

Modern approaches to rehabilitation of patients with chronic kidney disease

Enfoques modernos para la rehabilitación de pacientes con enfermedad renal crónica

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Abstract

The article discusses modern approaches to the treatment of patients suffering from chronic kidney disease. Chronic renal pathology is the main disease requiring comprehensive treatment and support. The paper discusses the main methods and measures of prevention, including diet, physical activity, pharmacological therapy and psychological support. Modern technologies and innovations that can help improve the quality of life of patients with chronic kidney disease are also discussed. Rehabilitation plays a crucial role in the management of human conditions, and understanding modern approaches can significantly improve the results of treatment and the lives of patients. Special attention is paid to an individual approach to each patient, starting with the severity of the disease, accompanying his condition and continuing the stage of the disease. An important aspect of the discussion is also the role of medical personnel, including doctors, nurses and psychologists, in the rehabilitation of patients with chronic renal pathology. The healthcare team plays a key role in ensuring proper patient care and support, as well as in teaching self-management skills to combat severe illness. Modern approaches to the treatment of patients with chronic renal pathology not only provide a permanent social condition, but also psychological behavior of patients, which plays a crucial role in ensuring full recovery and improvement of their overall well-being.

Keywords: chronic kidney pathology, rehabilitation of patients, treatment approaches, innovative technologies.

Resumen

El artículo analiza los enfoques modernos para el tratamiento de pacientes que padecen enfermedad renal crónica. La patología renal crónica es la principal enfermedad que requiere tratamiento y apoyo integral. El artículo analiza los principales métodos y medidas de prevención, incluida la dieta, la actividad física, la terapia farmacológica y el apoyo psicológico. También se analizan las tecnologías modernas y las innovaciones que pueden ayudar a mejorar la calidad de vida de los pacientes con enfermedad renal crónica. La rehabilitación desempeña un papel crucial en el manejo de las condiciones humanas y comprender los enfoques modernos puede mejorar significativamente los resultados del tratamiento y la vida de los pacientes. Se presta especial atención al trato individual de cada paciente, comenzando por la gravedad de la enfermedad, acompañando su condición y continuando con la etapa de la enfermedad. Un aspecto importante de la discusión es también el papel del personal médico, incluidos médicos, enfermeras y psicólogos, en la rehabilitación de pacientes con patología renal crónica. El equipo de atención médica desempeña un papel clave para garantizar la atención y el apoyo adecuados al paciente, así como para enseñar habilidades de autocuidado para combatir enfermedades graves. Los enfoques modernos para el tratamiento de pacientes con patología renal crónica no sólo garantizan una condición social permanente, sino también un comportamiento psicológico de los pacientes, que desempeña un papel crucial para

garantizar la recuperación completa y la mejora de su bienestar general.

Palabras clave: patología renal crónica, rehabilitación de pacientes, enfoques de tratamiento, tecnologías innovadoras.

Efforts aimed at developing and implementing modern methods of treating patients with chronic kidney disease can bring significant benefits to both patients and healthcare systems. All this gives hope for improving the quality of life and prognosis for millions of people facing this serious medical problem.

Introduction

Chronic kidney disease is a serious problem that affects the health and quality of life of millions of people around the world. This condition, including chronic renal failure, nephropathies and other renal diseases, requires long-term and comprehensive treatment¹.

However, this condition is also the treatment process, which is aimed at restoring and improving kidney function, as well as maintaining the necessary condition of patients^{2,3}.

Modern approaches to the treatment of patients with chronic pathology cover a wide range of medical, dietary, concomitant and psychological measures. They strive not only to improve the condition of patients, but also to ensure the maximum quality of life, taking into account the features and limitations associated with common renal pathology^{4,5}.

This article provides an overview of modern methods and prevention of treatment of patients with chronic kidney disease. We will also look at the latest scientific research and medical practice that affect the effectiveness and results of rehabilitation programs. An important point will be to highlight the attention of medical staff and patients in this process, as well as an individual approach to each incident, changing the consequences and changing the behavior of patients. In order to better understand the introduction of modern methods of treatment of patients with chronic renal pathology, the paper will consider their impact on the quality of life and prognosis of the disease.

This will allow us to better understand the course of treatment as a continuation of part of the complex treatment in patients with chronic kidney disease². Effective rehabilitation of patients with severe kidney pathology not only mitigates the symptoms of the disease and slows down its progression, but also helps to preserve their hopes for a healthier future. Rapid scientific achievements, the development of new technologies and the improvement of medical methods significantly expand the possibilities of optimizing rehabilitation programs³.

