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COMPREHENSIVE ASSESSMENT OF VARIOUS FORMS OF CHRONIC CHRONIC NEPHRITIC SYNDROME IN CHILDREN

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Abstract:

Diseases of the urinary system, according to WHO, currently occupy the 2nd place among the main forms of pathology characteristic of childhood. In the structure of kidney diseases in children hospitalized in the nephrology department, nephritic syndrome ranks second. The disease, which began in children, often continues into adulthood, which leads to a decrease in the quality of life, can cause disability, and sometimes dramatic outcomes. The urgency of the problem of chronic glomerulonephritis is explained not by the prevalence of the disease, but by the course of the disease and the development of renal failure. Chronic nephritic syndrome is one of the severe kidney diseases in children, which is characterized by the frequent development of complications and the progression of the course of the disease. The course of chronic nephritic syndrome depends on various forms of the disease and the clinical characteristics determine the prognosis of the disease

Keywords: chronic nephritic syndrome, nephrotic, hematuric, urinary syndrome

INTRODUCTION. Chronic nephritic syndrome (XHC) is a bilateral immuno-inflammatory disease, mainly of the glomerular apparatus, clinically manifested by nephritis, hematural, nephrotic or mixed (nephrotic syndrome in combination with hematuria and arterial hypertension) variants, leading to progressive death of functional elements of the nephron and interstitial kidney tissue with an outcome in chronic renal insufficiency. CGN may be a consequence of untreated acute glomerulonephritis, but may primarily be a chronic course of the disease. The course of XHC can be recurrent, persistent and progressive.

The prognosis of XNS depends on the clinical and morphological variant and timely adequate therapy.

OBJECTIVE: Comparative evaluation of various clinical forms of chronic nephritis syndrome in children

MATERIALS AND DESIGN OF THE STUDY. Our study was conducted on the basis of the Samarkand Regional Children's MultidisciplinaryMedical Center (SODMMC, Chief Physician Professor Azizov M.K.), 3-family polyclinic (chief physician Khusenov I.A.).

At the beginning of the study, the Department of Pediatrics of SamGMI (Head of the Faculty - Doctor of Medical Sciences, Associate Professor N.I. Akhmedzhanova) developed a map of individual observation of the patient, including data on the anamnesis of the patient's life and disease, data on the genealogical and medical-biological history, the results of the clinical and paraclinical examination of the child.

Patients were selected for the study according to the inclusion/exclusion criteria.

Criteria for inclusion in the study:

Signed informed consent of the patient.

Age <18 years.

Confirmed XNS by clinical-laboratory and functional methods.

Exclusion criteria:

Refusal of the patient to sign an informed consent to conduct the study.

Secondary XHC in systemic and metabolic diseases.

Recurrent and complicated urinary tract infections.

Patients with decompensated diseases of vital organs.

At the second stage, a nephrological examination of 102 children of patients with chronic nephritis syndrome who are on staionary treatment was carried out in the nephrology department of the Samarkand ODMPMC from 2018 to 2021. The control group consisted of 27 practically healthy children of similar age with a favorable family history (Table 1).

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Table 1.
Composition of the examined children, depending on age and sex

Children examined	Floor	Age			Altogether
		5-7 years	8-11 years	12-15 years	
Children with CGN	Boys	24(36,9%)	18(27,7%)	23(35,4%)	65(100%)
	Girls	13(35,1%)	13(35,1%)	11(29,8%)	37(100%)
Control group	Boys	8(61,5%)	4(30,8%)	1(7,7%)	13(100%)
	Girls	6(42,8%)	6(42,8%)	2(14,4%)	14(100%)
Altogether		51(39,5%)	41(31,8%)	37(28,7%)	129(100%)

All patients with CGN were admitted in the acute stage. Complaints and clinical manifestations were mostly typical and corresponded to those repeatedly described in the literature [1,2,3] (Table 2).

Table 2 Resource requirements by component
Characteristics of complaints in patients with chronic nephritis syndrome in the period of activity of the process

Nature of complaints	Chronic nephritic syndrome		
	Nephrotic форма (n=36)	Гематурическая форма (n=35)	Mixed form (n=31)
Decreased appetite	20(55,6%)	14(40%)	19(62,3%)
Headache	10(27. 8%)	13(37,1%)	19(61,3%)
Nausea, vomiting	8 (22,2%)	13(37,1%)	15(48,4%)
Pain in the abdomen and lumbar region	11 (30. 6%)	19(54,3%)	16(51,6%)
Edema: Common	27(75%)	1(2.9%)	17(54,8%)
Limited	6(16,7%)	12(34,3%)	10(32,3%)
Reduction of a single amount of urine	29(80,6%)	2(5,7%)	24(77,4%)
Reduction of urination	17(47. 2%)	2(5,7%)	12(37,7%)
Change in urine color:	13(36. 1%)	18(51,4%)	18(58,1%)

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As can be seen from Table 2, patients with nephrotic and mixed form of XHC were characterized by complaints of widespread edema (75%; 5.84%,respectively), a decrease in diuresis (80.6% and 77.4%), a change in urine transparency.

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

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

In an objective study, the syndrome of general intoxication isdiagnosed in most patients 33 (32.6%), it was manifested by lethargy, a decrease in emotional tone and appetite, pallor of the skin by passing changes in the function of the central nervous system.

