

## IMPROVING THE QUALITY OF LIFE OF PATIENTS WITH CHRONIC GLOMERULONEPHRITIS USING STATINS AS AN EXAMPLE

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### ✓ Resume,

*The article studies the comparative characteristics of the effectiveness of lovastatin and rosuvastatin preparations in patients with the nephrotic form of chronic glomerulonephritis (CGN), determining its lipid-suppressive and nephroprotective actions, thereby improving the quality of life of patients. The study involved 60 patients with a nephrotic form of chronic glomerulonephritis. In patients, the average age was formed 28-46 years. The duration of the study was 30 days, patients were selected during the year. All patients underwent basic treatment of glomerulonephritis in accordance with the approved standards. Detailed information on examination methods and treatment results is described below.*

**Keywords:** Lovastatin, rosuvastatin, nephrotic form of chronic glomerulonephritis, arterial hypertension, lipid-suppressive effect, nephroprotective effects.

## ПОВЫШЕНИЕ КАЧЕСТВА ЖИЗНИ БОЛЬНЫХ С ХРОНИЧЕСКИМ ГЛОМЕРУЛОНЕФРИТОМ НА ПРИМЕРЕ СТАТИНОВ

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### ✓ Резюме,

*В статье изучено сравнительная характеристика эффективности препаратов ловастатина и розувастатина у больных с нефротической формой хронического гломерулонефрита (ХГН), определяя его липидосупрессивные и нефропротективные действия, тем самым повышая качества жизни больных. В ходе исследования приняли участие 60 больных с нефротической формой хронического гломерулонефрита. У больных средний возраст был сформирован 28-46 годами. Длительность исследования составило 30 дней, больных подбирали в течение года. Всем больным проводилась базисное лечение гломерулонефрита согласно утверждённым стандартам. Развернутая информация о методах обследования и результатах лечения излагается ниже.*

**Ключевые слова:** Ловастатин, розувастатин, нефротическая форма хронического гломерулонефрита, артериальная гипертензия, липидосупрессив эффект, нефропротективные действия.

## СУРУНКАЛИ ГЛОМЕРУЛОНЕФРИТ БИЛАН ОФРИГАН БЕМОЛЛАРИНИНГ ҲАЁТ СИФАТИНИ ЯХШИЛАШ СТАТИНЛАР МИСОЛИДА

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### ✓ Резюме,

*Мақола шундай қилиб беморларнинг ҳаёт сифатини яхшилаш, унинг липидосупрессив ва нефропротектив таъсир аниқлаш, сурункали гломерулонефрит (СГН) нефротик шакли билан беморларда lovastatin ва rosuvastatin самарадорлигини қиёсий хусусиятларини текширади. Тадқиқотда сурункали гломерулонефритнинг нефротик шакли билан оғриган 60 бемор иштирок этди. Беморларда ўртача ёш 28-46 йилга келиб шаклланган. Тадқиқот муддати 30 кун бўлиб, беморлар бир йил ичида танланган.*

*Барча беморлар тасдиқланган стандартларга мувофиқ асосий гломерулонефрит даволаш олди. Текшириш усуллари ва даволаш натижалари ҳақида батафсил маълумот қуйида келтирилган.*

**Калит сўзлар:** Ловастатин, розувастатин, сурункали гломерулонефрит, нефротик синдром, липидосупрессив, нефропротектив

### Relevance

**T**oday, glomerulonephritis affects 10 to 15 adult patients per 10,000 people [4]. According to the

frequency of detection among all pathologies of the kidneys, this disease takes 3rd place, second only to pyelonephritis and urolithiasis in prevalence [3]. According to statistics, this pathology acts as the most

common cause of disability, which develops due to chronic renal failure [4].

Purpose of the study: study of tolerability and hypolipidemic efficacy of the drug "lovastatin" and "rosuvastatin" in patients with nephrotic form of CGN.

