Measures For the Prevention of Urate Nephropathies in Children

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ABSTRACT

Dysmetabolic nephropathy is a group of metabolic disorders in children in which structural and functional changes are observed in the kidneys. Almost always, the pathological process proceeds with crystalluria – the formation of salts in the urine. In the future, if left untreated, this condition can lead to the formation of urolithiasis. Pediatricians, nephrologists, urologists, with the participation of endocrinologists and other specialists, are engaged in the diagnosis and therapy of dysmetabolic nephropathy in childhood, as needed.

Keywords: chronic kidney disease, microhematuria, nephropathy

Introduction. Dysmetabolic nephropathy in pediatric urology accounts for up to 60% of the total number of detected diseases of the urinary system. There are no gender divisions: both boys and girls face pathology with the same frequency.

Children with this disease are at risk for developing urolithiasis, cystitis, pyelonephritis, nephritis and other serious conditions. In recent years, there has been a tendency towards noticeable rejuvenation of the disease: if earlier dysmetabolic nephropathy was found mainly in school-age children, now it is often detected in children under 5 years old.

The increasing prevalence of chronic somatic diseases worldwide (cardiovascular, bronchopulmonary, renal, etc.), usually of polygenic origin, with the onset most often in childhood and even at an early age. Therefore, there has been a particularly increased interest not only in establishing the presence, but also in deciphering specific mechanisms of predisposition to these diseases, which is fundamentally important for the development of primary prevention measures. Moreover, the significant, year after year, increasing prevalence of diseases of the urinary system organs (CHI), both in adults and in children, their tendency to relapse and chronization with an outcome in chronic kidney disease, requiring replacement therapy already in childhood and young age, make it very urgent to develop problems of preventive preventive nephrology. Risk factors affecting the formation and progression of nephropathies (hereditary, teratogenic, environmental) are intensively studied all over the world.

Our conditions are characterized by a combination of natural climatic and geographical ecopathogenic factors (heat load, hyperinsolation) with a high technogenic xenobiotic load, as well as a high ingbreeding coefficient (frequency of consanguineous marriages), which are extreme risk factors for the formation of the disease in the presence of predisposition. Increasingly, there are claims that in recent decades the prevalence of chronic somatic diseases, in particular chronic kidney disease (CKD), has assumed an epidemic character, emphasizing the undoubted priority of primary prevention of nephropathies, since the progression of CKD is inevitable regardless

of nosology with the development of CKD at different times. In the existing system of organization of specialized nephrological care, special attention should be paid to the outpatient stage (polyclinic).

It is in these conditions that the origins of the disease are revealed for the first time, dispensary risk groups are formed, primary diagnosis of nephropathology, medical examination and rehabilitation of children are carried out. The district pediatrician needs nephrological alertness, which means careful attention to minimal changes on the part of the kidneys – isolated proteinuria, microhematuria, crystalluria, etc., as well as markers of possible predisposition to nephropathology.Both primary prevention and metaphylaxis (renoprotective therapy) of patients cannot be effective without reliable functioning of the outpatient clinic of the nephrological service. The dispensary service of the population has accumulated extensive work experience that has contributed to reducing morbidity, the quality of rehabilitation, environmental improvement, etc., but it does not ensure the priority of preventive prevention. The protection of children's health is achieved by observing a healthy lifestyle, by eliminating risk factors, and by purposeful medical examination of persons with a hereditary predisposition

Materials and methods of research: Dispensary supervision focused on the preventive prevention of chronic somatic diseases cannot be effective while examination methods aimed at detecting disease (nosology) are used at the primary level, and which are not suitable for detecting prenosological conditions, borderline conditions, diathesis. To do this, it is necessary to develop specific criteria for these conditions and their implementation in the practice of primary health care. Preventive prevention of chronic somatic diseases is possible only at this level. Without this, modern "dispensary surveillance" will continue to contemplate the ever-increasing fascination with these diseases, as is now the case.

The reorientation of the dispensary service to preventive prevention, the organization of specialized laboratories allowing to identify people with a predisposition to certain diseases is a qualitatively new level of medical examination and requires new approaches, especially in terms of laboratory services: improvement and centralization on a city or district scale, taking into account the requirements of preventive medicine.