Materials and methods

In the process of working on the article, scientific studies, articles, books and other academic sources related to the rehabilitation of patients with chronic kidney disease were analyzed. Clinical trials presented in various sources were also analyzed. Comparative and analytical research methods were used to write the work.

Results

A review of modern methods and measures for prevention and individual patients with chronic kidney disease allows us to identify the following approaches.

1. Early detection and screening. The early manifestation of the risk of developing a chronic renal nature is crucial. Effective screening programs allow you to identify a predisposition to morbidity and begin preventive measures.

Early manifestation of chronic renal nature is a key moment in preventing the progress of the disease and minimizing its consequences. The main purpose of this stage is to identify the risk of developing nature in people who do not yet have pronounced symptoms. It is important to remember that chronic renal pathology is usually asymptomatic, so the early manifestation can be severe⁴.

Doctors conduct a detailed study of the patient's medical and family history. Risk factors include diabetes mellitus, hypertension, hereditary predisposition and the use of certain medications. Constant measurement of blood pressure makes it possible to detect its increase, which may be an early sign of impaired kidney function⁵.

Regular urine analysis can reveal the presence of protein and albumin, which may indicate a violation of renal function. The level of creatinine in the blood is one of the key indicators of renal function. Its increase can lead

to violations. In the case of family inheritance of chronic kidney disease or other risk factors, genetic tests can help in early identification.

Doctors can use information from electronic medical records to detect changes in kidney function and detect them at an early stage. Early detection and screening make it possible to identify chronic renal pathology in the early stages, when it does not yet cause serious symptoms or complications. After reducing risks or restrictions, patients may be offered recommendations regarding lifestyle restrictions and individuals in order to slow down progress in the field of healthcare and improve the quality of life.

2. Healthy lifestyle. A key aspect in the prevention and dissemination of natural elements is the observance of a healthy lifestyle. This clause implies that patients and persons at risk should take an active part in their health and closely monitor various aspects of their lifestyle in order to reduce the development or progression of a permanent risk of renal nature⁶. A healthy diet is a fundamental aspect of the management of chronic renal pathology. Patients may prefer a diet that limits the intake of protein, sodium, potassium and phosphorus, depending on the stage of the disease. Individual nutrition is tailored to the attention of each patient. Regular physical activity contributes to maintaining the health of the cardiovascular system and blood pressure control, which is important for slowing the progress of the renal system⁷. An individual exercise program can be developed taking into account the physical capabilities of the patient and the degree of development of the disease. Adherence to a healthy lifestyle, including a balanced diet, physical activity and moderate alcohol consumption, allows for a reduction in the risk of developing chronic kidney disease.

3. Management of arterial bleeding. Blood pressure control is fundamental to slowing the progress of the renal base. Antihypertensive therapy using medications and lifestyle recommendations are key methods.

4. Compliance with the diet. Limiting the intake of protein, sodium, potassium and phosphorus in food can help manage symptoms and slow the progression of the natural renal nature.

5. Drug therapy. In some cases, medications may be prescribed, for example, angiotensin converting enzyme inhibitors (ACE inhibitors) or angiotensin II receptor antagonists (ARA II), to regulate blood pressure and protein motility.

6. Technologies of renal replacement therapy. Patients with severe chronic renal failure can use methods of renal replacement therapy, such as dialysis or kidney transplantation⁸.

7. Education and psychological support. Educational programs and psychological support help patients

to better relate to their condition and follow the recommendations of doctors.

8. Innovation in waiting. Modern methods, such as monoclonal antibody therapy and gene therapy, are being investigated as approaches to the emergence of genetic mechanisms.

9. Multidisciplinary approach. The key point in the implementation of the principle of the principles of the chain is the cooperation of various specialists, such as nephrologists, nutritionists, physiotherapists and psychologists, to provide comprehensive patient care⁹.

The modern approach involves special attention to prevention, early diagnosis and individual patient management. This makes it possible to improve the quality of life of patients and reduce the burden on healthcare systems.

Discussion

Digitalization in healthcare, including the treatment of patients with chronic renal pathology, is the introduction of modern information and communication technologies (ICT) to improve patient care processes, ensure the availability of medical care and improve the quality of treatment. Below are some ways to use digitalization in patients with chronic renal pathology:

The introduction of electronic medical system documentation allows doctors and medical personnel to easily access the patient's medical history, the results of tests and examinations. This ensures more effective monitoring of the condition of patients and making informed decisions about the birth.

