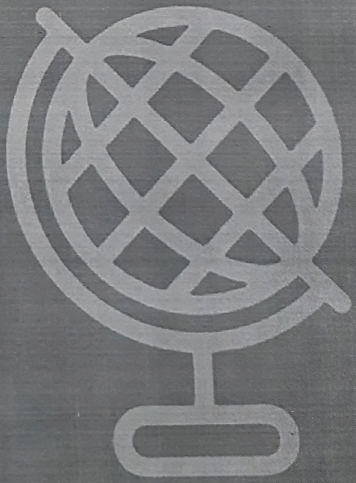
ISSN 2310-5577

# European Science Review

2018
5-6



# European science review

№ 5–6 2018
May–June

PREMIER
Publishing

Vienna
2018

# European Sciences review

Scientific journal

№ 5–6 2018 (May–June)

ISSN 2310-5577





**Proofreading**

Kristin Theissen

**Cover design**

Andreas Vogel

**Additional design**

Stephan Friedman

**Editorial office**

Premier Publishing s.r.o. Praha 8 – Karlín, Lyčkovo nám. 508/7, PSČ 18600

**E-mail:**

pub@ppublishing.org

**Homepage**

ppublishing.org

**European Journal of Arts** is an international, German/English/Russian language, peer-reviewed journal. It is published bimonthly with circulation of 1000 copies.

The decisive criterion for accepting a manuscript for publication is scientific quality. All research articles published in this journal have undergone a rigorous peer review. Based on initial screening by the editors, each paper is anonymized and reviewed by at least two anonymous referees. Recommending the articles for publishing, the reviewers confirm that in their opinion the submitted article contains important or new scientific results.

Premier Publishing s.r.o. is not responsible for the stylistic content of the article. The responsibility for the stylistic content lies on an author of an article.

**Instructions for authors**

Full instructions for manuscript preparation and submission can be found through the Premier Publishing s.r.o. home page at: http://www. ppublishing.org.

**Material disclaimer**

The opinions expressed in the conference proceedings do not necessarily reflect those of the Premier Publishing s.r.o., the editor, the editorial board, or the organization to which the authors are affiliated.

Premier Publishing s.r.o. is not responsible for the stylistic content of the article. The responsibility for the stylistic content lies on an author of an article.

**Included to the open access repositories:**

The journal has the GIF impact factor 1.26 for 2017.





Typeset in Berling by Ziegler Buchdruckerei, Linz, Austria.

Printed by Premier Publishing s.r.o., Vienna, Austria on acid-free paper.

*Rakhmanova Lola Karimovna,*
*associate professor, of the Department*
*of Childhood Illness No. 2*
*of the Tashkent Medical Academy*
*Iskandarova Iroda Rustamovna,*
*Ass Department of Propedeutics of Children's Diseases,*
*Pediatrics and Higher Nursing Urgench Branch Tashkent*
*Medical AcademyTMA,*
*E-mail: evovision@bk.ru*

# EFFICIENCY OF SYSTEMIC ENZYMOTHERAPY IN NEPHROTIC SYNDROME IN CHILDREN WITH LYMPHATIC DIETHESIS

**Abstract:** Immunopathological changes in the body in children with nephrotic syndrome in chronic glomerulonephritis with lymphatic diathesis are characterized by suppression of cellular immunity and an increase in the content of ASL of the kidneys, the CEC and hyperproduction of IL-2, which persist even during remission.

**Keywords**: Nephrotic syndrome, lymphatic diathesis, children.

Currently, the prevention of progression of chronic kidney diseases and the search for effective therapeutic approaches are the most acute medical and social problem related to the priorities of the national health systems of most countries of the world [6, 10]. At the same time, the problems of progressing the steroid-resistant form of chronic glomerulonephritis (CGN) in children remain one of the topical issues in the world pediatric nephrology, which is determined by the high incidence of chronic renal failure (CRF), which is noted by more than about 50% of patients during the 5–10 years [10]. Therefore, from the clinical point of view, it is extremely important to search for clinical and immunological predictors of unfavorable renal outcome, which allow predicting the course of the disease with an individual assessment of the risk of developing CRF. In this regard, serious attention is paid to the nephrotic syndrome (NS) in CGN in children suffering from lymphatic diathesis (LD).

LD is characterized by a lack of local immunity of the respiratory and gastrointestinal tract, thymomegaly, hyperplasia of the lymphadenoid system, morphofunctional immaturity of the heart, kidney, adrenal gland leading to status lymphaticus, anemia, lymphocytosis, dysproteinemia, hormonal imbalance and the subsequent formation and development of the syndrome of unclassifiable immune deficiency organism [3, 8].

**The aim of the study** was to study the effectiveness of systemic enzyme therapy (SET) in nephrotic syndrome in children with lymphatic diathesis.

