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A MODERN VIEW TO OPTIMIZING DIAGNOSTICS OF CHRONIC KIDNEY DISEASE

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✓ ***Resume***

The present work is a review that analyzes the accumulated knowledge on the modern view to optimize the diagnosis of the course of chronic kidney disease. We analyzed the results of foreign sources and the CIS countries, published in the last 10 years, which are devoted to the optimization of diagnostics of the course of chronic kidney disease. It is concluded that as a result of identifying the main risk factors and their predictive significance in the progression of CKD and the development of a clinical algorithm for the diagnosis and treatment of CKD for primary care physicians, it will be possible to identify a group of patients with an increased risk for predicting CKD. As a result, this will significantly improve the identification of patients in the early stages of CKD and the work of succession mechanisms with specialized institutions, which will give a real opportunity to qualitatively improve the level of national medicine in providing specialized nephrological care to the population of Uzbekistan at the level of world standards.

Key words: Chronic kidney disease, disability, cardiovascular complications, prognosis.

СОВРЕМЕННЫЙ ВЗГЛЯД К ОПТИМИЗАЦИИ ДИАГНОСТИКИ ТЕЧЕНИЯ ХРОНИЧЕСКОЙ БОЛЕЗНИ ПОЧЕК

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✓ ***Резюме***

Настоящая работа представляет собой обзор, анализирующий накопленные знания по современному взгляду к оптимизации диагностики течения хронической болезни почек. Были проанализированы результаты зарубежных источников и стран СНГ, опубликованные в последние 10 лет, которые посвящены оптимизации диагностики течения хронической болезни почек. Делается вывод, что в результате определения основных факторов риска и их предикторной значимости в прогрессировании ХБП и разработка клинического алгоритма диагностики и лечения ХБП для врачей первичного звена здравоохранения, позволят выделить группу больных повышенного риска по прогнозированию ХБП. В итоге это значительно улучшит выявление больных на ранних стадиях ХБП и работу механизмов преемственности со специализированными учреждениями, что даст реальную возможность качественно повысить уровень национальной медицины по оказанию специализированной нефрологической помощи населению Узбекистана на уровне мировых стандартов.

Ключевые слова: Хроническая болезнь почек, трудоспособность, сердечно-сосудистые осложнения, прогнозирование.

BUYRAKNING SURUNKALI KASALLIGINI DIAGNOSTIKASINI OPTIMALLASHTIRISH UCHUN ZAMONAVIY KO'RINISH

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Ushbu ish, surunkali buyrak kasalligi diagnostikasini optimallashtirishning zamonaviy nuqtai nazari bo'yicha to'plangan bilimlarni tahlil qiladigan sharhdir. So'nggi 10 yil ichida surunkali buyrak kasalligi diagnostikasini optimallashtirishga bag'ishlangan xorijiy manbalar va MDH mamlakatlarining natijalarini tahlil qildik. Xulosa qilish mumkinki, asosiy xavf omillarini aniqlash va ularning SBK rivojlanishidagi bashorat qiluvchi ahamiyati va SBK diagnostikasi va davolashning

klinik algoritmini ishlab chiqish, birlamchi vrachlar uchun SBKni bashorat qilish xavfi yuqori bo'lgan bemorlar guruhini aniqlash mumkin bo'ladi. Natijada, bu SBKning dastlabki bosqichlarida bemorlarni identifikatsiyalashni va ixtisoslashtirilgan muassasalar bilan merosxo'rlik mexanizmlarini ishlashini sezilarli darajada yaxshilaydi, bu esa jahon standartlari darajasida O'zbekiston aholisiga ixtisoslashgan nefrologik yordam ko'rsatishda milliy tibbiyot darajasini sifat jihatidan yaxshilashga imkon beradi.

Kalit so'zlar: Surunkali buyrak kasalligi, nogironlik, yurak-qon tomir asoratlari, prognoz.

