontinence with neurotic enuresis and a decrease in the frequency of episodes to 1-2 times a week in children with neurosis-like enuresis after the end of acupuncture sessions. In children with myelodysplasia, there was a reduction in urinary

incontinence after the end of the acupuncture course. It should be noted that nocturnal urinary incontinence decreased from night incontinence to 2-3 times a week. After receiving complex therapy in children of all groups, except for the reduction of episodes of urinary incontinence, signs of asthenization of the nervous system, emotional lability, irritability, as well as signs of autonomic dysfunction decreased.

**Conclusion:** Treatment of bedwetting is a rather complicated problem that requires correct diagnosis of the causes of bedwetting and is successful with the correct combination of complex medication and non-medication treatment with elements of acupuncture and herbal medicine, which was confirmed by our study.

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**Used literature.**

1.WHO 2000, General Guidelines for Research Methodologies and Evaluation of Traditional Medicine 89 pp.

2.Zakharova I.N., Mumladze E.B., Pshenichnikova I.I. Enuresis in Pediatric Practice // Journal of Nephrology/Urology, 2017. no. 1, pp. 172-179.

3.Mirvarisova L.T., Nurmatova K.C., Mirzarakhimova K.R. Medical Management, Optimization and Improvement in Uzbekistan Stomatologiya ?4, 61-64, 2018

4.Austin PF, VricellaGj: Functional disorders of the lower urinary tract in children. В Campbell-Walsh Urology, ed. 11, под редакцией Wein A, Kavoussi I., Partin A, Peters C. Филадельфия, Elsevier, 2016, стр. 3297-3316.

5.Rae A, Renson, C: Biofeedback in the treatment of functional voiding disorders. В Pediatric Incontinence, Evaluation and Clinical Management, edited by Franco I, Austin P, Bauer S, von Gontard A, Homsy I. Chichester, John Wiley & Sons Ltd., 2015, pp. 145-152.

6.Wright, Aj: The epidemiology of childhood incontinence. В Pediatric Incontinence, Evaluation and Clinical Management, edited by Franco I, Austin P, Bauer S, von Gontard A, Homsy I. Chichester, John Wiley & Sons Ltd., 2015, pp. 37-60.