



SPECIFICS OF THERAPEUTIC NUTRITION IN GLOMERULONEPHRITIS

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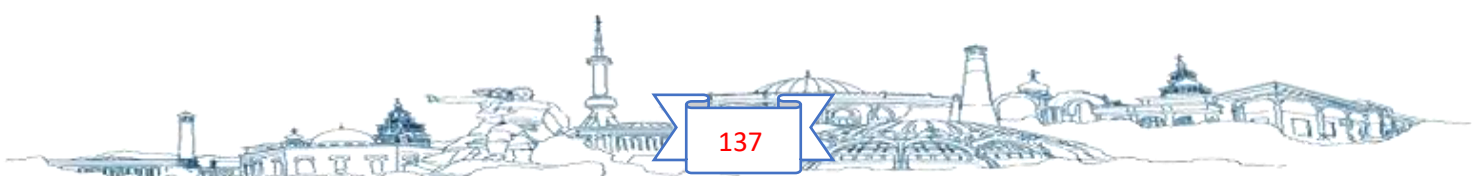
ABSTRACT: Nutrition management for patients with nephrological diseases has always been the main part of the therapeutic approach. Despite a fairly high interest to this problem, there are still many questions about diet recommendations to patients with glomerulonephritis depending on the morphological form, clinical manifestations and activity of the disease. This review examines the current system of standard diets for certain nephrological diseases and conditions and provides a detailed description of high-protein and low-protein diets used for kidney diseases. The article presents the results of a number of clinical studies on the effect of exclusionary diets on the clinical manifestations and course of the disease in patients with nephrotic syndrome and immunoglobulin A (IgA) nephropathy. Some pathogenetic mechanisms of IgA nephropathy are considered with the description of the role of mucosal immunity in the development of renal structures damages.

KEY WORDS: glomerulonephritis, diet, nephrotic syndrome and IgA nephropathy.

Diet therapy or therapeutic nutrition occupies an important place in the structure of nonmedicamental treatment of acute and chronic kidney diseases [1]. The guidelines for chronic kidney disease (CKD) devote a significant section to dietary recommendations at different stages of CKD. However, the causes of CKD can be a fairly wide range of diseases, and an important part of them is glomerulonephritis. By its characteristics, it is a heterogeneous group of diseases with a variety of morphological, clinical manifestations, peculiarities of pathogenetic mechanisms of development and progression. Clinical manifestations are quite variable and can be characterized by an isolated urinary syndrome, with minimal / moderate proteinuria, erythrocyturia, cylinduria, as well as the development of such severe syndromes as nephritic and nephrotic. In this regard, dietary approaches to the therapy of glomerulonephritis may differ slightly from the classical recommendations on the diet of patients with CKD, the basis of which is strict control of protein content in the diet adequately to the degree of renal failure.

The importance of diet therapy in nephrological patients is related to the fact that the kidneys are the main organs of the excretory system, directly involved in the purification of the body, actively removing water and end products of metabolism, and are also responsible for maintaining the constancy of the internal environment [2]. Nephrological diseases and conditions require optimization of patients' diets in terms of the main nutrients, primarily hard-to-digest animal proteins and animal fats, gluten, excess of which in the diet affects not only the main non-immune processes of kidney damage, but also, given a number of studies, probably plays a role in maintaining the immune component of pathogenesis, contributes to the progression of renal disease. Moreover, the formation of a therapeutic diet should take into account the patient's disorders of protein, fat, water-electrolyte and phosphorus-calcium metabolism, which are often observed in the main renal pathology, and can also lead to decompensation of concomitant diseases [1].

Thus, therapeutic diet prescribed in conjunction with other types of treatment is an





essential element of the complex therapy of a nephrological patient. An important aspect is the formulation of a therapeutic diet depending on the nature of the renal lesion, the activity of the disease, the state of renal function, and the methods of drug therapy used [1].

Prior to 2003, M.I. Pevzner's numbered system of diets, which was based on the nosological principle and was divided into 15 regimens or tables of food for people with various diseases, was used in compiling therapeutic diets. Currently, the Pevzner system of diets is considered outdated, as it is designed for a generalized model of a particular disease and does not take into account possible multicomorbidity and individual characteristics of the patient's body [3].

Standard diets differ in the quantitative and qualitative composition of the main nutrients and micronutrients, energy value, technology for preparing dietary meals and the average daily set of products [4, 5].