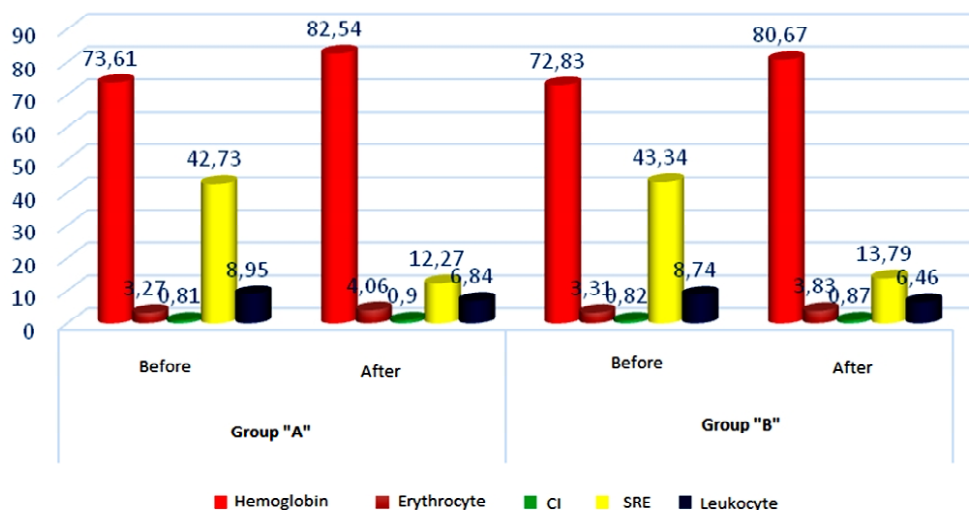
### Materials and methods

The study involved 60 patients with a nephrotic form of CGN. Among the selected patients, the male sex was 33 cases, and the female sex was 27 cases. In patients, the average age was 28-46 years. Of the selected respondents, 49, in addition to CGN, revealed concomitant diseases and syndromes. From here 8 cases of anemia and CGN were revealed; Anemia, AH and CGN amounted to 12 cases; AH and CGN; 26 cases were studied; COPD and CGN in the aggregate were 3 cases. Among patients, a damaged kidney was identified by localization, unilateral (right kidney or left kidney) and bilateral. Among the identified respondents with complications there were 18: complicated cases of chronic renal failure (I, II, III stages) - 13 cases, and complicated by nephrotic crises - 5 cases. The duration of the study was 30 days, patients were selected during the year. All patients underwent basic treatment of glomerulonephritis in accordance with approved standards. In this case, patients are randomly divided into 2 groups (A and B), comparable by sex, age, weight and height. Patients of group A as part of the complex

therapy of glomerulonephritis were prescribed Lovastatin at a dose of 20 mg (1 tablet) 1 time per day for 30 days, patients of group B were prescribed Rosuvastatin at a dose of 10 mg (1 tablet) per day for 30 days. Examination data were recorded on the first, tenth and thirtieth day of treatment. A general clinical study was conducted below: weight and height of patients, to identify hidden edema in the whole body; BMI ( $\text{kg} \setminus \text{m}^2$ ) was calculated, AH was measured, as well as examination of the patient, laboratory and biochemical examinations: general blood analysis, biochemical analyzes (creatinine, urea, total protein, ALT, AST), blood lipid spectrum analysis (cholesterol, HDL, LDL, triglycerides); general analysis of urine and ultrasound of the kidneys.

### Results and discussion

We examined more than 60 patients, upon admission to the hospital routine body mass index (BMI) was determined, a general blood test (GBT), a general urinalysis (GU), ultrasound of the kidneys, biochemical blood counts were determined, and subsequently the average glomerular filtration rate was calculated. The indicators were recorded on the first day of admission to the hospital and on the 30th day of treatment with the drugs "lovastatin" and "rosuvastatin". Group A took the drug "lovastatin", group B - "rosuvastatin".



Pic 1. The average indicators of total blood test in patients.

According to the study (Pic. 1), it is seen that the indicators in group "A" hemoglobin, erythrocytes and CL are higher than in group "B". At the same time, we see

the erythrocyte sedimentation rate (SRE) and leukocytes are reduced in group "A" and in group "B" are almost identical.