Telemedicine consultations allow patients to receive medical care and consultations remotely, which is especially important for patients located in remote regions or with limited mobility. It also allows doctors to monitor the condition of patients and adjust treatment as needed¹⁰.

With the help of digital devices and applications, patients can independently monitor indicators such as blood pressure, blood sugar and kidney function, and transmit the data to the appropriate doctor for analysis. This makes it possible to detect changes in the condition early and respond to them.

Machine learning algorithms can help doctors predict the risks and prognoses of modern renal evolution based on medical data. This can help in more accurate diagnosis and the development of a personalized treatment plan¹¹.

The systems support data-based decision-making and can provide doctors with recommendations on standard methods of treatment and monitoring of patients with chronic renal pathology. Digitalization in healthcare can improve the quality and effectiveness of treatment of patients with chronic renal pathology, provide more affordable and customized care.

Treatment of patients with chronic renal pathology includes modern methods, but there are also problems associated with this process. In some regions and countries, access to modern methods of treatment of renal nature is limited due to existing medical resources, long expectations from specialists and the unavailability of modern medicines and medical equipment.

Treatment of severe renal events can be expensive, especially if the patient requires dialysis or kidney transplantation. This can put patients at a financial disadvantage and limit the availability of treatment. Many medications used in the event of severe renal diseases can have pronounced consequences, such as hyperkalemia (elevated potassium levels in the blood) or disorders of the gastrointestinal tract. This can create difficulties in the treatment of diseases¹².

Despite modern methods of treatment, some forms of early kidney disease can progress and lead to impaired kidney function. This can be carried out during long-term treatment, dialysis or kidney transplantation.

Patients may report difficulties in following dietary recommendations, taking medications and regular health monitoring. Failure to comply with the treatment regimen may worsen the prognosis of the disease¹³.

Chronic renal pathology can affect the mental state of patients and their quality of life. The emotional and psychological aspects of the disease also require attention and support.

Patients with chronic renal pathology often need long-term care and support, which can put a strain on their family and loved ones. Modern methods of treatment of chronic kidney disease also contribute to the development of diseases. To improve the results of treatment, it is important to combine a medical approach with the patient's lifestyle, diet and preventive measures.

Solving the problems associated with the treatment of patients with chronic renal pathology requires comprehensive treatment and medical cooperation, patients and society as a whole. Here are a few steps that can help solve some of the listed problems:

1. Increasing the availability of medical care. It includes the expansion of medical programs and centers for the treatment of chronic kidney disease in remote regions, as well as the introduction of telemedicine for remote States and patient monitoring.

2. Development of financial programs and insurance policies that help patients cover treatment costs.

3. Conducting training programs for patients on the importance of following the treatment regimen, diet and health status.

4. Assistance in the treatment of patients with psychological aspects of the disease and available support resources.

5. Investments in medical research aimed at developing new methods of treatment and medicines for patients with chronic renal pathology¹⁴.

6. Using artificial intelligence technologies for more accurate diagnosis and prediction of actions¹⁵.

7. Providing psychological support and rehabilitation services to patients with chronic renal pathology¹⁶.

8. Support in the group organization of support for patients and their families.

9. Conducting programs to prevent chronic renal disease, including blood pressure control and diabetes mellitus¹⁷.

It is important that doctors and patients work in a group, discuss treatment plans together and make decisions, determine the appearance and choose patients.

Conclusions

Modern approaches to the rehabilitation of patients with chronic pathology include a wide range of medical and psychosocial measures aimed at improving the quality of life and treating diseases.

Rehabilitation of patients with chronic kidney disease should be individual, with the progression of kidney damage, the physiological and psychological state of the patient, as well as his doctor and goals. Patients often need the support of a psychologist or psychiatrist to manage emotional stress and adapt to lifestyle changes.

Dietary management, including restriction of protein, sodium, phosphorus and potassium in food, is an important part of treatment. Nutritionists and patients work together to develop individual dietary plans. The use of medications to control blood pressure, sugar levels and other parameters helps to manage the course of renal pathology and prevent detection.

Physical activity and physical therapy can help in maintaining physical fitness and strengthening overall health. Lifestyle plays the whole role. Completing

habits such as smoking and drinking alcohol, as well as maintaining a healthy lifestyle, is a permissible condition.

It is important to provide patients with information about their disease, treatment methods and self-management so that they can make informative decisions. Regular monitoring and monitoring of the condition allow one to identify changes and respond to them in time.

Modern approaches to the treatment of patients with chronic pathology are aimed at maximizing the quality of life and improving the prognosis of the disease. They require support from patients, medical staff and society to ensure reliable management of complex conditions.

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