**Materials and methods.** We observed 35 children aged 7 to 11 years with a nephrotic form of CGN with LD. The control group consisted of 25 practically healthy children of the same age. Clinical diagnosis was made on the basis of anamnesis, clinical and laboratory and functional research methods, immunological indicators, and LD markers [9]. The state of cellular immunity, antigen-binding lymphocytes (ASL) of the kidneys was studied by the method of Garib F. Yu. and co-authors [4, 5]. Phagocytic activity of neutrophils (FAN) by means of a test with nitrosine tetrazolium using latex particles [2]. Concentrations of circulating immune complexes (CEC) were determined by the precipitation method [1], interleukin-2 (IL-2) by the method of Ortaldo J., et al. [11].

The exacerbation of diseases in combined therapy have included the preparation of ETS Vobenzim (Mukos Pharma, Germany, tablets, state registration number B-250–95 № 1999) per 6 kg body weight, 1 tablet per day for 1 month.

Patients were divided into two groups: 1-group – CGN + LD (20 children) – c conventional therapy, 2-group– CGN + LD (15 infants) – with traditional therapy SET +.

The material used for the study was venous blood taken in the morning on an empty stomach. The digital data was processed by the method of variational statistics with the calculation of the reliability of the numerical differences in the Student.

**Results and its discussion.** According to the results of the conducted studies, it was revealed that of the observed patients on the sex of HC with CGN, boys were 60.0%, girls-40%, and by age 7–8 years, 72.0%. When CGN + LD78.0% were male, 22.0% – girls, confirming the literature data that the NA-th in CGN and LD th 1.5–2 times more common in males. In the analysis of clinical markers in LD patients were identified: the pathology of pregnancy and childbirth the mother (86.0%), Thymomegalia (48.0%), a large birth weight (55.0%), pasty face (67.0%) disproportion body (short torso, long limbs (43.0%), adenoids (49.0%), a steady increase in pe-

ripheral lymph nodes (73.0%), high infection index (72.0%). The frequency of child morbidity with intercurrent pathologies was 4–6 times during the year.

Clinical manifestations of HC with CGN + LD were characterized: the onset of the disease was gradual (78.0%), "chalky" pallor (65.8%), lethargy (85.0%), edema (74.7%), tachycardia (68, 3%), hepatomegaly (26.9%), oliguria (100.0%), headache (56.2%), proteinuria (100.0%), hypoproteinemia (86.0%), hypercoagulability (65.0%%), and hypercholesterolemia (45.0%). The main disease in children with CGN + LD was accompanied by anemia (73.5%), adenoids (42.7%), chronic tonsillitis (83.0%), helminthiosis (35.1%), recurrent bronchitis (45.0%), GTS (36.2%), gastroduodenitis (15.2%).

Clinical observations showed that patients who received wobenzyme showed a decrease in clinical manifestations of NS and LD after the end of the course of treatment (shortening the periods of intoxication, normalization of peripheral blood and urine parameters (hemoglobin, leukocytes, ESR, proteinuria, erythrocyturia, leukocyturia, diuresis daily), prolongation of the period of clinical remission, as well as a decrease in the incidence of morbidity with intercurrent pathologies in comparison with children of group 1. At the same time, 85.0% of patients had reliable rates tion of coagulation, reduced the level of gamma-globulin ($p < 0.001$), decreased somewhat Dysproteinemia and increased serum albumin, which indicates an improvement of redox processes in the body.

When studying the status of the immune status (Table), it was found that the patients had a significant decrease in comparison with a healthy group of T-lymphocyte (CD3), T-helper (SD4), ($p < 0.001$), T-suppressor (SD8) < 0.01), FAN ($p < 0.001$),; increased kidney ALS, CEC ($p < 0.001$), hyperproduction of IL-2. The content of B-lymphocytes (CD19) was not significantly different from that of healthy children.

The results of the study showed that in children with HC at CGN + LD vobenzim positively affects the normalization of clinical and immunological changes in the body. Since 82.0% of patients observed receiving complex therapy with vobenzyme showed a significant increase in the content of CD3, CD4, normalization of IL-2 production ($p < 0.001$), SD8 ($p < 0.01$); decrease in the index of ASL of the kidneys, CEC ($p < 0.001$), with a more frequent and significant improvement observed after 1 month, unlike traditional basic therapy. The high therapeutic efficacy of vobenzima is explained by the fact that the drug pathogenetically plays a role in the normalization of immunemeostasis, optimization of inflammation, pronounced anti-edematous action, increased cytotoxic activity of macrophages, inducing or inhibiting cytokines, including IL-2, removing circulating in the blood and fixed in tissues immune complexes, as well as inhibition of their formation [7].