Table 1

The average indicators of urinalysis in patients

Indicators	"A" group		"B" group	
	Before	After	Before	After
Density	1007,2±1,74	1008,7±1,68	1006,7±1,59	1008,2±1,63
Erythrocyte	9,84±2,36	<b>1,04±2,41</b>	9,23±2,52	<b>1,22±2,28</b>
Leukocyte	6,13±1,89	<b>2,27±1,63</b>	7,05±1,72	<b>2,35±1,56</b>
Cylinders	1,79±1,26	1,0±1,12	1,81±1,17	1,10±1,24
Protein (g/l)	<b>5,45±2,73</b>	<b>0,83±1,14</b>	5,28±2,84	<b>1,03±1,32</b>

An important indicator in the general analysis of urine is protein in the urine, so in group "A" it is more reduced than in group "B". The presence of red blood cells and

white blood cells in GU group "A" is more reduced than in group "B". And indicators of cylinders and urine density are almost unchanged.

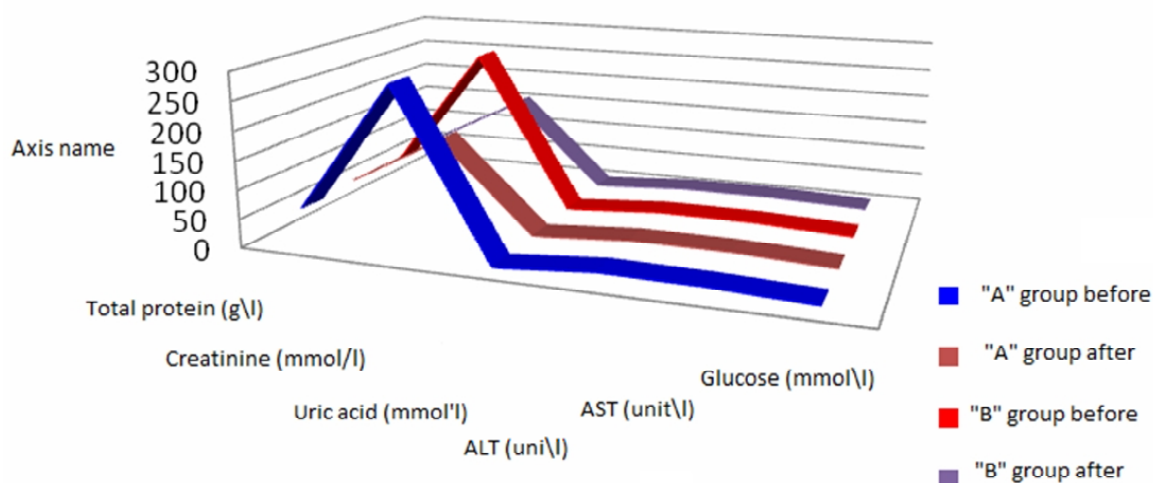
Table 2

The average indicators of ultrasound of the kidneys in patients (all indicators in mm)

Indicators	"A" group		"B" group	
	Before	After	Before	After
Right kidney				
Length	117,76±5,87	<b>113,84±5,27</b>	119,34±5,64	<b>115,95±5,73</b>
Width	50,53±4,56	<b>48,84±4,38</b>	50,07±4,82	<b>48,0±4,18</b>
Pelvis	42,34±3,75	<b>38,59±3,63</b>	39,76±3,27	<b>37,84±3,59</b>
Thickness	19,05±2,69	<b>14,48±2,76</b>	18,32±2,48	<b>13,85±2,63</b>
Left kidney				
Length	120,59±3,85	<b>116,84±3,49</b>	118,83±3,36	<b>115,75±3,71</b>
Width	47,50±2,86	<b>45,28±2,58</b>	48,29±2,63	<b>47,26±2,57</b>
Pelvis	30,63±2,39	<b>28,59±2,74</b>	31,68±2,87	<b>30,07±2,84</b>
Thickness	17,42±1,96	<b>16,42±1,87</b>	18,22±1,48	<b>17,75±1,69</b>

Renal size indices on ultrasound proves an increase in size before treatment, but after treatment, kidney size