Currently, in the general nosological structure of kidney diseases, the total frequency of various DMN is significantly higher than other kidney diseases. Meanwhile, with timely detection and observance of simple preventive measures (diet, fluid regime, microclimate, elimination of infectious, toxic, allergic effects and correction of dysmetabolism), they do not lead to complications (interstitial nephritis, urolithiasis, dysmetabolic nephrapathy, secondary pyelonephritis).

The environmental factors contributing to the manifestation of pathology in children with metabolic disorders certainly include seasonal climatic fluctuations – adaptation to low and high temperatures, nutritional errors, emotional and physical overload, membranopathy and intercurrent diseases. It turned out that the primary prevention of multifactorial diseases is one of the most time-consuming areas in medicine. The weak point remains the insufficient readiness of medical workers to introduce modern achievements of preventive medicine into healthcare practice, insufficient equipment of primary care facilities, low level of medical and hygienic culture of the population, which reduces the effectiveness of preventive recommendations. Nevertheless, this is the path that preventive medicine, including nephrology, should follow, overcoming difficulties, studying and solving numerous problems. Since preventive preventive measures are carried out at the family and primary health care level, it is important to train doctors of the general network in the basics of preventive medicine, including preventive nephrology, psychological reorientation of the doctor and his activities from narrowly curative to primary prevention of morbidity with an assessment of the effectiveness of his activities according to the level of preventive work carried out by him and the final result, which should be The leading criteria for the quality of his work are to develop

economic measures to stimulate such work.

It can be argued that currently the real scientific concept that meets the requirements of preventive preventive medicine is the active identification of children with hereditary predisposition (diathesis), borderline conditions and their early correction, preventing their clinical manifestation.

Results. Thus, in relation to nephrology, life also dictated the need to develop and implement the principles of prenosological diagnosis and medical examination. For this purpose, convincing prerequisites have been created for the orientation of the activities of the district (family) doctor mainly on prevention:

1. Primary prevention of nephropathies in children with diathesis (hereditary predisposition) is organized, if possible, not only by non–invasive, but also mainly by non-medicinal methods (regime, microclimate, diet, herbal medicines, physical therapy, elimination of chronic foci of infection - a healthy lifestyle).
2. The priority of preventive prevention of DMN involves the implementation of these measures in the preclinical stage.

CKD more often originates in childhood, and objective signs of predisposition can be taken into account even in newborns (burdened heredity in nephropathology, diseases of the mother's CHI, etc.). Accordingly, early detection of risk factors, hereditary predisposition and elimination of exogenous risk factors (failure to prescribe nephrotoxic drugs, conducting membrane therapy in the early neonatal period with nephropathic fetopathy, etc.) are significant, but still underutilized reserves that can many times increase the effectiveness of preventive activities of a district (family) doctor.

Inputs: .Thus, dysmetabolic nephropathies most often manifest against the background of oxidative stress (OCST) in respiratory infection (ARVI, pneumonia, bronchitis), which is an important pathogenetic mechanism for the development and progression of MHI diseases. This mechanism is relevant for all types of diathesis, especially for families with calculous (oxalate - calcium) diathesis, which are characterized by familial instability of cytomembranes. Preventive prophylaxis and metaphylaxis of nephropathies in uric acid diathesis is presented to us as follows.

conclusions: At the same time, the use even before the clinical manifestation of a low-purine diet, measures to influence purine metabolism and their renal excretion through the consistent use of allopurinol, magurlitol, urodone, kanefron, etc. in age-related dosages, under the control of urine reaction, it refers to the preventive prevention of uricopathies, including urate nephropathies**:**

1. The priority of primary prevention of chronic diseases of the CHI is focused on the need to significantly strengthen the specialized nephrological service at the primary level, the creation of diagnostic centers that identify pathogenetic markers of hereditary predisposition.
2. For the introduction of modern achievements in preventive medicine, a state educational system for the training of specialized pediatricians and nephrologists is necessary.

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