In the 1-group of children receiving traditional treatment, despite the improvement in health, biochemical, functional parameters and renal inflammation, decreasing slightly towards the end of treatment, the dynamics of observation again increased, and in 5 patients moderate proteinuria, erythrocyturia and leucocyturia persisted, which was due to recurrence of the process to the kidneys. Normalization of clinical manifestations of HC in CGN, such as "chalk" pallor, lethargy, edema, tachycardia, hepatomegaly and headache was detected only in 64.0% of patients.

**Conclusions**

1. Immunopathological changes in the body in children with nephrotic syndrome in chronic glomerulonephritis with lymphatic diathesis are characterized by a decrease in CD3, CD4, CD8, an increase in the content of ASL of the kidneys, CEC and hyperproduction of IL-2, which persist even during remission.

Table 1. – Dynamics of immune status in children with HC at CGN with LD (M ± m)

| Indicators | Control group, $n = 25$ | Traditional therapy, (1-group) ($n$=20), $P^1$ | Traditional therapy + wobenzyme, ($n = 15$), 2-group, $P$ | $P^1$ | $P$ |
|---|---|---|---|---|---|
| СД3,% | 54.67 ± 0.94 | 40.35 ± 1.2 | 49.65 ± 1.2 | p < 0.001 | p < 0.001 |
| СД4% | 33.13 ± 0.83 | 24.32 ± 1.6 | 30.85 ± 1.5 | p < 0.001 | p < 0.001 |
| СД8,% | 19.90 ± 0.72 | 13.54 ± 1.2 | 17.14 ± 1.6 | p < 0.001 | p < 0.01 |
| СД19,% | 11.60 ± 0.89 | 14.26 ± 0.76 | 12.51 ± 0.65 | – | – |
| ASL blood,% | – | 5.0 ± 0.62 | 2.0 ± 0.54 | – | p < 0.001 |
| ASL of the kidneys | 0.002 ± 0.003 | 0.078 ± 0.001 | 0.024 ± 0.006 | p < 0.001 | p < 0.001 |
| ФАН,% | 50.50 ± 1.11 | 36.09 ± 0.37 | 45.56 ± 0.43 | p < 0.001 | p < 0.001 |
| IL-2 | 2.8 ± 0.09 | 3.1 ± 0.06 | 2.9 ± 0.07 | p < 0.01 | p < 0.01 |

*Note: the reliability of differences compared with a group of healthy children. ASL are compared between groups 1 and 2*

2. Immunocorrecting and anti-inflammatory actions of vobenzim allow to recommend for wide application in complex therapy of children with nephrotic syndrome in chronic glomerulonephritis with lymphatic diathesis.

**References:**


1. Belokrinitsky D. B. Methods of clinical immunology. In: Laboratory methods of research in the clinic. Ed. Menshikova VV– M: Medicine,– 1987.– P. 277–310.
2. Bumagina T. K. Determination of phagocytic activity of neutrophils by means of latex. Immunology.– 1981.– No. 2.– P. 44–45.
3. Veltischev Yu. E. Formation and development of the immune system in children. Immune failure. Immunodiates.– M.,– 2000.– 78 p.
4. Gharib F. Yu. The method of determining lymphocytes // Rasmi akhborotnoma.– 1995.– No. 1.– 90 p.
5. Garib F. Yu. and others. Clinical value of the determination of ASL in patients with typhoid and other diseases. Method. Rec.– Tashkent.– 1983.– 32 p.
6. Ilek Y. Yu., Rakhmanova L. K., Alimzhanov I. I. Kidney function and immunopathological shifts in rheumatoid arthritis in children // Ter. Herald of Uzbekistan.– 2015.– No. 3.– P. 185–188.
7. Mazurov VI Systemic enzyme therapy. Modern approaches and perspectives.– St. Petersburg.– 1999.– 220 p.
8. Rakhmanova L. K., Kamalov Z. S. Cytokine disorders and the effectiveness of immunolymphocorrection in immunodiadesis in children // Jour. Teoret. and a wedge. medicine.– 2001.– No. 1.– P. 60–63.
9. Rahmanova L. K. Features of the clinical and immunological course, immunotherapy and prevention of diathesis (allergic, lymphatic, neuro-arthritic) in children. Author's abstract. diss ... Dr. med. sciences.– Tashkent,– 2002.– 32 p.
10. Rahmanova L.K., Karimzhanov I. A., Holmatova B. T. Efficiency of immunocorrection in the treatment of chronic glomerulonephritis in children // Uzbekistan Therapy of akhborotnomasi.– 2015.– No. 3.– P. 189–191.
11. Ortaldo J. Effects of natural and recombinand Il-2 on regulation of JEN production and Nk activity // J.immunol.– 1984.– Vol. 133.– No. 2.– P. 779–784.