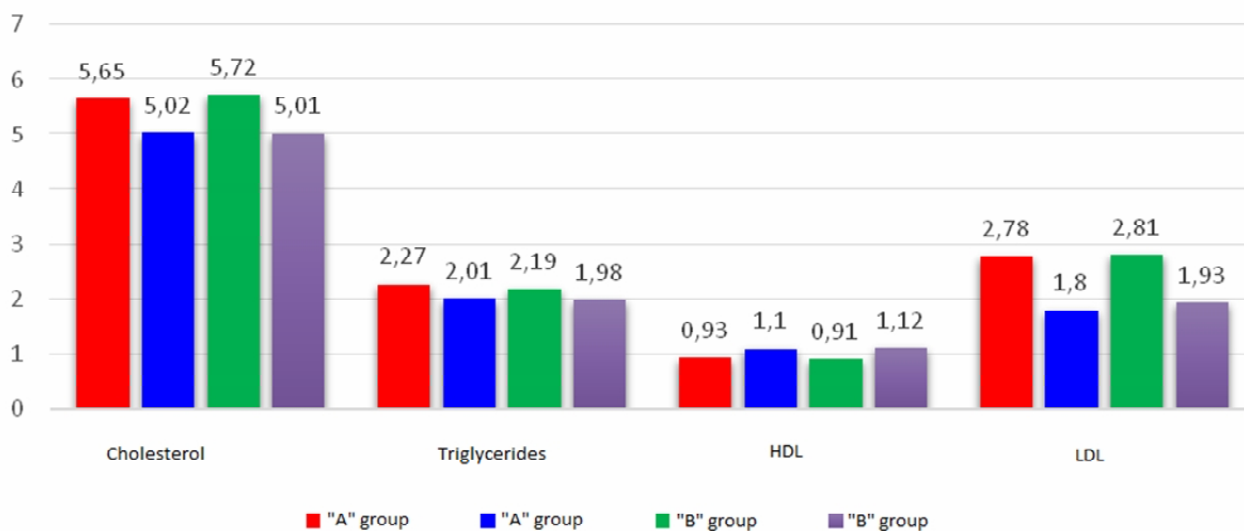
recovery was detected. This indicator is higher in group "A" than in group "B".



Pic 2. Average biochemical analysis of blood in patients

In terms of the biochemical analysis of blood, the total protein was reduced before treatment, but after treatment this indicator was more increased in group "A" than in

group "B". And indicators of creatinine, uric acid and ALT are more reduced in group "A" than in group "B".



Pic 3. Average lipid profile in patients.

The indicators of the blood lipid spectrum of cholesterol, triglycerides and LDL after treatment are more

reduced in group "B" than in group "A". And HDL indicators are more increased in group "B" than in group "A".

Table 3

**Average BMI in patients (kg/m<sup>2</sup>)**

Indicators	"A" group		"B" group	
	Before	After	До	Before
BMI	31,2±2,17	28,71±1,45	33,56±2,87	29,71±3,45

BMI in patients after treatment is more reduced in group "B" than in patients in group "A".

Table 4

**The average glomerular filtration rate in patients (ml/min/1.73 m<sup>2</sup>)**

Indicators	"A" group		"B" group	
	Before	After	До	Before
Glomerular filtration rate (GFR)	62,34±1,67	78,37±1,29	61,83±1,05	75,03±1,47

The glomerular filtration rate after treatment is increased in group "A" than in group "B".

**Conclusions:**

1. According to the results of biochemical analysis of blood - indicators of creatinine and urea, general analysis of urine - indicators of red blood cells, white blood cells and protein; glomerular filtration rates and renal ultrasound of its nephroprotective effect are higher in lovastatin than in rosuvastatin;

2. According to the results of the blood lipid spectrum, cholesterol, triglycerides and LDL; BMI of lipid-suppressant action; better indicators of rosuvastatin than lovastatin;

3. In patients with CGN with a nephrotic form, the tolerance drug and the absence of side effects are higher in "lovastatin" than in "rosuvastatin". This indicator was identified by the results of the clinical conditions of patients after treatment; and a general blood test - indicators of hemoglobin, red blood cells, white blood cells and SRE; and biochemical analysis of blood - indicators of ALT, AST and total protein.

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