Clinical dynamics of chronic nephritic syndrome in children

Bazarova Nigina Sobirjonovna
Department assistant. Organization of the pharmaceutical business.
Samarkand State Medical University.
ORCID ID 0000-0001-8070-9391
Tel. +998933344476

Tuychieva Sabohat Kurakbaevna
Department assistant. Organization of the pharmaceutical business
Samarkand State Medical University.
Samarkand.Uzbekistan

ABSTRACT

The study of the prevalence and clinical variability of the course of CNS, the rate of progression adapted to the indicator of a decrease in the glomerular filtration rate, the influence of risk factors and immunosuppressive therapy on the long-term prognosis of the disease remains the subject of scientific discussions, creates prerequisites for further study of this problem and determines its relevance.

Keywords: chronic nephritic syndrome, glomerulonephritis, prognosis.

According to WHO data, at present, diseases of the urinary system among the child population occupy a leading place among the main clinical diseases. Over the past 10 years, there has been a significant progress of HNS, accounting for more than 35% of all kidney diseases. CNS occurs with damage to the glomeruli, tubules and interstitial tissue, however, in the future, non-immune progression factors quickly turn on. In the works of recent years, the relationship between CNS and the activation of the systemic inflammatory response has been established, and the latter, in turn, is associated with an imbalance in the “proteolysis–antiproteolysis” system.

The urgency of the problem of chronic glomerulonephritis is explained not by the prevalence of the disease, but by its course and the development of renal failure. In more than half of the cases, the causes of the development of nephritic syndrome remain unknown and unexplored.

Currently, according to the current ICD 10th revision, chronic nephritic syndrome has been assigned the code N03, since the classification of glomerulonephritis is still unclear, and morphological types of diagnosis are made on the basis of a kidney biopsy. Chronic glomerulonephritis and chronic nephritic syndrome follow the same code everywhere (No. 03).

Chronic nephritic syndrome is characterized by micro/macrohematuria, moderate proteinuria (up to 1 g/day), dense edema, and hypertension. This is a large group of primary and secondary glomerulonephritis.

Nephritic syndrome is a manifestation of glomerular inflammation (glomerulonephritis) that occurs at any age. Causes depend on age, and mechanisms depend on the cause. Nephritic

syndrome is primary and secondary glomerulonephritis.

Chronic glomerulonephritis can be both the outcome of acute nephritis and primary chronic. More often, the etiology of the disease is very difficult to determine or not possible at all. Thus, the role of hereditary predisposition to the occurrence of chronic glomerulonephritis is determined. Chronic glomerulonephritis makes up the bulk of patients with glomerulonephritis, significantly exceeding patients with acute glomerulonephritis.

According to epidemiological data, the prevalence of glomerulonephritis among children is 7–20.5 per 100,000 children. In the structure of kidney diseases in adults, chronic glomerulonephritis is a large percentage, caused already in childhood. Nephritic syndrome is one of the severe syndromes of kidney disease in children, characterized by the development of complications and disability, which subsequently leads to high financial costs in hemodialysis and kidney transplantation. In this regard, an important role is played by nephrotic syndrome, which refers to severe variants of glomerulopathies in children.

Our study was conducted on the basis of the Samarkand Regional Children's Multidisciplinary Medical Center (SODMMC, head physician Professor M.K. Azizov).

At the beginning of the study, we developed a map of individual observation of the patient, including data on the anamnesis of the patient's life and illness, data on the genealogical and biomedical anamnesis, and the results of a clinical and paraclinical examination of the child.

The study involved 102 patients with CNS and 27 practically healthy children from 5–15 years of age. We found that the etiological factor in 41.1% (42) of children, provoking the development of CNS, was inflammatory diseases, and in 15.7% (16) of cases, the development of CNS was associated with previous allergic diseases. Hereditary predisposition was detected in 35.4% (36) of patients and in 7.8% of cases (8) other causes occurred 2–3 weeks before the clinical manifestation of the disease.

At the first stage of our work, children in the studied groups underwent a clinical and laboratory examination on the basis of the Samarkand ODMPMC and the children's advisory polyclinic of the city of Samarkand No. 3.

Data analysis was carried out on the basis of the collection of anamnesis of the disease, perinatal and genealogical anamnesis, assessment of the functional state of the kidneys, a special biochemical study and ultrasound examination of the kidneys. To assess the structural state of the kidneys, ultrasound diagnostics of OMS was performed in B-mode (gray-scale image) using a Siemens Acuson Antares version 4.0 device (ultrasound scanner). During the initial ultrasound examination, the size of the kidneys, the thickness of the parenchyma, the echogenicity and uniformity of the parenchymal layer were evaluated.

The general clinical study included the identification of complaints, examination of the objective status, visual and palpation examination of edema.

Using the biochemical method of blood analysis, protein metabolism was assessed with the determination of albumin, urea, creatinine and uric acid in the blood serum.

When making a diagnosis of "Chronic nephritic syndrome", the recommendations given in the order of the Ministry of Health of the Republic of Uzbekistan "On measures to improve the provision of nephrological and hemodialysis care to the population" dated December 29, 2018 and the international WHO classification were used.

Patients with CNS were conditionally divided into 3 groups depending on the form of the disease. ania.

An analysis of the clinical manifestations of CNS showed that in 47 patients (46.1%) an exacerbation of the disease was detected upon admission due to the onset of symptoms of the disease - edema, decreased diuresis, headache, dark urine that appeared after acute pharyngitis or acute respiratory viral infection. In the remaining 43 patients (42.2%), an exacerbation of CNS was detected when the patient applied to a medical institution not due to the GN clinic, but

due to some other disease, in 12 children (11.7%) - during a preventive examination.

All patients with CNS were admitted in the acute stage. Complaints and clinical manifestations were mostly typical and corresponded to those repeatedly described in the literature.

Patients with nephrotic and mixed forms of CNS were characterized by complaints of widespread edema (75%; 84%, respectively), decreased diuresis (80.6% and 77.4%), and changes in urine transparency.

Patients with hematuric form of CNS more often indicated pain in the abdomen and lumbar region (54.3%), gross hematuria and weight loss.

Upon admission of patients to the hospital, the condition of 17 (16.7%) patients was defined as severe, in 29 (28.4%) patients - moderate severity. The severity of the disease was assessed by a combination of extrarenal and renal symptoms.

In an objective study, the syndrome of general intoxication was diagnosed in the majority of patients - 33 (32.6%), manifested by lethargy, decreased emotional tone and appetite, pallor of the skin, passing changes in the function of the central nervous system.

As shown by our results, an increase in blood pressure occurred in 56.1% of patients. In patients with nephrotic form of CNS and in all children with a mixed form, there was an increase in the abdomen due to free ascitic fluid in the abdominal cavity, in 2 ascites was combined with effusion pericarditis, in 1 - exudative pleurisy.

It was established that during the active period of CNS exacerbation, urinary syndrome was the leading among other clinical manifestations of diseases; ,9%), significant changes in urinary sediment. At the same time, the duration of proteinuria was different in different age groups.

In the hematuric form of CNS, the main manifestations were hematuria and cylindruria, with erythrocyte and epithelial casts predominating in the urinary sediment.

Thus, the clinical and laboratory characteristics of the observed patients confirms the heterogeneity of the severity and dynamics of these indicators in children suffering from individual forms of CNS, mixed and nephrotic forms.

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