Currently, six variants of standard diets are used:

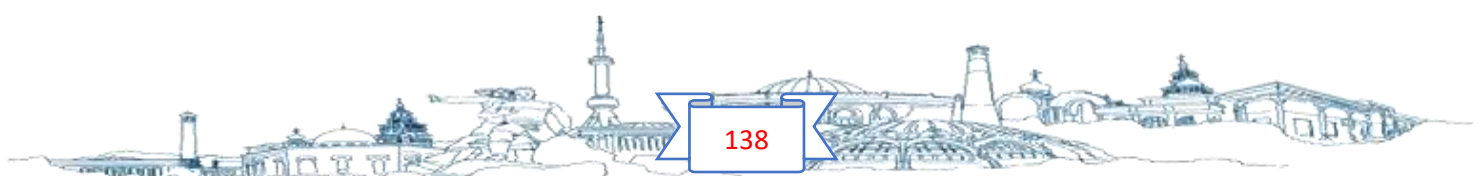
- Basic variant of the standard diet.
- A variant of a mechanically and chemically sparing diet (sparing diet).
- A high-protein diet (high-protein diet).
- A lower-protein diet (low-protein diet).
- A reduced-calorie diet option (low-calorie diet).
- A high-calorie diet (high-calorie diet).

In addition to general recommendations on the composition of basic foods, functional and specialized products can be added to standard diets, such as: dry composites, metabolically targeted and balanced mixtures and various biologically active food supplements in the form of vitamin and mineral complexes, polyunsaturated fatty acids (omega-3, 6, 9), lecithin, dietary fiber, pre- and probiotics, etc. [5, 6]. Nutritional therapy in nephrological patients is not only a part of non-medicinal therapy of the disease, but also provides the body with the necessary nutrients and nutrients to maintain the normal functioning of all organs and systems, as well as improve the quality of life.

Basic principles of diet therapy for glomerular disease

In patients with edematous syndrome, azotemia, or elevated blood pressure, the following strategies are used:

- 4-6 times a fractional meal;
- the first 2-3 days of the disease prescribe a sodium-free diet in the form of contrast days (potato, watermelon, banana, apple, pumpkin, etc.);
- alcohol, strong coffee, tea, cocoa, chocolate, canned foods, smoked foods, pickles are excluded;
- Exclude table salt during the cooking process;
- Extractive substances are excluded;





- liquid is limited to 0.8 l/day. (individual amount of fluid is determined by the value of daily diuresis + 500 ml);

- from the 4th day a diet with moderate protein restriction up to 70 g/day is prescribed. Protein should be predominantly of animal origin. The most valuable protein products that are recommended to include in the diet of a patient with nephrological profile are protein from eggs, milk, fish, it is in these products protein is contained in optimal amounts and easily digestible form. However, a group of patients with nephrotic syndrome requires special recommendations due to the large loss of protein in the urine. These patients are advised to consider diets with normal and elevated protein content or to adjust the diet individually with enteral mixtures;

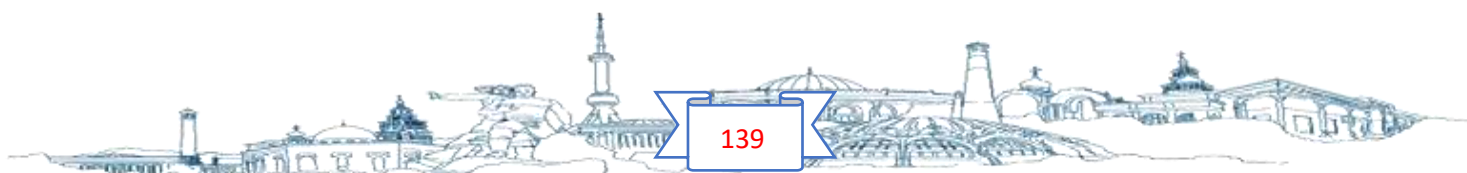
- fats and complex carbohydrates are used according to physiological nutritional norms and do not require specific correction, but it is recommended to limit simple carbohydrates in the diet to 50 g/day. During thermal processing and preparation of therapeutic dishes, attention should be paid to the removal of extractive substances and cooking methods. Dishes should be in the form of boiled, stewed, baked at low temperatures or steamed, possible to consume in the pureed and ungrated form. The food should not be cold, below 15 ° C, but also not above 60-65 ° C [6, 7].

CONCLUSIONS

To date, a close relationship between nutritional style and the course of chronic kidney disease and its complications has been determined; in some cases, these data can be extrapolated to patients with glomerulonephritis, but the specifics of pathogenesis and diversity of clinical manifestations of this disease group require a more individual approach in developing dietary recommendations. In recent years standards of therapeutic nutrition have been revised and improved. The modern concept of diet therapy has undergone significant changes and moved away from classification of diets depending on the nosological forms of the disease in the direction of a more personalized approach. However, many questions remain that require additional research.

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