Relevance

Chronic kidney disease (CKD) is a general medical problem with profound socio-economic consequences associated with its widespread prevalence in the population (10-15% of the population), disability and mortality due to the development of end-stage renal failure (ESRD) and cardiovascular complications (SSO), the risk of which in patients with impaired renal function increases tenfold. At the turn of the 20th and 21st centuries, the world community is faced with a global problem that has not only medical, but also enormous socioeconomic significance - a pandemic of chronic no communicable diseases, which claim millions of lives every year, lead to severe complications associated with disability and the need for high-cost treatment. Among them, kidney diseases occupy an important place due to their significant prevalence in the population, a sharp decrease in the quality of life, high mortality of patients and lead to the need to use expensive methods of replacement therapy in the terminal stage - dialysis and kidney transplant. At the same time, the development of medical science and pharmacology at the end of the 20th century laid the foundations for the development of new highly effective and affordable methods of prevention, which can significantly slow down the progression of chronic kidney disease, reduce the risk of complications and the cost of treatment. Such approaches turned out to be applicable to the vast majority of patients with renal pathology, regardless of its cause. These circumstances require a new strategy for health systems to define and stratify the severity of chronic renal disease. There is a need for the development of simple criteria and a universal classification that allow assessing the degree of renal dysfunction, prognosis and clearly planning certain therapeutic effects. Only on the basis of universal approaches and a unified terminology can an adequate assessment of the incidence and prevalence be carried out, regional and national registries of patients with impaired renal function can be compiled and, on this basis, the need for appropriate treatment methods can be calculated, and the necessary financial costs can be planned. Historically, the first attempt to address these issues was initiated at the beginning of the 21st century by the US National Kidney Foundation (NKF). The analysis of numerous publications on the diagnosis and treatment of kidney diseases, the prognostic role of a number of indicators, terminological concepts formed the basis of the concept of chronic kidney disease (CKD). Subsequently, experts from the European Renal Association - European Dialysis and Transplantation Association (ERA-EDTA) [18] and KDIGO (Kidney Disease: Improving Global Outcomes) [20] took part in the development of this model.

Diseases of the circulatory system (CVD) make the main contribution to the morbidity and mortality of people in older age groups. According to the Ministry of Health of the Russian Federation, the incidence of CSD in our country in 2012 was 63711.5 per 100,000 people over working age [15, 4]. Among cardiovascular diseases (CVD), the leading positions are occupied by ischemic heart disease (IHD) and arterial hypertension (AH), the share of the latter being from 30% to 40% [14].

Early development and progression of CVD is facilitated by renal dysfunction, the prevalence of which has increased significantly in the last 10-15 years [10,18,20]. In 2007, the term "chronic kidney disease" (CKD) was introduced into the international classification of diseases (ICD-10). According to the National Recommendations (2012), CKD includes conditions, regardless of nosology, existing for at least 3 months, in which signs of kidney damage are revealed - a persistent decrease in the glomerular filtration rate (GFR) below 60 ml / min / 1.73 m2, structural changes in the kidneys detected by imaging studies, increased albuminuria / proteinuria, changes in urine sediment, in the electrolyte composition of urine and blood [24]. CKD is recorded according to population studies in 6-14% of the adult population and in 20-56% of older age groups [21,23]. Many authors emphasize the unity of

risk factors for CKD and CVD, which include atherogenic dyslipidemia, metabolic syndrome, obesity, hyperuricemia, smoking [1,9,12].

To date, the concept of CKD and its classification have received worldwide recognition. The peculiarity of the CKD problem is the prevalence of secondary nephropathies, in connection with which patients are observed for a long time by therapists and "non-nephrologists" specialists, and cases of CKD as a secondary disease are practically not taken into account by official statistics. The prevalence of CKD is high and is not inferior to the prevalence of socially significant diseases such as diabetes mellitus, hypertension, and heart failure. In the United States, it is 14%, while kidney disease ranks 4th in the structure of causes of death. According to studies conducted on different continents in countries with different ethnic composition and economic development, signs of CKD are observed in 12-18% of the population, and CKD of the most unfavorable stages 3-5 - in 5.9-8.1% of the population (in Japan - up to 18.7%). Thus, at least every tenth inhabitant of the Earth has signs of CKD.

Data on the nosological composition of CKD require clarification, since population studies, as a rule, do not imply a detailed nephrological examination, and the currently created CKD registries do not include patients in its early stages. However, there is no doubt that, as already mentioned, the leading place in the structure of CKD and the causes of ESRD is occupied not by primary kidney diseases, such as glomerulonephritis, polycystic kidney disease, but by secondary nephropathies in diabetes and hypertension. The most obvious consequence of CKD is the colossal cost of life-saving renal replacement therapy (dialysis and kidney transplant), which places a heavy burden on the healthcare system. In 2011, renal replacement therapy expenditure in the United States reached 7.2% of the total Medicare health care budget, while these patients accounted for 1.4% of the total number of people covered by the system [25]. At the same time, an average of $ 87,945 was spent on the treatment of one patient with ESRD receiving hemodialysis treatment under the Medicare system. USA, peritoneal dialysis - 71 630 dollars. USA, for a patient with a transplanted kidney - 32 922 dollars. USA. In Russia, at least 1–1.5 million rubles are spent on the treatment of one dialysis patient during the year, which is more than 100 times higher than the per capita standard of the Program of State Guarantees of Free Provision of Medical Aid to Citizens.