Lethargy and fatigue were noted by 66.7% of patients. Some patientscomplained of headaches 57.4%, periodic abdominal pain 31.3% nausea and vomiting, oliguria, change in the color of urine, thirst.

An increase in arterialpressure occurred in 56.1% of patients. In patients with XNS with a nephrotic form and in all children with a mixed form, an increase in the abdomen was noted due to free ascitic fluid in the abdominal cavity, in 2 ascites was combined with effusive pericarditis, in 1 - exudative pleurisy.

As shownby the results of those irradiated by us in 85.7% of patients with CGN with a nephrotic form and in 58.4% of a mixed form, ghypoproteinemia (42-55 g / l) was noted, in 76.7% hypercholesterolemia (8.7-9.8 mmol / l).

In contrast, in patients with XHC with a hematuric form, a significant decrease in the total protein content in the blood serum and hypercholesterolemia was not detected.

Changes in the blood coagulation system by the type of hypercoagulocation syndrome were detected in 74.4% of sick children with nephrotic form XNS, in 62.6% in hematural and in 77.5% of patients with mixed form XHC.

Table 3 Resource requirements by component
Characteristics of urinary syndrome in children with chronic glomerulonephritis.

Group of patients / Indicators		нефротическая форма(n=36)	гематурическая форма(n=35)	mixed form(n=31)
Proteinuria	Up to 3 g/day	-	22 (62,9%)	12 (38,7%)
	From 3 to 5 g/day	22 (61,1%)	-	9 (29%)
	Over 5 g/day	14 (38,9%)	-	10 (32,3%)
Hematuria	Macrohematuria	-	2 (5,7%)	-
	Sediment microscopy: erythrocytes cover the entire field of view	-	10 (28,6%)	1 (3,2%)
	Clinical analysis of urine from 10 to 40 er.vp/zr	-	23 (65,7%)	8 (25,8%)
Cylindruria	Hyaline	13 (36,1%)	3 (8,6%)	9(29%)
	Granular	11 (30,6%)	4 (11,4%)	13(41,9%)
	Epithelial	8 (22,2%)	16 (45,7%)	3(9,7%)
	Erythrocyte	4 (11,1%)	12 (34,3%)	6(19,4%)

During the period of the greatest activity of exacerbation of XNS, among other clinical manifestations of diseases was urinary syndrome. From Table 3 it follows that with XNS nephrotic form, it is manifested by the presence of proteinuria (from 3 to 5 g / day - in 61.1%; over 5 g / day - in 38.9% z significant changes in urinary sediment. At the same time, the duration of proteinuria was different in different age groups.

In the hematuric form of XHC, the main manifestations were hematuria and cylindruria, and erythrocyte and epithelial cylinders prevailed in the urinary sediment.

When analyzing anamnesticdata, it was found that in 33.3% (34) of children, the resolving or provoking factors in the development of XNS were more ofteninflammatory diseases, in 24.5% (25) sore throats

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or exacerbationsof chronic tonsillitis that occurred 2-3 weeks before the clinical manifestation of the disease.

Table 4 Resource requirements by component
Distribution of patients with CGN by the duration of the disease, the number of previous exacerbations and the duration of previous remission

Analyzed indicators	Quantitative characteristics of the analyzed indicators in patients		
	нефротическая форма (n =36)	гематурическая форма (n =35)	mixed form(n = 31)
Duration of the disease			
2-3 years	12 (33,3%)	14 (40%)	10 (30,6%) (32,3%)
4-5 years	13 (36,1%)	12(34,3%)	12(38,7%)
Over 5 years	11(30,6%)	9(25,7%)	9(29%)
Duration of previous remission			
Less than 1 year	15 (41,7%)	17(48,6%)	18(58%)
1-2 years	13(36,1%)	12(34,3%)	10(32,3%)
More than 2 years	8 (22,2%)	6(17,1%)	3(9,7%)
Number of previous exacerbations			
Up to 3 times a year	21(58,3%)	23(65,7%)	17(54,8%)
4-5 times a year	13(36,1%)	11(31,4%)	10(32,3%)
More than 5 times a year	2(5,6%)	1(2,9%)	4(12,9%)

From Table 4 it can be seen that according to the duration of the disease and previous remission, as well as the number of previous exacerbations between the compared forms of XNS, these indicators are practically indistinguishable.

FINDINGS.

Thus, the clinical and laboratory characteristics of the observed patients confirm the non-uniformity of the severity and dynamics of these indicators in children suffering from certain forms of XNS.

Analysis of the clinical manifestations of XNS showed that in 47 patients (46.1%) exacerbation of the disease was detected by treatment in connection with the appearance of symptoms of the disease - edema, decreased diuresis, headache, darkening of urine that appeared after suffering acute pharyngitis or acute respiratory viral infection. The remaining 4-3 patients (42.2%) exacerbation of XNS was detected when a patient went to a medical institution not in connection with the clinic of nephroidsyndrome, but aboutsome other disease, in 12 children (11.7%) during preventive examinations.

We assessed the physical development and its harmony in the examined children. The physical development of children was assessed by the Standard Deviation Score (SDS) of the body mass index. Currently, it has been established that mass-growth indices are more informative than individual anthropometric indicators, and their parameters are not due to the influence of ethnic-territorial factors [5,6,7].

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