Patients receiving renal replacement therapy are just the tip of the iceberg for CKD, attracting the most attention from healthcare providers, healthcare providers and the medical community. Meanwhile, the already moderate decline in kidney function leads to a significant decrease in life expectancy, deterioration of other health indicators and an increase in treatment costs. The need for hospitalization in patients with CKD is 38% higher than in people without CKD, and mortality is 43% [3, 18]. The kidneys eliminate factors damaging the endothelium, therefore, when their work is disrupted, the adverse effect on the cardiovascular system of traditional, "Framingham" risk factors (RF) increases: arterial hypertension (AH), insulin resistance, hyperlipidemia. At the same time, when GFR is <60 ml / min / 1.73 m2, the role of specific "renal" RF CVD begins to manifest itself and increases as it further decreases: disorders of calcium phosphate metabolism, protein-energy malnutrition syndrome (PEM), anemia, chronic inflammation , hyperuricemia. Each subsequent stage of CKD, starting from 3a, is characterized by an additional increase in cardiovascular risk by 1.5–3 times [11]. The high prevalence of CKD, its unfavorable outcomes and complications give grounds to raise the problem of the feasibility of developing and implementing measures at the population level for its early detection, nephroprotection and nephroprophylaxis [24].

Elderly and senile age is one of the main risk factors for both CVD and CKD. CKD can be asymptomatic and gradually progress to the terminal stage [13,17,20]. The prevalence of CKD is comparable to such socially significant diseases as hypertension and diabetes mellitus, as well as obesity and metabolic syndrome. The results of epidemiological studies in Uzbekistan showed that the problem of CKD for our country is no less acute. Signs of chronic kidney disease are noted in more than 1/3 of patients with chronic heart failure; decreased kidney function is observed in 36% of people over the age of 60, in people of working age; decreased function is observed in 16% of cases, and in the presence of cardiovascular diseases, its frequency increases to 26% [5,13,16]. These data make us reconsider the traditional view of the relative rarity of kidney diseases among the population and require a radical restructuring of the care system for this category of patients. A decrease in renal function, according to modern concepts, is an independent and important reason for the accelerated development of pathological changes in the cardiovascular system. This is due to a

number of metabolic and hemodynamic disorders that develop in patients with a reduced glomerular filtration rate, when unconventional, "renal" factors of cardiovascular risk arise and come to the fore: albuminuria / proteinuria, systemic inflammation, oxidative stress, anemia, hyperhomocysteinemia, etc. others [13].

Thus, the rapid growth in the population of the number of patients with reduced renal function is not a highly specialized, but a general medical interdisciplinary problem with serious socio-economic consequences [13]. It requires, on the one hand, the restructuring and strengthening of the nephrological service - not only by opening new dialysis centers and the development of transplantology, but also by strengthening its structures aimed at conducting etiotropic, pathogenetic and nephroprotective treatment in order to prevent end-stage renal failure. On the other hand, it is necessary to fully integrate nephrology and primary health care, as well as other specialties in order to conduct broad preventive measures, early diagnosis of CKD, ensure the continuity of treatment and the effective use of available resources. The concept of CKD, which provides the unification of approaches to both prevention, diagnosis, and treatment of nephropathies of various natures, creates the prerequisites for solving these important health problems.

Conclusions

An analysis of the available literature has shown that, despite the progress achieved in the study of CKD in recent years, there are still many unresolved problems in the field of diagnosis, treatment and prevention of CKD. Determination of the main risk factors and their predictive significance in the progression of CKD and the development of a clinical algorithm for the diagnosis and treatment of CKD for primary care physicians will make it possible to identify a group of patients at increased risk for predicting CKD. As a result, this will significantly improve the identification of patients in the early stages of CKD and the work of succession mechanisms with specialized institutions, which will give a real opportunity to qualitatively improve the level of national medicine in providing specialized nephrological care to the population of Uzbekistan at the level of world standards.

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